

# The Network Readiness Index 2019:

Towards a Future-Ready Society

Soumitra Dutta and  
Bruno Lanvin  
Editors



INSIGHT REPORT

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## ABOUT PORTULANS INSTITUTE:

Founded in 2019 by Soumitra Dutta, Bruno Lanvin and Carolina Rossini, the Portulans Institute (PI) is an independent nonprofit, nonpartisan research and educational institute based in Washington DC. Our areas of expertise include technology competitiveness, innovation readiness, and people and global Talent. Our Mission is:

- To develop cross-community knowledge and dialogue on how people, technology and innovation contribute to sustainable and inclusive growth.
- To inform policymakers by producing independent, rigorous metrics and data-based research.
- To collaborate with private sector leaders in driving a business agenda that invests in people, technology and innovation for a prosperous common future.
- To host and co-organize events and conferences on the above issues affecting human-centric sustainable economic prosperity.

## ABOUT WITSA:

The World Information Technology and Services Alliance (WITSA) is the leading recognized international voice of the global ICT industry, whose members from over 80 countries and economies represent more than 90 percent of the world ICT market. WITSA is dedicated to advocating policies that advance industry growth and development; facilitating international trade and investment in ICT products and services; strengthening WITSA's national industry associations; and providing members with a broad network of professional contacts.

WITSA members are leaders in a globally interconnected marketplace. Because the challenges facing the ICT industry are undisputedly global in nature, WITSA members work together to achieve a shared vision on important issues of common interest. WITSA makes it possible for its members — ranging from Mongolia and Argentina to Kenya and the United States — to identify common issues and priorities, exchange valuable information, and present a united position on industry issues. For more information on WITSA, please visit [www.witsa.org](http://www.witsa.org).



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# PREFACE

It was the year 2000, and we both were part of a small group of experts at the World Economic Forum (WEF) with the mandate to design a framework for assessing the impact of information and communications technologies (ICT) on the development and competitiveness of nations. The commercialization of the Internet had started only a few years before, and there were many anecdotes about the positive impact of the emerging technology on the lives of people, including, for example, fishermen and farmers in Western Africa. However, there was no overall framework for the evaluation of such impacts of ICT. It was hoped that the team of experts at the WEF could propose a more evidence-based and structured approach to ICT policy formulation by public and private sector stakeholders.

The result of the exercise was the creation of the Network Readiness Index (NRI), which provided, for the first time, a holistic framework for assessing the multi-faceted impact of ICT on society and the development of nations. The NRI was forward-looking. In many ways, it anticipated many of the aspects which would become critical in the following years. Early on, the NRI identified the three key stakeholders for ICT: individuals/society, businesses, and governments, and included elements of ICT application that were novel for the time—for example, a focus on the political environment and quality of regulations. At a time when the primary concerns in ICT revolved around infrastructure issues, the NRI provided a forward-looking and holistic perspective on the application of ICT within national economies.

The NRI rapidly developed into an influential global benchmark for the application and utilization of ICT. Many economies utilized the NRI to design their ICT strategies, and the NRI was used and frequently quoted by leaders from the public and private sectors. Over the ensuing two decades, the NRI framework underwent one major revision, which allowed an explicit focus on the impact

of ICT. Despite the challenges inherent to collecting data from more than 120 economies, the NRI chose to retain its extensive global coverage and evolved into a trusted global benchmark of the use of ICT for development and competitiveness.

Earlier this year (2019), due to some internal re-organizations and changed priorities, the WEF decided to hand over the production of the NRI to us. This provided us with an opportune moment to revisit the NRI framework and make it future-ready. Over the last decade, ICT has become more integrated with our lives than we could have ever anticipated. This has in turn raised important issues of trust, governance, and impact that have become critical in recent years.

We turned to a set of experts in ICT and friends of the NRI to redesign the framework of the NRI. We are grateful for this NRI technical advisory group for their support in redesigning the NRI to make it reflective of current ICT issues and to make the NRI more future-ready in the wake of new technological disruptions such as AI. A key theme underlying the newly redesigned NRI framework is that a necessary condition to a collective prosperous future will be our ability to integrate people and technology with the right governance structures.

We also decided to create a special not-for-profit, the Portulans Institute (PI) to support research on the NRI and continue to serve leaders from the public and private sectors in their quest to deploy the power of ICT effectively within their societies and economies. We hope that the Portulans Institute, much like the ancient navigational maps, the Portulans, will help us to discover the contours of the changing impact of ICT on our world and navigate the right path forward.



**Soumitra Dutta**

*S. Dutta*



**Bruno Lanvin**

*Bruno Lanvin*





# FOREWORD



**MS. YVONNE CHIU**



**DR. JAMES (JIM) H. POISANT**

On behalf of the World Information Technology & Services Alliance, (WITSA), it is a sincere pleasure to be selected as a Knowledge Partner of the 2019 Network Readiness Index (NRI). This authoritative and wide-ranging assessment of how ICT impacts the competitiveness and well-being of nations aligns with WITSA's vision of "Fulfilling the Promise of the Digital Age," which means the promise will be fulfilled when every person on Earth is connected and benefiting from information and communications technology (ICT).

As WITSA is a consortium of leading ICT associations in over 80 nations, representing over 90% of the ICT industry, we understand the importance of all stakeholders, including individuals, businesses, and governments, having a comprehensive understanding of how ICT is driving the global economy and affecting individuals and societies.

The NRI provides an abundant set of examples, models, best practices, and lessons learned from across the globe. By assessing and contrasting ICT development in scores of nations of all sizes, cultures, and economies, the NRI reveals critical insights to all nations so that they can see firsthand what is required for them to benefit from ICT.

As the Digital Age evolves, it is imperative that all nations embrace digital technologies in order to compete and flourish in a new world, being transformed by technology. The Network Readiness Index provides nations with invaluable knowledge they must have to succeed.

WITSA wishes to congratulate the principals of the 2019 NRI for their recognition of a very large segment of global society—persons with disabilities. Persons with disabilities (PWD) are among the most marginalized groups throughout the world and face many barriers to social and economic inclusion. This community has the potential to offer tremendous benefit to the development of ICT and, in turn, benefit from advancements in the accessibility and usability of services and products. Inclusion of persons with disabilities through ICT creates a virtuous cycle that benefits all of society. Accordingly, as the Digital Age continues to mature, and if the promise of the Digital Age is to be realized, EVERYONE must be included.

Since 1978, WITSA has hosted the World Congress on Information Technology (WCIT). This event attracts over 2,000 delegates from over 70 countries to include senior-level business executives, government officials, internationally recognized institutions, civil society, academia, and media. Penang, Malaysia will host WCIT 2020, and Dhaka, Bangladesh will host the event in 2021.

Over the years, WITSA Congresses have relied on the excellence of the NRI. In 2019, we are very proud and honored to be NRI's Knowledge Partner.

**Ms. Yvonne Chiu**  
Chairman  
WITSA

and

**Dr. James (Jim) H. Poisant**  
Secretary General  
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Project Coordinator and Co-author

Co-Founder and CEO, Portulans Institute

# Executive Summary

Digital technologies have progressed at a rapid pace over the last few decades, and they today permeate all aspects of business and society, opening up new opportunities and bringing benefits to many. As digital disruptions gain momentum, the challenge of how to best combine technological opportunities and human well-being is high on the agenda of global leaders. If we are not able to leverage technology to bring out the best in people, we are potentially headed for scenarios in which society is fractured, and some of our core organizational principles, such as democracy, can be corrupted. Moreover, if the benefits of technology are not shared in an inclusive fashion, they will create new inequalities or reinforce existing ones.

Against this backdrop, the two co-editors of the Network Readiness Index (NRI)—one of the leading global indices on the application and utilization of information and communication technology (ICT)—decided to update the index in close dialogue with chosen experts in ICT. The end result is a redesigned, future-ready index that will continue the NRI tradition of providing policymakers, business leaders, academia and the civil society with a trusted and valuable tool to evaluate progress and set the action agenda for more inclusive and sustainable growth in the digital age.

## Key messages from the Network Readiness Index 2019

### Message 1:

**The champions of 2019 were already highly ranked in 2016.**

This stickiness in the rankings of the leading nations reflects the results of determined efforts over the years in these economies to prioritize investments in digital technologies while ensuring that a supportive ecosystem for digital leadership is put in place across all key stakeholders.

### Message 2:

**The ability to integrate people and technology with the right governance structures is key to a collective prosperous future.**

Technology can have an important positive impact on national economies and on their ability to reach the Sustainable Development Goals (SDGs), but this will not be achieved unless we are able to set up effective governance mechanisms to integrate technology with the three key stakeholder groups: individuals, businesses and governments.

### Message 3:

**The technological divide remains a key concern at the global level.**

Because high-income countries have traditionally invested heavily in their technology infrastructure (boosting both access and content) and continue to monitor and invest in Future Technologies, they generally remain better positioned to leverage the opportunities afforded by technological innovations.

### Message 4:

**Technology and the impact of ICT are the key drivers that differentiate regions.**

There can be considerable variations in network readiness across countries within any particular region. However, some regional differences can be identified through NRI data and analyses. For instance, Asia & Pacific and Commonwealth of Independent States do comparatively well in terms of Impact of ICT, while access to and production of technology remains a challenge. In Africa and the Arab region, on the other hand, technologies and infrastructure often remain the first obstacle to network readiness.

**Message 5:**

**Policy measures are urgently needed to allow a large part of mankind to be future-ready.**

The results of the NRI 2019 show a persistent and important digital divide across nations, in all pillars of the model. Given the rapid pace of progress in underlying technology trends, it is important for governments to exhibit leadership and put in place appropriate policy measures to enable individuals and businesses to benefit from technological progress within the context of a trusted ecosystem.

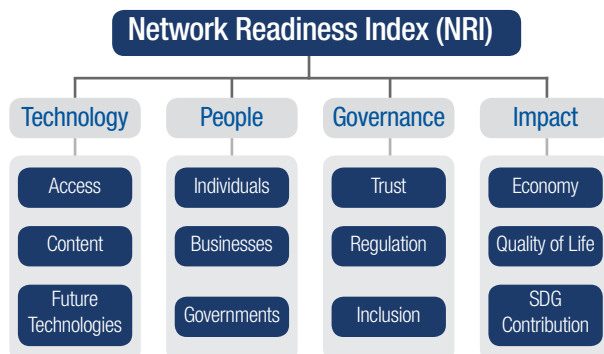
**Message 6:**

**Technological innovation is a powerful tool to achieve the SDGs.**

In the face of growing distrust vis-à-vis governments (compounded by privacy concerns) on the one hand, and technological innovations on the other (artificial intelligence and cybersecurity being two areas in point in this regard), it is critically important to rebuild the human face and values base of information technology. Linkages between technological progress and our collective ability to reach the SDGs will continue to be crucially important in this regard.

## The NRI model

The redesigned NRI is based on four pillars: Technology, People, Governance and Impact. Each pillar is further composed of three sub-pillars as indicated in the figure below. *“People and technology will increasingly interact as collaborators and partners. To ensure a positive and inclusive impact on society and business, appropriate governance mechanisms need to be implemented to address issues related to trust, security and inclusion”,* said Soumitra Dutta.



Note: SDG = Sustainable Development Goal.

## Sweden, Singapore and the Netherlands lead the overall NRI rankings

*The Network Readiness Index 2019* ranks a total of 121 economies. The top performer in this year's index is Sweden, which is just ahead of Singapore in 2nd place and the Netherlands in 3rd place. The top 10 countries in the NRI 2019 are shown in the table below. The top of the rankings is dominated by European nations, with the region claiming 8 of the top 10 positions. The United States is ranked 8th globally.

Country	NRI rank	NRI score
Sweden	1	82.65
Singapore	2	82.13
Netherlands	3	81.78
Norway	4	81.30
Switzerland	5	81.08
Denmark	6	81.08
Finland	7	80.34
United States	8	80.32
Germany	9	78.23
United Kingdom	10	77.73

Sweden claims the top spot in the renewed NRI. One of the country's greatest strengths is its consistency across the pillars: It ranks in the top 10 in all four pillars and in the top 5 in three of them. Singapore is a top 10 country in all four pillars and is in the top position when it comes to the Impact pillar, where it does particularly well in terms of the impact of its readiness on the Economy (1st).

Similarly, Netherlands performs well in all four pillars, ranking in the top 10 in each of them. The country is particularly strong when it comes to Technology (2nd), where it is the global leader in the Content sub-pillar and has a high level of Future Technologies (8th). Norway is the world's top-performing country when it comes to issues of Governance that are relevant to the network economy. It enjoys high levels of Trust (2nd) and Regulation (3rd) and is also one of the top 10 countries in the Inclusion (8th) sub-pillar. Norway is the global leader with regard to Quality of Life and also has a strong SDG Contribution (4th), which are the main factors behind the country's high Impact (4th).

The United States leads the way when it comes to Technology, where it is the top performer in Future Technologies and has the second-highest score in Content. Its weaker performance in the Access

(29th) sub-pillar stands in stark contrast to this. The country also does very well in the Governance (4th) pillar, where it has the world's best Regulation relevant to the network economy and is a leading country in terms of Inclusion (4th). The United Kingdom makes it into the top 5 in the Governance (5th) pillar, where it benefits from solid performances in all three sub-pillars: Trust (5th), Regulation (10th) and Inclusion (5th).

## Performance by pillar of the NRI

The highest-ranked country in the **Technology** pillar is the United States, followed by the Netherlands and Switzerland. All three countries perform well at the sub-pillar level and are the three top-performing countries in the Content sub-pillar. Luxembourg leads the way with respect to the Access sub-pillar, and the United States is top-ranked in the sub-pillar of Future Technologies.

The **People** pillar is headed by two Scandinavian countries, Denmark and Sweden, which are strong in all dimensions related to the usage and skills in digital technologies among individuals, businesses and governments. They are also the two leading countries when it comes to the Businesses sub-pillar, and are ranked 3rd and 4th, respectively, in the Governments sub-pillar.

Another Scandinavian country—Norway—is top-ranked in the **Governance** pillar. It performs particularly well with respect to the Trust and Regulation sub-pillars, but it is also a top 10 country in the Inclusion sub-pillar. There are three different global leaders in the three sub-pillars: Luxembourg is the highest-ranked country when it comes to Trust, the United States leads the way in Regulation, and New Zealand ranks first in matters related to Inclusion.

Singapore is the highest-ranked country in the pillar related to **Impact** followed by Switzerland and Sweden. Singapore is also the leader when it comes to the Economy sub-pillar. Switzerland is a more consistent performer, with high rankings in all three sub-pillars. Sweden performs particularly well with respect to the Economy and Quality of Life sub-pillars. The latter dimension is primarily dominated by the Nordic countries, with Norway leading the way.

## Regional performance

The top regional performers are indicated in the table below.

Africa	Arab States	Asia & Pacific
1. Mauritius (53)	1. United Arab Emirates (29)	1. Singapore (2)
2. South Africa (72)	2. Qatar (33)	2. Japan (12)
3. Rwanda (89)	3. Bahrain (40)	3. Australia (13)

CIS	Europe	The Americas
1. Russian Federation (48)	1. Sweden (1)	1. United States (8)
2. Kazakhstan (60)	2. Netherlands (3)	2. Canada (14)
3. Belarus (61)	3. Norway (4)	3. Chile (42)

Note: Global ranks in parentheses. CIS = Commonwealth of Independent States.

Europe dominates the NRI rankings, with eight countries in the top 10. In addition to the high-ranked performances of Sweden and the Netherlands, other countries also come up with excellent results. Switzerland, ranked 5th globally, is ranked high (2nd) in the Impact pillar, primarily as a result of its high scores in the Economy (3rd) and SDG Contribution (2nd) sub-pillars. Switzerland is also impressive when it comes to the Technology (3rd) pillar, where it enjoys superior levels of Access (4th), Content (3rd) and Future Technologies (7th). Denmark, ranked 6th globally, is one of the top 5 countries in all three sub-pillars of the People pillar: Individuals (5th), Businesses (2nd) and Governments (3rd). Finland ranks in the top 10 in each of the four pillars. Its highest placement is in the Technology and People (5th in both) pillars. Germany finds itself in the top 10 in three pillars: Technology (10th), People (10th) and Impact (8th). Its strong performance with respect to the Impact pillar is primarily due to its positive SDG Contribution (6th) and outcomes in the Economy (7th) sub-pillar.

The Asia & Pacific region is only behind Europe in many of the dimensions included in the NRI. Asia & Pacific has a wide dispersion of performances in the NRI, ranging from Singapore in 2nd to Lao P.D.R. in 108th. After Singapore, the next highest-ranked country in the region is Japan (12th), which makes it into the top 10 in two pillars: People (7th) and Impact (10th). Japan is also a world-class performer in Future Technologies (5th), but its overall score in Technology is weakened by its levels of Access (35th) and Content (27th). Ranked just below Japan is Australia (13th), which also enjoys high ICT usage and skills among Individuals (6th) that contribute to making People (11th) its best-ranked pillar. Australia's performances in Governance (13th)

and Technology (16th) are primarily boosted by high levels of, respectively, Trust (9th) and Access (8th).

Further down the rankings of the Asia & Pacific region, one finds the highest-scoring South Asian country: India (79th). Its key strength lies in Governance (52nd), as a result of consistent performances in all three sub-pillars: Trust (49th), Regulation (59th) and Inclusion (58th). The relatively high score in the Governments (36th) sub-pillar is offset by weak ICT usage and skills by Individuals (103rd) and Businesses (87th), which leads to a rank of 81st in the People pillar. Slightly better is the Technology (79th) pillar, mainly because of the level of Future Technologies (46th). India's greatest challenge is to raise its ranking in the Impact (100th) pillar, where there is much scope for improvement in issues related to Quality of Life (93rd) and SDG Contribution (108th).

The group of Arab States also shows a large dispersion of overall scores in the NRI, despite the region being represented by only 13 countries in the index. The region can, in effect, be broken down further into Middle East and Northern Africa, where most of the former countries clearly outperform the latter economies. The regional leader, United Arab Emirates (29th), is the only Arab State ranked in the top quartile. The high ICT usage of its population makes it the top-performing country in the Individuals sub-pillar, but lower digital usage and skills by firms and national authorities (34th in Businesses; 59th in Governments) put a damper on the overall score in the People (24th) pillar. The UAE performs equally well in the Governance (24th) pillar, boosted by consistent performances in all three sub-pillars (Trust, 21st; Regulation, 32nd; Inclusion, 28th). Its most pressing need is to improve the Impact (38th) of the network economy, where much could be done to raise SDG Contribution (75th).

The group of Commonwealth of Independent States (CIS) is headed by Russian Federation (48th). Its best performance relates to People (38th), especially the ICT usage and skills of firms and national authorities (35th in Businesses and 32nd in Governments). At the level of the sub-pillar, meanwhile, the country does even better when it comes to Inclusion (29th). However, the same pillar — Governance (56th) — also includes Russian Federation's weakest dimension in the NRI: Regulation (91st). Other areas in need of improvement include Future Technologies (72nd) in the Technology (51st) pillar and Quality of Life (85th) in the Impact pillar (59th). The associated pillars, Technology and Governance, are also the two weakest dimensions of the CIS, which

suggests that many countries in the region should pay more attention to promoting online safety and ICT regulation and to preparing themselves for disruptive technologies like artificial intelligence and Internet of Things.

In the Americas region, after the U.S., Canada (14th) is a solid performer in all four pillars, ranking in the top 20 in each. It is one of the leading countries when it comes to Inclusion (3rd) of various groups in the network economy, which—together with high levels of Trust (14th) and Regulation (15th)—leads to good Governance (11th). Canada ranks 10th in the two sub-pillars related to Governments and Quality of Life, but relatively weak ICT usage among Individuals (47th) dampens the People (17th) pillar, while the Impact (19th) would improve by boosting the role of ICT in the Economy (29th) and SDG Contribution (27th).

Chile (42nd) is the leading Latin American country in no small part because of its levels of ICT usage and skills among Individuals (20th) and Businesses (41st), which boosts the People (41st) pillar. The country also performs relatively well with respect to Governance (39th), where it enjoys solid levels of Trust (42nd) and Regulation (39th). Its main weakness relates to Impact (54th), where much could be done to raise the Economy (70th) sub-pillar. The three largest Latin American economies — Mexico (57th), Argentina (58th) and Brazil (59th) — are all ranked next to each other in the NRI. All three do comparatively well in the People pillar (Mexico, 55th; Argentina, 46th; Brazil, 48th), and all three countries can do more to increase their readiness for Future Technologies (Mexico, 80th; Argentina, 103rd; Brazil, 95th).

In Africa, there is a significant gap even within the top 3, with Mauritius ranked 53rd and Rwanda ranked 89th. In between these two is South Africa (72nd), where the levels of Trust (38th) and Inclusion (46th) contribute to making Governance (47th) its best pillar. South Africa also finds itself in the third quartile with respect to Technology (58th), primarily as a result of the country's position in Content (54th) and Future Technologies (53rd). Its greatest challenge, meanwhile, concerns the Impact (99th) of the network economy, especially as it relates to improving Quality of Life (118th). As for Mauritius, its level of Trust (32nd) also makes a significant positive contribution to the Governance (41st) pillar. Its weakest dimension is People (70th), with considerable room for improvement in all three sub-pillars (Individuals, 73rd; Businesses, 68th; Governments, 69th). It is interesting to note that Africa ranks ahead of CIS in the sub-pillars of Future Technologies and Trust.





# Section I

## The 2019 Network Readiness Index

*Soumitra Dutta,  
Bruno Lanvin,  
Michael Bratt,  
and Carolina Rossini*



# Key Messages from the 2019 Edition of the Network Readiness Index (NRI)

Building on two decades of experience in benchmarking the digital economy, the NRI maps the network-based readiness landscape of 121 economies based on their performances across 62 indicators. While details about the NRI framework and results for 2019 are provided in the following sections, the following are the key messages to emerge from this year's analysis:

**Message 1: The champions of 2019 were already there in 2016.** The top 3 countries in the NRI 2019 are Sweden, Singapore, and the Netherlands. The first two were also in the top 3 in the most recent NRI 2016 rankings. In fact, eight of this year's top 10 countries featured in the top 10 in NRI 2016. This stickiness in the rankings of the leading nations reflects the results of determined efforts over the years in these economies to prioritize investments in digital technologies while ensuring that a supportive ecosystem for digital leadership is put in place across all key stakeholders.

**Message 2: The ability to integrate people and technology with the right governance structures is key to a collective prosperous future.** The NRI underscores this by showing that the top-performing countries in the overall index are also among the top-performing countries in each pillar of the NRI: Technology, People, Governance, and Impact. Technology can have an important positive impact on national economies and on their ability to reach the Sustainable Development Goals (SDGs), but this will not be achieved unless we are able to set up effective governance mechanisms to integrate technology with the three key stakeholder groups – individuals, businesses, and governments.

**Message 3: The technological divide remains a key concern at the global level.** High-income countries are the most future-ready in any dimension, but especially in technology. Unsurprisingly, the group of high-income countries dominates the NRI. If there is any one dimension, however, where this dominance is most keenly felt, it is technology. The technology-related indicators of NRI are also frequently where the greatest dispersions can be seen. Because high-income countries have traditionally invested heavily in their technology infrastructure (boosting both access and content) and continue to monitor and invest in Future Technologies,

they generally remain better positioned to leverage the opportunities afforded by technological innovations.

**Message 4: Technology and the impact of ICT are the key drivers that differentiate regions.** There can be considerable variations in network readiness across countries within any particular region. However, some regional differences can be identified through NRI data and analyses. For instance, Asia & Pacific and Commonwealth of Independent States (CIS) do comparatively well in terms of Impact of ICT, while access to and production of technology remains a challenge. In Africa and the Arab region, on the contrary, technologies and infrastructure often remain the first obstacle to network readiness.

**Message 5: Policy measures are urgently needed to allow a large part of mankind to be future-ready.** The results of the NRI 2019 show a persistent and important digital divide across nations, in all pillars of the model. Given the rapid pace of progress in underlying technology trends, it is important for governments to exhibit leadership and put in place appropriate policy measures to enable individuals and businesses to benefit from technological progress within the context of a trusted ecosystem.

**Message 6: Technological innovation is a powerful tool to achieve the SDGs.** In the face of growing distrust vis-à-vis governments (compounded by privacy concerns) on one hand, and technological innovations on the other (artificial intelligence and cybersecurity being two areas in point in this regard), it is critically important to rebuild the human face and values base of information technology. Linkages between technological progress and our collective ability to reach the SDGs will continue to be crucially important in this regard.

## A Renewed, Future-Ready NRI

Technology has progressed at a very fast pace over the last few decades. Today, it permeates all aspects of business and society. Information technology adoption became ubiquitous through the rapid penetration of the mobile phone and the Internet, and later the expansion of the platform economy. Today, it is an integral part of the lives of billions of people. Progress in core technologies continues at a fast pace, and technological disruptions are opening new opportunities for countries and firms to innovate and become more competitive. Technology has also improved the lives of billions through the provision of new services in education, health, finance, employment, commerce, and other key domains.

Along with this process, the strategic questions related to technology investment, deployment, and use have shifted from pure infrastructure issues to broader issues such as the impacts generated by the change from an economy based on ownership to a sharing-based economy, increasing security challenges and diminishing trust and complex governance schemes. This change is coupled with the challenge of how to leverage societies' capacity to absorb and benefit equally from the opportunities brought about by technology.

As disruptions in areas like big data, artificial intelligence, fintech, healthtech, and augmented and virtual reality gain momentum, the challenge of how to best combine technological opportunities and human concerns is high on the agenda of global leaders. The realization has emerged that if we are not able to leverage technology for bringing out the best in humans, we are potentially headed for scenarios in which society is fractured and some of our core organizational principles, such as democracy, can be perverted. Moreover, if the benefits to be expected from ongoing and upcoming changes are not global, they are bound to create new inequalities or reinforce existing ones.

The Network Readiness Index Report 2019 is the latest edition of a series launched in 2002 . It features a renewed Network Readiness Index (NRI) framework, which assesses the factors, policies, and institutions that enable a country to fully leverage information and communication technologies (ICTs) for inclusive, sustainable growth, competitiveness, and well-being.

The NRI has emerged as one of the leading global indices on the use of technology for development and enhanced competitiveness. Last published in 2016 by the World Economic Forum, initially in collaboration with the World Bank, then with INSEAD, and later in partnership with both INSEAD and Cornell University, the NRI has been recognized as a global benchmark for assessing the progress and readiness of technology adoption in countries around the world. Over the years, the NRI revealed the opportunities and challenges posed to governments, businesses, academia, and individuals to fully capture the benefits of technology, and provided valuable, data-based guidance to leaders from both the public and private sectors.

In this rejuvenated version, the framework of the NRI has been updated to include both the current technology landscape and the new imperatives in leveraging technology for the good of all. The goal is to update and continue the tradition of the NRI and use it as a basis to create an authoritative and valuable quantitative tool for facilitating multi-stakeholder dialogues at the international, regional, and national levels. We hope that the updated NRI continues to be used by policymakers, business leaders, academia, and civil society to evaluate progress and set the action agenda for more inclusive and sustainable growth, on a global scale.

A special not-for-profit, Portulans Institute, has been created to support research on the NRI and continue to serve leaders from the public and private sectors in their quest to deploy the power of ICT effectively within their societies and economies. It is hoped that the Portulans Institute, much like the ancient navigational map Portulan, will help us to discover the contours of the changing impact of ICT on our world and help us to navigate the right path forward. More details on the mission of the Portulans Institute can be found at [www.portulansinstitute.org](http://www.portulansinstitute.org).

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[https://cyber.harvard.edu/publications/2002/The\\_Global\\_Information\\_Technology\\_Report\\_2001-2002](https://cyber.harvard.edu/publications/2002/The_Global_Information_Technology_Report_2001-2002)

# The Redesigned NRI Model

During the development process for the 2019 renewed NRI, the team reviewed over 30 other general or technology-specific indices and surveys and compared their metrics and methodology used. A clear conclusion they found from this exercise is that a majority of existing indices have focused either on infrastructure—from its presence to its affordability, adoption, and in some cases relevance (e.g. the existence of content in a local language)—or on individual perceptions of the adoption of one specific technology (e.g. artificial intelligence, fintech, digital health tools), and thus do not provide country-level data that allows for rankings.

A smaller number of indices give priority to the human factor of network readiness and try to capture the impact of people's choices regarding technology and governance on economic growth, and more generally to the contribution of network readiness to the achievement of broader goals, such as those in the SDGs. In Appendix I, we present a table with a brief summary of our findings on the indices we reviewed.

A technical advisory group was then created to help advise on the redesign of the NRI model. There were three major principles guiding this process:

a) to maintain continuity with the major components of the NRI from previous years

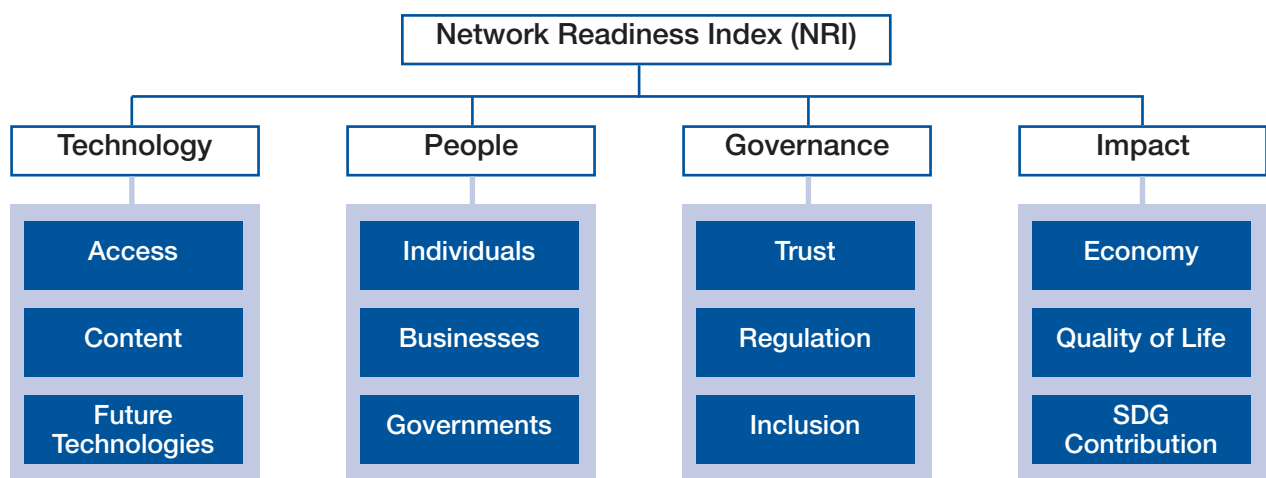
b) to reflect the current issues with respect to ICT deployment that were not adequately captured in the NRI model of 2016

c) to future-proof the NRI model for future technology trends and developments.

At a high level, the main concept underlying the new NRI model is that our collective future will require a harmonious integration of people and technology. Technology will continue to evolve and become more intelligent with the spread of artificial intelligence and related technological innovations. People and technology will increasingly interact as collaborators and partners in most parts of society and business. To ensure the effectiveness of this integration, appropriate governance mechanisms will have to be implemented to address issues related to trust, security, and inclusion. The ultimate objective is for technology to have a positive impact on the economy and our Quality of Life, helping us to achieve the SDGs.

In light of these considerations, a new NRI model emerged that rests on four pillars: Technology, People, Governance, and Impact. Each pillar is itself comprised of three sub-pillars, leading to the redesigned NRI model depicted in Figure 1.

Figure 1: The NRI 2019 model



Note: SDG = Sustainable Development Goal.

The reasoning behind the pillars and sub-pillars of the redesigned NRI model can be summarized as follows:

### Technology

Technology is at the heart of the network economy. This pillar therefore seeks to assess the level of technology that is a sine qua non for a country's participation in the global economy. The following three sub-pillars have been identified for that purpose:

- **Access:** The fundamental level of ICT in countries, including on issues of communications infrastructure and affordability.
- **Content:** The type of digital technology produced in countries, and the content/applications that can be deployed locally .
- **Future Technologies:** The extent to which countries are prepared for the future of the network economy and new technology trends such as artificial intelligence (AI) and Internet of Things (IoT).

### People

The availability and level of technology in a country is only of interest insofar as its population and organizations have the access, resources, and skills to use it productively. This pillar is therefore concerned with the application of ICT by people at three levels of analysis: individuals, businesses, and governments.

- **Individuals:** How individuals use technology and how they leverage their skills to participate in the network economy.
- **Businesses:** How businesses use ICT and participate in the network economy.
- **Governments:** How governments use and invest in ICT for the benefit of the general population.

### Governance

A country's network readiness does not take place in a vacuum and is a function of the national context within which people operate. Thus, this pillar seeks to capture how conducive the national environment is for a country's participation in the network economy, based on issues of trust, regulation, and inclusion.

- **Trust:** How safe individuals and firms are in the context of the network economy. This does not only relate to actual crime and security, but also to perceptions of safety and privacy.

- **Regulation:** The extent to which the government promotes participation in the network economy through regulation.

- **Inclusion:** The digital divides within countries where governance can address issues such as inequality based on gender, disabilities , and socioeconomic status.

### Impact

Ultimately, readiness in the network economy is a means to improve the growth and well-being in society and the economy. This pillar therefore seeks to assess the economic, social, and human impact of participation in the network economy.

- **Economy:** The economic impact of participating in the network economy.
- **Quality of Life:** The social impact of participating in the network economy.
- **SDG Contribution:** The impact of participating in the network economy in the context of the SDGs—the goals agreed upon by the UN for a better and more sustainable future for all. The focus is on goals where ICT has an important role to play, including such indicators as health, education, and environment.

Eventually, 62 indicators have been identified to populate these 12 sub-pillars. Details about these indicators can be found in Appendix II: Sources and Definitions.

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For the content pillar, the recently developed digital participation sub-index by Ojanperä, Graham, & Zook (2019) is particularly pertinent.

Shane Kanady, VP of Workforce Development for Source America notes that the importance of recognizing persons with disabilities in the NRI cannot be overstated. As a group, persons with disabilities, or so often overlooked in terms of their social and economic contributions. Technology can be a means for unlocking human potential and will continue to grow importance as the nature of employment changes worldwide. Action taken now to purposefully include persons with disabilities in the design of accessible, and usable technology will unlock their economic potential and contribute to the betterment of society

# Results of NRI 2019

## Overall rankings

The Network Readiness Index 2019 ranks a total of 121 economies. The top performer in this year's index is Sweden, which is just ahead of Singapore in 2nd place and the Netherlands in 3rd (Table 1). In truth, there is not much separating the leading countries in the NRI, as reflected in their overall scores. For instance, the top 5 countries (which also include Norway, 4th, and

Switzerland, 5th) are all within a couple of points of each other. Similarly, the other countries that make up the top 10—Denmark, Finland, the United States, Germany, and the United Kingdom—are less than 5 points away from Sweden's top score.

**Table 1: NRI 2019 Rankings and Scores**

Rank	Country/Economy	Score	Income group	Region
1	Sweden	82.65	High income	Europe
2	Singapore	82.13	High income	Asia & Pacific
3	Netherlands	81.78	High income	Europe
4	Norway	81.30	High income	Europe
5	Switzerland	81.08	High income	Europe
6	Denmark	81.08	High income	Europe
7	Finland	80.34	High income	Europe
8	United States	80.32	High income	The Americas
9	Germany	78.23	High income	Europe
10	United Kingdom	77.73	High income	Europe
11	Luxembourg	77.46	High income	Europe
12	Japan	76.17	High income	Asia & Pacific
13	Australia	74.80	High income	Asia & Pacific
14	Canada	74.72	High income	The Americas
15	Austria	74.36	High income	Europe
16	New Zealand	73.97	High income	Asia & Pacific
17	Korea (Republic of)	73.84	High income	Asia & Pacific
18	France	73.42	High income	Europe
19	Ireland	73.29	High income	Europe
20	Belgium	72.62	High income	Europe
21	Iceland	71.94	High income	Europe
22	Israel	70.86	High income	Europe
23	Estonia	69.30	High income	Europe
24	Hong Kong (China)	68.14	High income	Asia & Pacific
25	Spain	68.01	High income	Europe
26	Malta	66.94	High income	Europe
27	Slovenia	66.89	High income	Europe
28	Portugal	65.56	High income	Europe
29	United Arab Emirates	65.45	High income	Arab States
30	Czech Republic	65.09	High income	Europe
31	Lithuania	64.13	High income	Europe
32	Malaysia	63.76	Upper-middle income	Asia & Pacific

Rank	Country/Economy	Score	Income group	Region
33	Qatar	63.73	High income	Arab States
34	Italy	63.21	High income	Europe
35	Slovakia	61.95	High income	Europe
36	Cyprus	61.57	High income	Europe
37	Poland	61.46	High income	Europe
38	Hungary	59.95	High income	Europe
39	Latvia	59.31	High income	Europe
40	Bahrain	58.73	High income	Arab States
41	China	57.63	Upper-middle income	Asia & Pacific
42	Chile	57.38	High income	The Americas
43	Greece	57.07	High income	Europe
44	Croatia	56.75	High income	Europe
45	Saudi Arabia	56.49	High income	Arab States
46	Uruguay	56.04	High income	The Americas
47	Romania	55.47	Upper-middle income	Europe
48	Russian Federation	54.98	Upper-middle income	CIS
49	Bulgaria	54.77	Upper-middle income	Europe
50	Costa Rica	54.59	Upper-middle income	The Americas
51	Turkey	53.75	Upper-middle income	Europe
52	Serbia	53.65	Upper-middle income	Europe
53	Mauritius	53.40	Upper-middle income	Africa
54	Kuwait	53.39	High income	Arab States
55	Oman	52.87	High income	Arab States
56	Thailand	51.54	Upper-middle income	Asia & Pacific
57	Mexico	51.44	Upper-middle income	The Americas
58	Argentina	51.27	Upper-middle income	The Americas
59	Brazil	51.07	Upper-middle income	The Americas
60	Kazakhstan	50.68	Upper-middle income	CIS
61	Belarus	50.34	Upper-middle income	CIS
62	Armenia	49.84	Upper-middle income	CIS
63	Viet Nam	49.57	Lower-middle income	Asia & Pacific
64	Trinidad and Tobago	49.29	High income	The Americas

Rank	Country/Economy	Score	Income group	Region
65	North Macedonia	48.97	Upper-middle income	Europe
66	Moldova	48.93	Lower-middle income	Europe
67	Ukraine	48.91	Lower-middle income	Europe
68	Georgia	48.81	Upper-middle income	Europe
69	Colombia	48.77	Upper-middle income	The Americas
70	Azerbaijan	47.74	Upper-middle income	CIS
71	Philippines	47.70	Lower-middle income	Asia & Pacific
72	South Africa	47.38	Upper-middle income	Africa
73	Jordan	46.97	Upper-middle income	Arab States
74	Panama	46.96	High income	The Americas
75	Albania	46.57	Upper-middle income	Europe
76	Indonesia	46.15	Lower-middle income	Asia & Pacific
77	Peru	45.68	Upper-middle income	The Americas
78	Jamaica	45.52	Upper-middle income	The Americas
79	India	44.81	Lower-middle income	Asia & Pacific
80	Iran (Islamic Republic of)	43.66	Upper-middle income	Asia & Pacific
81	Bosnia and Herzegovina	42.72	Upper-middle income	Europe
82	Dominican Republic	42.59	Upper-middle income	The Americas
83	Sri Lanka	42.42	Upper-middle income	Asia & Pacific
84	Tunisia	42.04	Lower-middle income	Arab States
85	Ecuador	41.98	Upper-middle income	The Americas
86	Lebanon	41.44	Upper-middle income	Arab States
87	Morocco	41.38	Lower-middle income	Arab States
88	Paraguay	40.55	Upper-middle income	The Americas
89	Rwanda	39.97	Low income	Africa
90	Mongolia	39.91	Lower-middle income	Asia & Pacific
91	Kyrgyzstan	39.72	Lower-middle income	CIS
92	Egypt	38.58	Lower-middle income	Arab States
93	Kenya	38.19	Lower-middle income	Africa

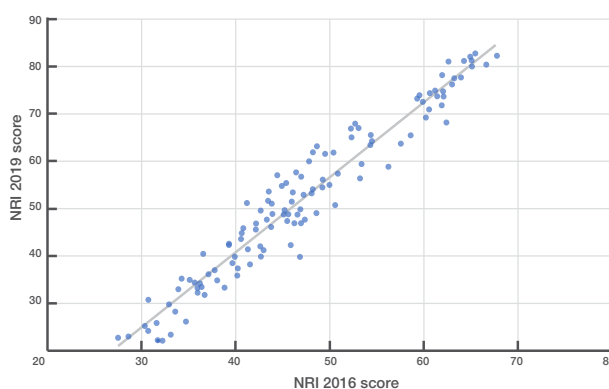
The underlying model of this year's NRI differs in several respects against that of the most recent NRI from 2016. The results of the two rankings are not, therefore, directly comparable. That said, it is still of interest to see whether they are broadly similar. Figure 2, which plots the scores of both NRIs, shows that this is indeed the case. Not only is the positive correlation between the two rankings very high ( $\rho = 0.97$ ), but several countries find themselves in roughly the same position, especially at the extremes of the rankings. This is arguably most notable at the very top of the rankings, with both Singapore and Sweden ranked in the top 3 in NRI 2016 and NRI 2019. Even though we would caution against comparing results of the two NRI rankings, the high degree of similarity between them strongly suggests that this year's index is indeed aligned with the latest version (2016) of the previous NRI.

One of the new features of NRI 2019 is its very structure. In particular, the pillars and sub-pillars of which the index is comprised are different from those of the previous NRIs, although there is some overlap. Table 2 shows how countries perform in the overall NRI and in its four pillars: Technology, People, Governance, and Impact. One of the insights that is immediately obvious from the table is that

Rank	Country/Economy	Score	Income group	Region
94	El Salvador	37.27	Lower-middle income	The Americas
95	Ghana	37.07	Lower-middle income	Africa
96	Guatemala	36.07	Upper-middle income	The Americas
97	Honduras	35.88	Lower-middle income	The Americas
98	Algeria	35.30	Upper-middle income	Arab States
99	Tajikistan	34.90	Low income	CIS
100	Botswana	34.85	Upper-middle income	Africa
101	Bangladesh	34.48	Lower-middle income	Asia & Pacific
102	Venezuela	34.14	Upper-middle income	The Americas
103	Senegal	33.67	Lower-middle income	Africa
104	Pakistan	33.38	Lower-middle income	Asia & Pacific
105	Namibia	33.34	Upper-middle income	Africa
106	Nepal	32.96	Low income	Asia & Pacific
107	Cambodia	32.29	Lower-middle income	Asia & Pacific
108	Lao P.D.R.	31.88	Lower-middle income	Asia & Pacific
109	Tanzania	30.73	Low income	Africa
110	Uganda	29.70	Low income	Africa
111	Nigeria	28.22	Lower-middle income	Africa
112	Zambia	26.20	Lower-middle income	Africa
113	Cameroon	25.94	Lower-middle income	Africa
114	Eswatini	25.19	Lower-middle income	Africa
115	Mali	24.29	Low income	Africa
116	Ethiopia	23.37	Low income	Africa
117	Malawi	22.90	Low income	Africa
118	Madagascar	22.73	Low income	Africa
119	Zimbabwe	22.09	Lower-middle income	Africa
120	Mozambique	22.07	Low income	Africa
121	Yemen	12.33	Low income	Arab States

the leading countries overall also perform very well in the various pillars. For instance, looking at how the countries ranked in the top 10 in the overall NRI fare at the pillar level, it can be seen that nine of them are also among the top 10 performers in the Technology dimension. A similarly high frequency also holds for the other pillars, with each containing eight countries that are also in the top 10 of the overall rankings.

Figure 2: NRI 2019 versus NRI 2016



Note: Scores for NRI 2016 fall in the 1-to-7 scale, while scores for NRI 2019 fall in the 0-to-100 scale.  $R^2 = 0.94$ .



The highest-ranked country when it comes to the Technology pillar is the United States, followed by the Netherlands and Switzerland (Table 2). All three countries perform well at the sub-pillar level and are, as a matter of fact, the 3 top-performing countries in the Content sub-pillar. Luxembourg leads the way with respect to the Access pillar, which can be partly attributed to the fact that smaller economies often have an advantage

in ensuring high levels of penetration. Indeed, Qatar, Singapore, and Hong Kong (China) are also among the top 10 economies in that sub-pillar. Finally, when it comes to Future Technologies, the United States is the standout performer, as it is among the leading countries in each of the associated indicators.

**Table 2: Rankings per pillar**

Country/Economy	NRI ranking	Technology	People	Governance	Impact
Sweden	1	4	2	9	3
Singapore	2	6	9	6	1
Netherlands	3	2	6	8	5
Norway	4	8	4	1	4
Switzerland	5	3	12	12	2
Denmark	6	11	1	10	6
Finland	7	5	5	7	7
United States	8	1	8	4	20
Germany	9	10	10	15	8
United Kingdom	10	7	14	5	13
Luxembourg	11	9	13	3	16
Japan	12	14	7	20	10
Australia	13	16	11	13	22
Canada	14	13	17	11	19
Austria	15	19	15	16	11
New Zealand	16	17	18	2	24
Korea (Republic of)	17	23	3	25	14
France	18	18	19	14	17
Ireland	19	12	28	17	9
Belgium	20	15	21	19	15
Iceland	21	20	16	30	12
Israel	22	22	22	23	18
Estonia	23	28	20	18	27
Hong Kong (China)	24	21	29	21	26
Spain	25	26	23	22	30
Malta	26	30	26	31	21
Slovenia	27	27	27	28	25
Portugal	28	24	30	27	36
United Arab Emirates	29	29	24	24	38
Czech Republic	30	31	33	35	23
Lithuania	31	34	25	26	41
Malaysia	32	36	32	29	33
Qatar	33	25	44	32	29
Italy	34	33	31	36	34
Slovakia	35	35	47	33	28
Cyprus	36	38	37	37	31
Poland	37	39	34	38	35
Hungary	38	32	50	46	32
Latvia	39	43	43	34	44
Bahrain	40	37	45	42	47

Country/Economy	NRI ranking	Technology	People	Governance	Impact
China	41	44	36	48	49
Chile	42	48	41	39	54
Greece	43	40	40	58	52
Croatia	44	45	52	40	43
Saudi Arabia	45	46	35	44	68
Uruguay	46	47	42	50	50
Romania	47	41	66	49	40
Russian Federation	48	51	39	56	59
Bulgaria	49	42	57	53	57
Costa Rica	50	56	56	51	37
Turkey	51	49	49	45	76
Serbia	52	50	51	60	55
Mauritius	53	52	70	41	58
Kuwait	54	55	38	71	62
Oman	55	70	58	43	53
Thailand	56	54	67	59	60
Mexico	57	68	55	63	48
Argentina	58	66	46	69	61
Brazil	59	67	48	55	71
Kazakhstan	60	74	61	66	39
Belarus	61	79	53	68	51
Armenia	62	53	54	81	70
Viet Nam	63	65	80	72	42
Trinidad and Tobago	64	61	77	78	46
North Macedonia	65	73	72	61	67
Moldova	66	62	69	77	56
Ukraine	67	71	63	67	65
Georgia	68	57	68	64	84
Colombia	69	76	65	57	73
Azerbaijan	70	63	74	84	63
Philippines	71	80	62	88	45
South Africa	72	58	79	47	99
Jordan	73	69	60	65	94
Panama	74	60	83	70	77
Albania	75	77	64	90	64
Indonesia	76	75	85	62	81
Peru	77	87	59	73	78
Jamaica	78	64	87	83	72
India	79	72	81	52	100
Iran (Islamic Republic of)	80	84	76	75	89

Country/Economy	NRI ranking	Technology	People	Governance	Impact
Bosnia and Herzegovina	81	85	88	86	74
Dominican Republic	82	90	71	85	91
Sri Lanka	83	78	98	79	83
Tunisia	84	86	78	91	88
Ecuador	85	94	75	99	75
Lebanon	86	59	73	115	85
Morocco	87	81	89	87	93
Paraguay	88	98	86	89	79
Rwanda	89	91	95	54	105
Mongolia	90	95	82	80	97
Kyrgyzstan	91	101	94	93	69
Egypt	92	88	90	92	95
Kenya	93	89	91	74	108
El Salvador	94	97	101	106	66
Ghana	95	100	96	76	102
Guatemala	96	104	97	104	86
Honduras	97	96	92	110	92
Algeria	98	109	93	108	87
Tajikistan	99	106	108	103	82
Botswana	100	92	102	97	106
Bangladesh	101	105	104	98	98

Country/Economy	NRI ranking	Technology	People	Governance	Impact
Venezuela	102	110	84	112	90
Senegal	103	99	106	96	104
Pakistan	104	93	111	101	101
Namibia	105	83	100	102	110
Nepal	106	107	107	95	103
Cambodia	107	82	110	116	96
Lao P.D.R.	108	103	103	120	80
Tanzania	109	115	109	82	109
Uganda	110	102	113	94	120
Nigeria	111	114	99	113	107
Zambia	112	113	114	100	119
Cameroon	113	108	115	117	113
Eswatini	114	111	105	118	112
Mali	115	112	120	105	118
Ethiopia	116	119	112	111	116
Malawi	117	120	118	109	111
Madagascar	118	116	117	107	121
Zimbabwe	119	117	116	119	114
Mozambique	120	118	119	114	115
Yemen	121	121	121	121	117

**The People pillar** is headed by two Scandinavian countries, Denmark and Sweden, which are strong in all dimensions related to the usage and skills of digital technologies by individuals, businesses, and governments. They are the two leading countries when it comes to the Businesses sub-pillar and are ranked 3rd and 4th, respectively, in the Governments sub-pillar. Immediately behind them is South Korea, which is the highest-ranked country in the Governments sub-pillar, but its 10th position with respect to Individuals and Businesses drags its pillar performance down somewhat. Other strong performers in the People pillar are Japan (especially in Individuals and Businesses) and the United States (especially in Businesses and Governments).

Another Scandinavian country—Norway—is the bellwether when it comes to **the Governance pillar**. It performs particularly well with respect to the Trust and Regulation sub-pillars, but it is also a top 10 country in the Inclusion sub-pillar. There are three different global leaders in the three sub-pillars: Luxembourg is the highest-ranked country when it comes to Trust, the

United States leads the way in Regulation, and New Zealand is second to none in matters related to Inclusion. Not surprisingly, these are also the countries that are ranked right below Norway in the Governance pillar.

**The final pillar—Impact**—sees Singapore as the highest-ranked country, followed by Switzerland and Sweden. Singapore is also the pacemaker when it comes to the Economy sub-pillar, where it features in the top 10 in three of the four indicators. Switzerland, meanwhile, is a more consistent performer, with high rankings in all three sub-pillars. Sweden performs particularly well with respect to the Economy and Quality of Life sub-pillars. The latter dimension is primarily dominated by the Nordic countries, with Norway leading the way. The top-performing economy with respect to SDG Contribution is Hong Kong (China), but its score at the pillar level is dragged down by indicators related to happiness and well-being in the Quality of Life sub-pillar.

## Top 10 NRI performers

The renewed NRI of 2019 has an improved structure that incorporates several features not included in the most recent model used for the index. As underlined earlier, this year's results are therefore not entirely comparable with the rankings of previous editions. Nevertheless, the fundamental basis of the NRI is unchanged and, as already discussed in relation to Figure 2, the rankings of NRI 2019 bear many resemblances to the results of NRI 2016. In fact, eight of this year's top 10 countries featured in the top 10 in NRI 2016. The two top 10 countries in this year's index that did not feature in the previous rankings' top 10 are Denmark (11th in NRI 2016; 4th in NRI 2019) and Germany (15th in NRI 2016; 10th in NRI 2019). Conversely, UK was ranked 8th and Japan was ranked 10th in NRI 2016, but in this year's index they are ranked, respectively, 11th and 12th. As expected, all of the top 10 countries are high-income countries. As for the regional distribution, eight of them are located in Europe, while one country (Singapore) is in Asia & Pacific, and one country (the United States) is in the Americas.

**1. SWEDEN** claims the top spot in the renewed NRI. One of the country's greatest strengths is its consistency across the pillars: It ranks in the top 10 in all four pillars and in the top 5 in three of them. Sweden's highest position at the pillar level is with respect to People (2nd), where it is the global leader in terms of Business ICT usage and skills, and it ranks 4th when it comes to the role of Government in ICT usage for People. The country ranks 3rd in the Impact pillar and 4th in the Technology pillar, boosted by strong showings in the Economy (5th) and Quality of Life (6th) sub-pillars in the former case and by impressive performances in the Content (5th) and Future Technologies (3rd) sub-pillars in the latter. One of Sweden's weakest dimensions relates to the Individuals (14th) sub-pillar, where there is a possibility to raise the skill set of the population.

**2. SINGAPORE** ranks just behind the leader in the NRI 2019. In fact, its overall score is only marginally lower than that of Sweden, and both countries can, for all intents and purposes, be regarded as equally ready for a global network economy in constant flux. Singapore is a top 10 country in all four pillars and is in the top position when it comes to the Impact pillar, where it does particularly well in terms of the impact of its readiness on the Economy (1st). The city-state

is also successful in the pillar related to Governance (6th), benefiting from high levels of Regulation (5th) and Inclusion (2nd). Being on the forefront of Future Technologies (4th) contributes to a strong performance in the Technology (6th) pillar. Singapore does less well when it comes to the People (9th) pillar, where more could be done to boost ICT usage of Businesses (16th).

**3. THE NETHERLANDS** is the final country to make it into the top 3. Like the two countries ranked above it, the Netherlands performs well in all four pillars, ranking in the top 10 in each of them. The country is particularly strong when it comes to Technology (2nd), where it is the global leader in the Content sub-pillar and has a high level of Future Technologies (8th). In the Impact (5th) pillar, it benefits from solid performances in the Economy (9th) and Quality of Life (7th) sub-pillars. Other notable strengths relate to the country's levels of Regulation (4th) and Inclusion (6th), which contribute to good Governance (8th), and to ICT usage and skills by firms and national authorities (ranking 7th in both sub-pillars related to Businesses and Governments), which boosts the digital relevance for People (6th). The main weakness is the Individuals (18th) sub-pillar, especially when it comes to increased digital usage.

**4. NORWAY** is the world's top-performing country when it comes to issues of Governance that are relevant to the network economy. It enjoys high levels of Trust (2nd) and Regulation (3rd) and is also one of the top 10 countries in the Inclusion (8th) sub-pillar. Norway is the global leader with regard to Quality of Life and also has a strong SDG Contribution (4th), which are the main factors behind the country's high Impact (4th). The country performs equally well in the People (4th) pillar, especially when it comes to ICT usage by the national authorities (2nd in the Governments sub-pillar). In the Technology (8th) pillar, Norway enjoys a high degree of Access (5th) and somewhat lower levels of Future Technologies (10th) and Content (12th).

**5. SWITZERLAND** is one of the global leaders in two of the pillars of the NRI, while it performs less well with respect to the other two pillars. The country's best showing relates to the Impact (2nd) pillar,

primarily as a result of the high scores it achieves in the Economy (3rd) and SDG Contribution (2nd) sub-pillars. Switzerland is also impressive when it comes to the Technology (3rd) pillar, where it enjoys superior levels of Access (4th), Content (3rd), and Future Technologies (7th). Its performances in the pillars on People and Governance (both 12th) are more disappointing. In the former case, the score is primarily dragged down by comparatively weak ICT usage among Individuals (44th), which stand in stark contrast to the ICT usage and skills by Businesses (3rd). In the latter case, it is mainly due to a relatively low level of Inclusion (18th).

**6. DENMARK** is a cut above the rest when it comes to the People (1st) pillar, where it is one of the top 5 countries in all three sub-pillars: Individuals (5th), Businesses (2nd), and Governments (3rd). The country is also in the top 10 in the pillars related to Impact (6th) and Governance (10th). With respect to the former, its strong performance in Quality of Life (5th) is offset by somewhat lower rankings in the sub-pillars related to Economy (11th) and SDG Contribution (16th). As for the latter, it ranks in the top 10 in each sub-pillar (Trust, 4th; Regulation, 9th; Inclusion, 10th). Content (8th) is Denmark's best-performing sub-pillar when it comes to Technology (11th), while the somewhat weaker performances in the other two sub-pillars—Access (13th) and Future Technologies (11th)—mean that it finds itself outside the top 10 in this dimension.

**7. FINLAND** is a strong performer across most dimensions in the NRI. In fact, it is the final country to rank in the top 10 in each of the four pillars. Its best showings are in Technology and People (5th in both pillars), which can be attributed to high levels of Future Technologies (6th) in the former case and excellent ICT usage and skills by Businesses (5th) in the latter case. Finland is ranked 7th with respect to both other pillars: Governance and Impact. In the Governance pillar, it performs well in all sub-pillars (Trust, 7th; Regulation, 2nd; Inclusion, 9th). The performances at the sub-pillar level of the Impact pillar are more varied, with the country having the second-highest score in Quality of Life and somewhat weaker performances in the Economy (16th) and SDG Contribution (11th).

**8. THE UNITED STATES** leads the way when it comes to Technology, where it is the top performer in Future Technologies and has the second-highest score in Content. Its weaker performance in the Access (29th) sub-pillar stands in stark contrast to this. The country also does very well in the Governance (4th) pillar, where it has the world's best Regulation relevant to the network economy and is a leading country in terms of Inclusion (4th). The United States also has a high rank in the People (8th) pillar, as a result of solid performances in the sub-pillars Businesses (9th) and Governments (8th). The country's weakest dimension relates to Impact (20th), where there is mainly room for improvement in the Quality of Life (40th) and SDG Contribution (35th) sub-pillars.

**9. GERMANY** finds itself in the top 10 in three pillars: Technology (10th), People (10th), and Impact (8th). The strong performance with respect to the Impact pillar is primarily due to the positive SDG Contribution (6th) and the outcomes in the Economy (7th) sub-pillar. Germany's showing in the Technology pillar is more checkered, though, as a world-class level of Future Technologies (2nd) is offset by lower degrees of Access (27th) and Content (17th). As for the People pillar, strong ICT usage and skills by firms and national authorities (6th in both the Businesses and Governments sub-pillars) is hampered by a weak ICT usage by Individuals (41st). Germany does not feature in the top 10 in any of the sub-pillars related to Governance (15th), where issues on Trust (19th) and Inclusion (17th) appear to be the most pressing.

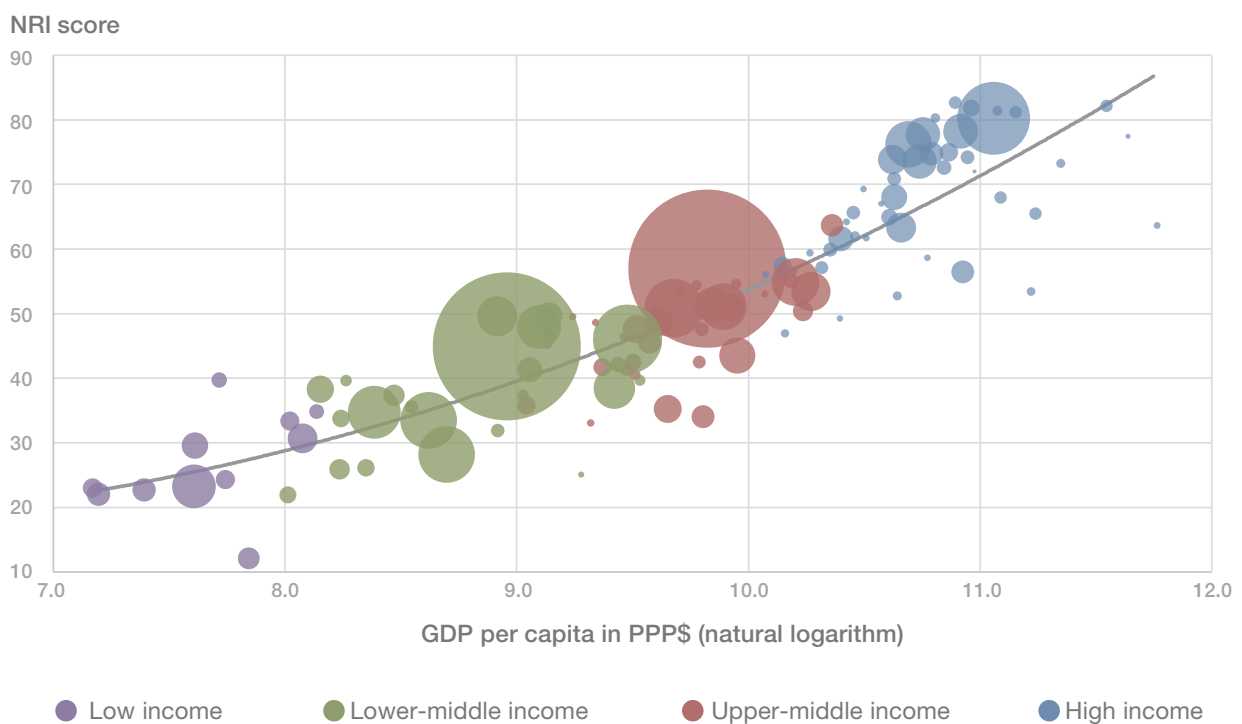
**10. THE UNITED KINGDOM** makes it into the top 5 in the Governance (5th) pillar, where it benefits from solid performances in all three sub-pillars: Trust (5th), Regulation (10th), and Inclusion (5th). The country is also ranked in the top 10 when it comes to Technology (7th), which is primarily driven by excellent Access (3rd) and Content (6th). A high level of SDG Contribution (3rd) boosts the Impact (13th) pillar, which is otherwise hampered by weaker performances in Economy and Quality of Life (18th in both sub-pillars). One of the main areas with scope for improvement relates to ICT usage and skills of Individuals (29th), which drags down the overall performance in the People (14th) pillar.

## NRI Performances by Income Group

A casual glance at the NRI 2019 rankings is enough to give the impression that, generally speaking, higher-income countries outscore lower-income countries. Figure 3 plots the NRI score of countries against their GDP per capita (PPP), which makes it clear that this impression

is justified and that the two measures are indeed highly correlated. It is therefore of interest to consider in greater detail how various income groups compare to each other in the NRI.

**Figure 3: NRI score vs GDP per capita**



Note: GDP per capita are in PPP\$ (natural logarithms). Both GDP per capita and population data (represented by the size of the bubbles) are for 2018 or the latest year available. The data are drawn from the World Bank's World Development Indicators database. The trend line is a polynomial of degree two ( $R^2 = 0.81$ ).

### Country codes for chart

Code	Country/Economy
AE	United Arab Emirates
AL	Albania
AM	Armenia
AR	Argentina
AT	Austria
AU	Australia
AZ	Azerbaijan
BA	Bosnia and Herzegovina
BD	Bangladesh
BE	Belgium
BG	Bulgaria

Code	Country/Economy
BH	Bahrain
BR	Brazil
BW	Botswana
BY	Belarus
CA	Canada
CH	Switzerland
CL	Chile
CM	Cameroon
CN	China
CO	Colombia
CR	Costa Rica

Code	Country/Economy
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
DO	Dominican Republic
DZ	Algeria
EE	Estonia
EG	Egypt
ES	Spain
ET	Ethiopia

Code	Country/Economy
FI	Finland
FR	France
GB	United Kingdom
GE	Georgia
GH	Ghana
GR	Greece
GT	Guatemala
HK	Hong Kong (China)
HN	Honduras
HR	Croatia
HU	Hungary

Code	Country/Economy	Code	Country/Economy	Code	Country/Economy	Code	Country/Economy
ID	Indonesia	LU	Luxembourg	OM	Oman	SZ	Eswatini
IE	Ireland	LV	Latvia	PA	Panama	TH	Thailand
IL	Israel	MA	Morocco	PE	Peru	TJ	Tajikistan
IN	India	MD	Moldova	PH	Philippines	TN	Tunisia
IR	Iran (Islamic Republic of)	MG	Madagascar	PK	Pakistan	TR	Turkey
IS	Iceland	MK	North Macedonia	PL	Poland	TT	Trinidad and Tobago
IT	Italy	ML	Mali	PT	Portugal	TZ	Tanzania
JM	Jamaica	MN	Mongolia	PY	Paraguay	UA	Ukraine
JO	Jordan	MT	Malta	QA	Qatar	UG	Uganda
JP	Japan	MU	Mauritius	RO	Romania	US	United States
KE	Kenya	MW	Malawi	RS	Serbia	UY	Uruguay
KG	Kyrgyzstan	MX	Mexico	RU	Russian Federation	VE	Venezuela
KH	Cambodia	MY	Malaysia	RW	Rwanda	VN	Viet Nam
KR	Korea (Republic of)	MZ	Mozambique	SA	Saudi Arabia	YE	Yemen
KW	Kuwait	NA	Namibia	SE	Sweden	ZA	South Africa
KZ	Kazakhstan	NG	Nigeria	SG	Singapore	ZM	Zambia
LA	Lao P.D.R.	NL	Netherlands	SI	Slovenia	ZW	Zimbabwe
LB	Lebanon	NO	Norway	SK	Slovakia		
LK	Sri Lanka	NP	Nepal	SN	Senegal		
LT	Lithuania	NZ	New Zealand	SV	El Salvador		

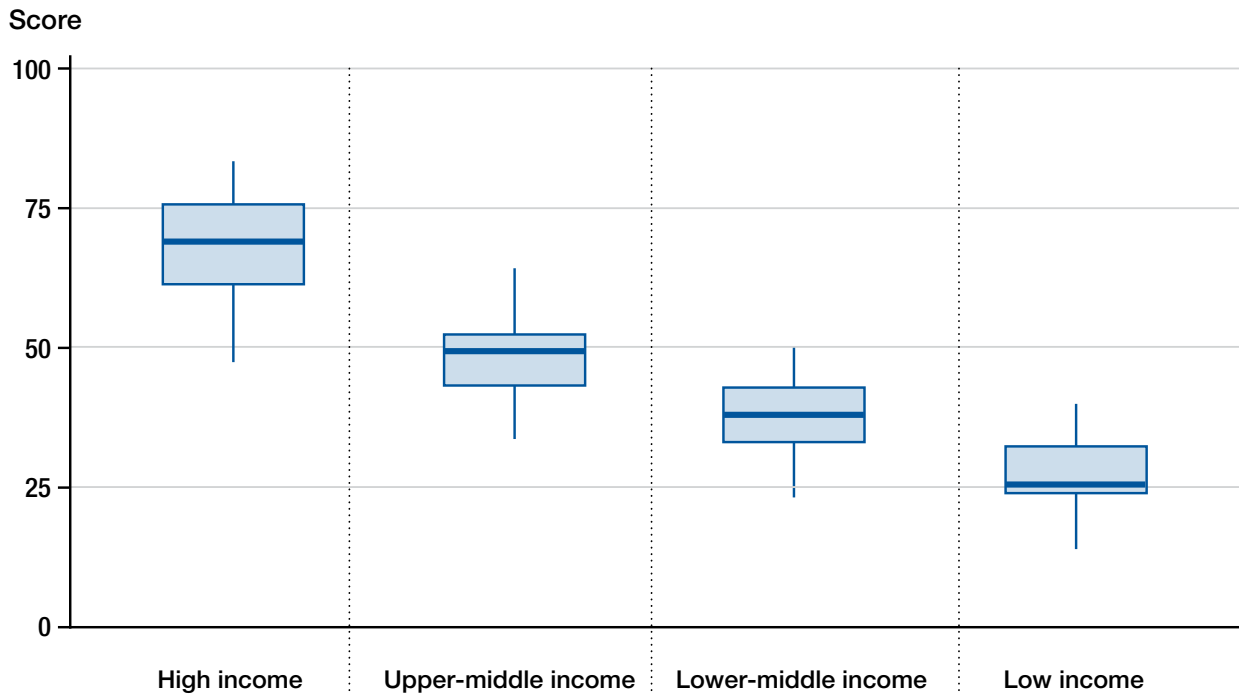
Figure 4 shows the distribution of scores in NRI 2019 for four income groups: low-income countries, lower-middle-income countries, upper-middle-income countries, and high-income countries. As would be expected, the group of high-income countries dominates the rankings. In fact, all the countries in the top quartile are high-income countries (the best-performing country from the other income groups, Malaysia, is ranked 32nd). Another manifestation of the group's dominance is that 44 of all 48 high-income countries outperform the leaders of the low-income and lower-middle-income country groups and would make it into the top 3 in the upper-middle-income group.

There is greater overlap across countries of the other three income groups, although Figure 4 clearly shows that the group of upper-middle-income countries outperforms the lower-middle-income group, which, in turn, has higher scores than the group of low-income countries.

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Countries are grouped according to the World Bank Income Classifications. Economies are divided based on their 2018 gross national income (GNI) per capita, calculated using the World Bank Atlas method (see <https://blogs.worldbank.org/opendata/new-country-classifications-income-level-2019-2020>).

Figure 4: NRI scores by income group



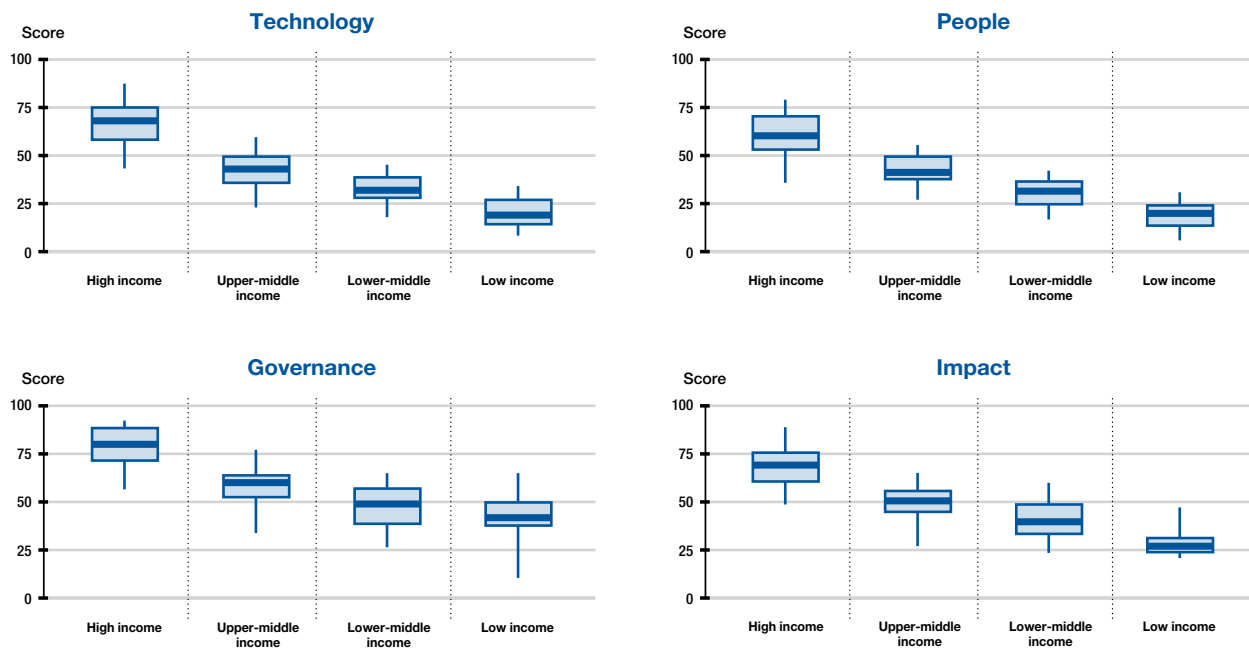
Note: The whiskers indicate minimum and maximum values, while the extremes of a box indicate the 25th and 75th percentiles. The line within a box represents the median (i.e. 50th percentile).

Looking at the performances of income groups at the pillar level sheds some light on their stronger and weaker dimensions. Figure 5 therefore shows the distribution of NRI scores for each income group broken down by pillar. Three main conclusions can be drawn. First, the relative performances of income groups in the respective pillars follow the same pattern as the overall NRI, i.e. the higher the income group, the higher the score. In fact, this pattern also seems to hold at the level of sub-pillars with the exception of one case. More specifically, comparing average scores by sub-pillar across income groups reveals that the high-income group is at the top in all of them, the low-income group is at the bottom in all of them, and the upper-middle-income and lower-middle-income groups are almost always second and

third, respectively. The one exception concerns the Future Technologies sub-pillar, where the average lower-middle-income country just outscores the average upper-middle-income country.

Second, the greatest overlap across income groups is in the Governance pillar. It is, for instance, the only pillar where the top-performing low-income country ranks above the weakest high-income country. Third, the Governance pillar is the dimension that has the greatest variation of NRI scores for upper-middle-income, lower-middle-income, and low-income countries. In the case of high-income countries, the greatest dispersion is in the Technology and People pillars.

Figure 5: NRI scores by income group and pillar



Note: The whiskers indicate minimum and maximum values, while the extremes of a box indicate the 25th and 75th percentiles. The line within a box represents the median (i.e. 50th percentile).

Turning to specific country performances, Table 3 lists the top 3 countries for each income group. The group of high-income countries—headed by Sweden, Singapore, and the Netherlands—have rankings that range from the top spot to 74th place (Panama). The median rank

is 25, which is better than the top-ranked country of any other income group. Top 10 performers in the NRI was discussed in greater detail in an earlier section (pp. 27–28), so the reader is referred to that part for an analysis of the top 3 high-income countries.

Table 3: Top 3 countries by income group

High-income countries	Upper-middle-income countries	Lower-middle-income countries	Low-income countries
1. Sweden (1)	1. Malaysia (32)	1. Viet Nam (63)	1. Rwanda (89)
2. Singapore (2)	2. China (41)	2. Moldova (66)	2. Tajikistan (99)
3. Netherlands (3)	3. Romania (47)	3. Ukraine (67)	3. Nepal (106)

Note: Global ranks in parenthesis.

**Malaysia** (32nd), **China** (41st), and **Romania** (47th) lead the group of upper-middle-income countries. The median rank for countries in the group is 69. Malaysia is a consistent performer in all four pillars, with rankings ranging from 29th in Governance to 36th in Technology. The Governance pillar benefits primarily from a strong showing in the Regulation (17th) sub-pillar. However, Malaysia's best performance at the sub-pillar level relates to the Economy (15th) sub-pillar in the Impact (33rd) pillar.

However, the same pillar also contains the lowest-ranked sub-pillars: Quality of Life and SDG Contribution (both 57th). China's best performance is in the People (36th) pillar, which is primarily boosted by the level of ICT usage and skills by Businesses (25th). The country also does well in the Future Technologies (26th) sub-pillar, but its overall score in the Technology (44th) pillar is dragged down by a relatively weak level of Content (78th). The most scope for improvement seems to be in the Impact



(49th), where more could be done to lift the Quality of Life (48th) and, above all, SDG Contribution (78th).

All of the lower-middle-income countries find themselves in either the first or second quartile in the overall NRI. The top-performing country of the group is **Viet Nam** (63rd), while the lowest-ranked country is **Zimbabwe** (119th). Viet Nam's strongest dimension relates to Impact (42nd). It is particularly impressive when it comes to the Economy (20th) sub-pillar, where it is placed in the top quartile. The country's worst performance is in the People (80th) pillar, and there is a need to improve the ICT usage and skills of firms and national authorities (it ranks 86th in the Businesses sub-pillar and 89th in the Governments sub-pillar).

**Rwanda** (89th) is the only low-income country that does not find itself in the bottom quartile. This is mainly due to its strong performance in the Governance (54th) pillar and, in particular, the strong relevance of the country's regulatory framework for the network economy (it ranks 30th in Regulation). Rwanda is also impressive in how the public authorities use ICT (30th in Governments), but poor ICT usage and skills among Individuals (114th) and Businesses (106th) drag down the overall score in the People (95th) pillar.

## NRI Performances by Region

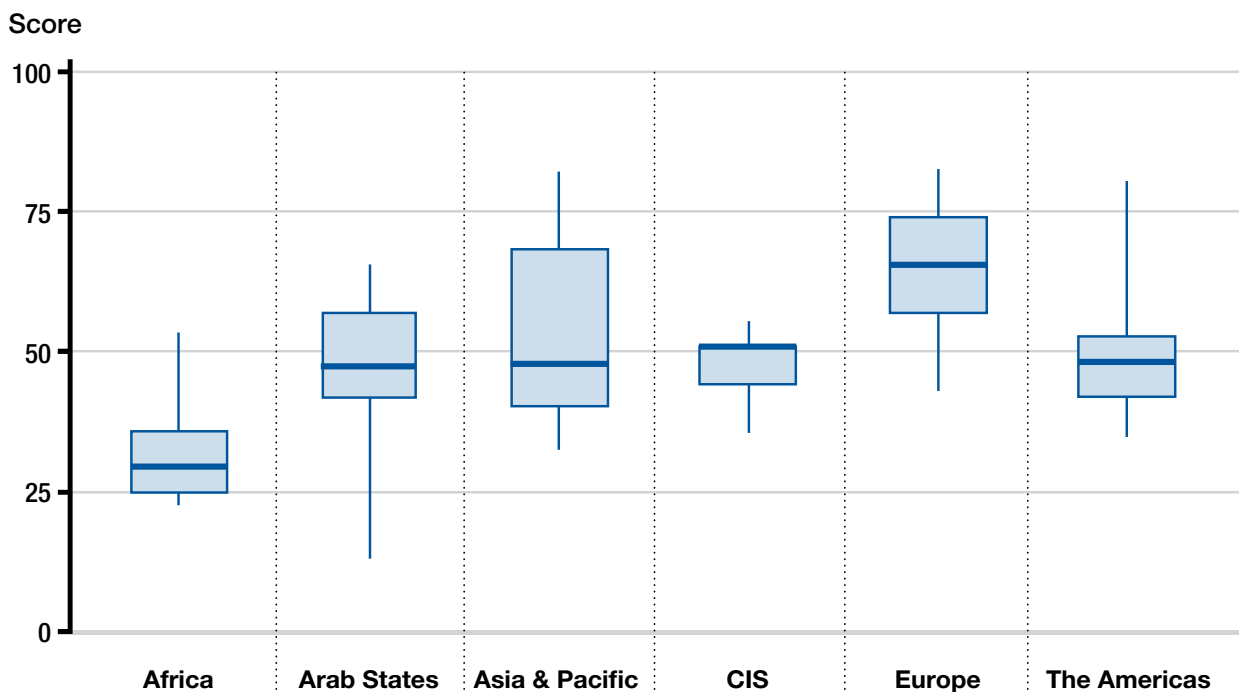
In view of how scores in the NRI are associated with GDP per capita (Figure 3) and how higher-income countries tend to outshine lower-income countries in the index, it is only to be expected that regional performance is reflected by the various proportions of income groups in the region. Figure 6, which depicts the distribution of NRI scores by region, confirms this. Thus, it can be seen that Europe—which has the largest share of high-income countries and the lowest shares of the other income groups—outperforms all other regions. Conversely, Africa—which has the greatest proportion of low-income countries—is clearly the weakest-performing region in the NRI.

More interesting than comparing regional performances in the overall NRI is to analyze how regions fare in each of the four pillars (Figure 7). To be sure, the rankings of some regions at the pillar level are in line with their overall rankings. Most notably, this is the case of Africa and Europe, which are placed at the bottom and top,

respectively, in each pillar. It is interesting to note, though, that Africa is not the worst-performing region when it comes to two sub-pillars—Future Technologies and Trust—where it ranks ahead of CIS. The associated pillars, Technology and Governance, are also the two weakest dimensions of the CIS, which suggests that many countries in the region should pay more attention to promoting online safety and ICT regulation and to preparing themselves for disruptive technologies like AI and IoT.

As pointed out by Ojanperä et al. (2019), this should not be interpreted as a lack of innovative capacity, since the variables have been scaled by population. Generally speaking, populous countries such as China and India can rank well below top-performing countries in a given variable when the number of inhabitants is taken into account, but may well be among the highest-ranked countries when the variable is considered in absolute terms.

Figure 6: NRI scores by region



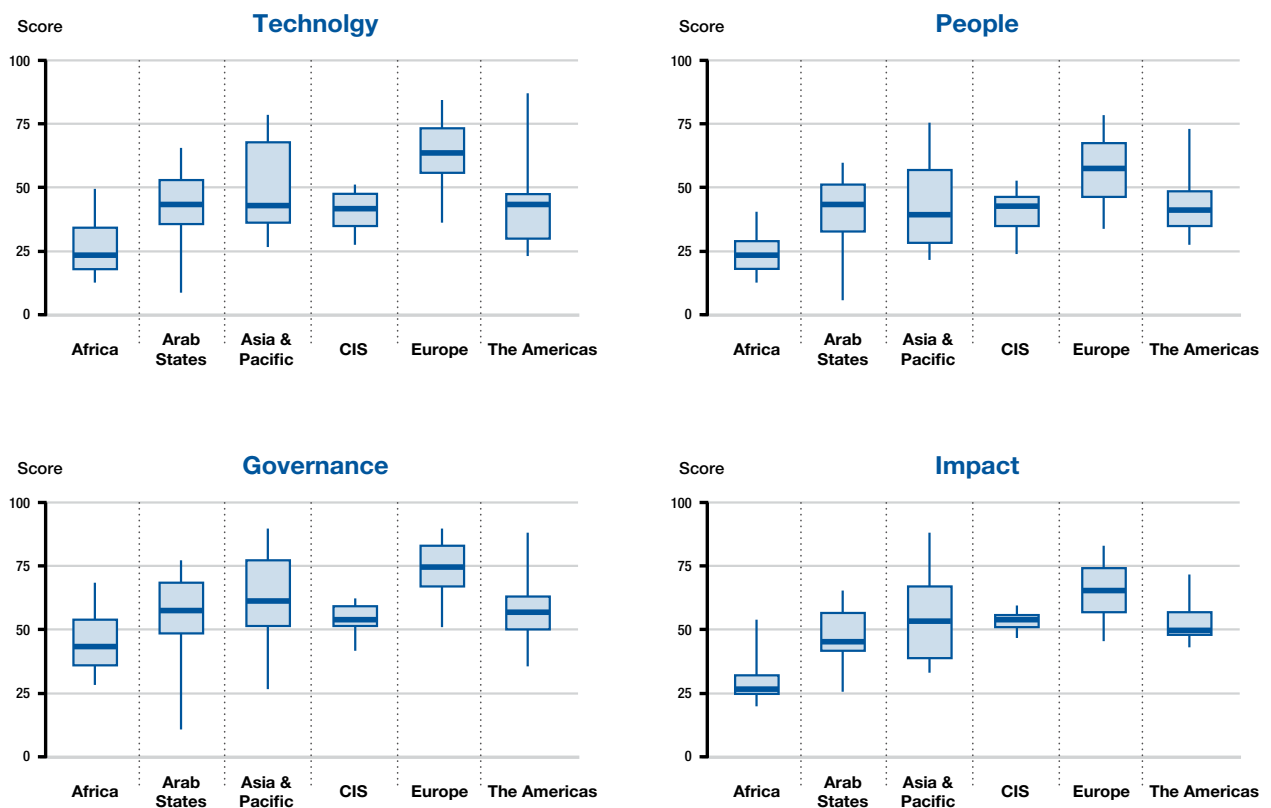
Note: The whiskers indicate minimum and maximum values, while the extremes of a box indicate the 25th and 75th percentiles. The line within a box represents the median (i.e. 50th percentile). CIS = Commonwealth of Independent States.

The Asia & Pacific region is often only behind Europe in many of the dimensions included in the NRI. That said, it performs slightly better in the Governance and Impact pillars and their associated sub-pillars. The strongest dimension of Arab States seems to relate to People, while the region's greatest challenges relate to Impact. Many countries located in The Americas have an advantage when it comes to Technology, although it is also the pillar

where the region has the greatest dispersion of scores.

Clearly, focusing on regions as a whole results in a failure to take into account the variety of performances by individual countries, as indicated by the heights of the boxes and whiskers in Figure 6 and Figure 7. This can also be seen in Table 4, which lists the 3 top-performing countries in each region.

Figure 7: NRI scores by region and pillar



Note: The whiskers indicate minimum and maximum values, while the extremes of a box indicate the 25th and 75th percentiles. The line within a box represents the median (i.e. 50th percentile). CIS = Commonwealth of Independent States.

In Africa, for instance, there is a clear gap even within the top 3, with **Mauritius** ranked 53rd and Rwanda ranked 89th. In between these two is **South Africa** (72nd), where the levels of Trust (38th) and Inclusion (46th) contribute to making Governance (47th) its best pillar. South Africa also finds itself in the third quartile with respect to Technology (58th), primarily as a result of the country's position in Content (54th) and Future Technologies (53rd). Its greatest challenge, meanwhile, concerns the Impact (99th) of the network economy, especially as it relates to improving Quality of Life (118th). As for Mauritius, its level of Trust (32nd) also makes a significant positive contribution to the Governance (41st) pillar. Its weakest dimension is People (70th), with considerable room for

improvement in all three sub-pillars (Individuals, 73rd; Businesses, 68th; Governments, 69th).

The group of Arab States has one of the largest dispersions of overall scores in the NRI, despite the region being represented by only 13 countries in the index. The region can, in effect, be broken down further into Middle East and Northern Africa, where most of the former countries clearly outperform the latter economies. The main exception is **Yemen**, which is ranked last in the NRI. The regional leader, **United Arab Emirates** (29th), is the only Arab State ranked in the top quartile. The high ICT usage of its population makes it the top-performing country in the Individuals sub-pillar, but lower digital

usage and skills by firms and national authorities (34th in Businesses; 59th in Governments) put a damper on the overall score in the People (24th) pillar. The UAE performs equally well in the Governance (24th) pillar, boosted by consistent performances in all three sub-pillars (Trust, 21st; Regulation, 32nd; Inclusion, 28th). Its most pressing

need is to improve the Impact (38th) of the network economy, where much could be done to raise SDG Contribution (75th).

**Table 4: Top 3 countries by region**

Africa	Arab States	Asia & Pacific
1. Mauritius (53)	1. United Arab Emirates (29)	1. Singapore (2)
2. South Africa (72)	2. Qatar (33)	2. Japan (12)
3. Rwanda (89)	3. Bahrain (40)	3. Australia (13)
CIS	Europe	The Americas
1. Russian Federation (48)	1. Sweden (1)	1. United States (8)
2. Kazakhstan (60)	2. Netherlands (3)	2. Canada (14)
3. Belarus (61)	3. Norway (4)	3. Chile (42)

Note: Global ranks in parenthesis. CIS = Commonwealth of Independent States.

Asia & Pacific is the other region with a wide dispersion of performances in the NRI, ranging from Singapore in 2nd to Lao PDR in 108th. Singapore is further discussed in the section on top 10 NRI performers by virtue of its high rank. The next best country in the region is **Japan** (12th), which makes into the top 10 in two pillars: People (7th) and Impact (10th). In the former case, the dimension is primarily boosted by the very high ICT usage and skills of Individuals (8th) and Businesses (4th). In the latter case, the pillar mainly benefits from excellent scores in the sub-pillars related to Economy (4th) and SDG Contribution (5th). Japan is also a world-class performer in Future Technologies (5th), but its overall score in Technology is weakened by its levels of Access (35th) and Content (27th). Ranked just below Japan is **Australia** (13th), which also enjoys high ICT usage and skills among Individuals (6th) that contribute to make People (11th) the best-ranked pillar. Australia's performances in Governance (13th) and Technology (16th) are primarily boosted by high levels of, respectively, Trust (9th) and Access (8th). The country's weakest dimension is Impact (22nd), where efforts should be made to raise ICT's role in the Economy (28th) and SDG Contribution (26th).

Further down the rankings of the Asia & Pacific region, one finds the highest-scoring South Asian country: **India** (79th). Its key strength lies in Governance (52nd), as a result of consistent performances in all three sub-pillars: Trust (49th), Regulation (59th), and Inclusion (58th). The

relatively high score in the Governments (36th) sub-pillar is offset by weak ICT usage and skills by Individuals (103rd) and Businesses (87th), which leads to a rank of 81st in the People pillar. Slightly better is the Technology (79th) pillar, mainly because of the level of Future Technologies (46th). India's greatest challenge is to raise the Impact (100th) pillar, where there is much scope for improvement in issues related to Quality of Life (93rd) and SDG Contribution (108th).

The group of CIS countries is headed by **Russian Federation** (48th). Its best performance relates to People (38th), especially the ICT usage and skills of firms and national authorities (35th in Businesses and 32nd in Governments). At the level of the sub-pillar, meanwhile, the country does even better when it comes to Inclusion (29th). However, the same pillar—Governance (56th)—also includes Russian Federation's weakest dimension in the NRI: Regulation (91st). Other areas in most need of improvement include boosting Future Technologies (72nd) in the Technology (51st) pillar and raising Quality of Life (85th) in the Impact pillar (59th).

Europe, as has been discussed above, dominates the NRI rankings, with eight countries in the top 10. These are all analyzed in greater detail in the separate section on the top 10 NRI performers (see above).

The two North American neighbors—the United States (8th) and **Canada** (14th)—are the highest-ranked

countries in The Americas. The former is discussed further in the section on the top 10 NRI performers. Meanwhile, Canada is a solid performer in all four pillars, ranking in the top 20 in each. It is one of the leading countries when it comes to Inclusion (3rd) of various groups in the network economy, which—together with high levels of Trust (14th) and Regulation (15th)—leads to good Governance (11th). Canada ranks 10th in the two sub-pillars related to Governments and Quality of Life, but relatively weak ICT usage among Individuals (47th) dampens the People (17th) pillar, while the Impact (19th) would improve by boosting the role of ICT in the Economy (29th) and SDG Contribution (27th).

**Chile** (42nd) is the leading Latin American country in no small part because of the levels of ICT usage and skills among Individuals (20th) and Businesses (41st), which boosts the People (41st) pillar. The country also performs relatively well with respect to Governance (39th), where it enjoys solid levels of Trust (42nd) and Regulation (39th). Its main weakness relates to Impact (54th), where much could be done to raise the Economy (70th) sub-pillar. The largest three Latin American economies—**Mexico** (57th), **Argentina** (58th), and **Brazil** (59th)—are all ranked next to each other in the NRI. All three do comparatively well in the People pillar (Mexico, 55th; Argentina, 46th; Brazil, 48th), although in the case of Argentina, it is primarily due to the high level of ICT usage and skills among Individuals (17th), while in the case of Mexico and Brazil, it can mainly be attributed to ICT usage by national authorities (28th and 27th, respectively). All three countries can do much more to increase their readiness for Future Technologies (Mexico, 80th; Argentina, 103rd; Brazil, 95th).

## Conclusion

As in all previous editions of the NRI, the index proposed this year should be seen as a work in progress, which will benefit from the reactions, feedback, and suggestions that we expect from our readership.

The changes made this year to the NRI framework and methodology, although they do not create a total disruption from the time series and analyses produced over the last two decades of NRI, offer a unique and

bold opportunity to better integrate the human and technological aspects of the significant changes affecting our global environment today and tomorrow. It is our hope that the new NRI will allow the international community and its key stakeholders (governments, business, individuals) to become more future-ready.

Addressing the challenges of the SDGs will continue to be a key component of that effort.

The persistence of a strong digital divide between the more advanced economies and the rest of the world, as well as the growing importance granted by populations around the globe to issues of confidentiality, privacy, security, and the future of work in the presence of massive automation and reliance on AI call for imaginative approaches to ICT strategies. We hope that the new NRI will encourage and support efforts made in that direction.

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The following sections of this report include the profiles of the economies included in the 2019 NRI and the data tables that provide detailed metrics for all the 62 indicators. The Country/Economy Profiles section presents a profile for each of the 121 countries summarizing each economy's performance in the various NRI pillars and sub-pillars.

These two sections are followed by three appendixes. Appendix I: Indices Review discusses a benchmark of indices reviewed during the design process of the 2019 NRI. Appendix II: Technical Notes provides a summary of the methodology of the NRI. Appendix III: Sources and Definitions lists in detail the names, descriptions, definitions, and sources for each of the 62 NRI indicators.

NRI 2019 - Annex Table 1 - Technology

Country	PILLAR	SUB-PILLARS		
	Technology	Access	Content	Future Technologies
United States	1	29	2	1
Netherlands	2	12	1	8
Switzerland	3	4	3	7
Sweden	4	14	5	3
Finland	5	15	9	6
Singapore	6	5	16	4
United Kingdom	7	3	6	15
Norway	8	6	12	10
Luxembourg	9	1	14	9
Germany	10	27	17	2
Denmark	11	13	8	11
Ireland	12	11	4	20
Canada	13	28	13	17
Japan	14	35	27	5
Belgium	15	17	21	16
Australia	16	8	11	30
New Zealand	17	16	10	28
France	18	23	26	18
Austria	19	36	19	19
Iceland	20	7	7	40
Hong Kong (China)	21	9	40	14
Israel	22	53	20	13
Korea (Republic of)	23	20	43	12
Portugal	24	25	28	29
Qatar	25	2	49	21
Spain	26	22	33	27
Slovenia	27	24	18	38
Estonia	28	26	15	41
United Arab Emirates	29	10	48	23
Malta	30	31	24	33
Czech Republic	31	33	23	37
Hungary	32	21	29	50
Italy	33	45	35	31
Lithuania	34	30	22	57
Slovakia	35	38	38	36
Malaysia	36	48	47	24
Bahrain	37	41	64	22
Cyprus	38	47	25	62
Poland	39	32	36	63
Greece	40	37	34	71
Romania	41	18	37	90
Bulgaria	42	50	30	68
Latvia	43	40	32	86
China	44	42	78	26
Croatia	45	49	31	107
Saudi Arabia	46	19	86	35
Uruguay	47	46	42	83
Chile	48	43	53	69

Country	PILLAR	SUB-PILLARS		
	Technology	Access	Content	Future Technologies
Turkey	49	54	52	58
Serbia	50	51	39	104
Russian Federation	51	59	44	72
Mauritius	52	63	60	44
Armenia	53	62	41	79
Thailand	54	39	69	60
Kuwait	55	34	68	74
Costa Rica	56	66	50	54
Georgia	57	44	62	94
South Africa	58	69	54	53
Lebanon	59	57	51	92
Panama	60	77	57	45
Trinidad and Tobago	61	64	61	88
Moldova	62	56	58	113
Azerbaijan	63	85	81	25
Jamaica	64	65	73	51
Viet Nam	65	60	76	66
Argentina	66	71	45	103
Brazil	67	72	59	95
Mexico	68	70	67	80
Jordan	69	80	70	43
Oman	70	55	96	56
Ukraine	71	78	56	82
India	72	73	84	46
North Macedonia	73	61	46	118
Kazakhstan	74	52	87	98
Indonesia	75	67	93	49
Colombia	76	74	66	93
Albania	77	84	65	61
Sri Lanka	78	81	71	64
Belarus	79	58	55	121
Philippines	80	83	74	70
Morocco	81	68	92	81
Cambodia	82	75	101	67
Namibia	83	101	82	48
Iran (Islamic Republic of)	84	82	85	96
Bosnia and Herzegovina	85	88	63	115
Tunisia	86	76	91	97
Peru	87	87	72	112
Egypt	88	79	98	85
Kenya	89	99	97	39
Dominican Republic	90	86	88	87
Rwanda	91	98	105	32
Botswana	92	89	100	55
Pakistan	93	94	95	65
Ecuador	94	92	83	102
Mongolia	95	96	79	100
Honduras	96	108	94	59

Country	PILLAR	SUB-PILLARS		
	Technology	Access	Content	Future Technologies
El Salvador	97	97	75	117
Paraguay	98	102	80	109
Senegal	99	106	109	34
Ghana	100	104	102	52
Kyrgyzstan	101	90	99	111
Uganda	102	95	104	73
Lao P.D.R.	103	107	110	42
Guatemala	104	105	90	91
Bangladesh	105	100	103	78
Tajikistan	106	103	114	47
Nepal	107	109	89	108
Cameroon	108	93	116	76
Algeria	109	91	108	110

Country	PILLAR	SUB-PILLARS		
	Technology	Access	Content	Future Technologies
Venezuela	110	110	77	120
Eswatini	111	111	107	101
Mali	112	116	113	77
Zambia	113	112	120	84
Nigeria	114	113	111	105
Tanzania	115	118	115	75
Madagascar	116	117	112	99
Zimbabwe	117	115	106	114
Mozambique	118	114	119	106
Ethiopia	119	120	121	89
Malawi	120	119	118	116
Yemen	121	121	117	119

NRI 2019 - Annex Table 2 - People

Country	PILLAR	SUB-PILLARS		
	People	Individuals	Businesses	Governments
Denmark	1	5	2	3
Sweden	2	14	1	4
Korea (Republic of)	3	10	10	1
Norway	4	9	11	2
Finland	5	12	5	11
Netherlands	6	19	7	7
Japan	7	8	4	18
United States	8	16	9	8
Singapore	9	7	16	5
Germany	10	41	6	6
Australia	11	6	19	12
Switzerland	12	44	3	17
Luxembourg	13	39	8	15
United Kingdom	14	29	15	9
Austria	15	36	14	16
Iceland	16	2	17	24
Canada	17	47	18	10
New Zealand	18	26	23	14
France	19	54	20	13
Estonia	20	13	26	19
Belgium	21	40	13	25
Israel	22	42	12	26
Spain	23	11	31	20
United Arab Emirates	24	1	34	59
Lithuania	25	28	29	23
Malta	26	23	27	34
Slovenia	27	38	24	39
Ireland	28	46	21	41

Country	PILLAR	SUB-PILLARS		
	People	Individuals	Businesses	Governments
Hong Kong (China)	29	15	30	43
Portugal	30	43	40	21
Italy	31	45	28	33
Malaysia	32	32	42	22
Czech Republic	33	66	22	44
Poland	34	27	32	46
Saudi Arabia	35	22	49	29
China	36	52	25	47
Cyprus	37	17	36	52
Kuwait	38	3	59	38
Russian Federation	39	57	35	32
Greece	40	24	47	35
Chile	41	21	41	45
Uruguay	42	30	54	31
Latvia	43	20	38	74
Qatar	44	25	63	37
Bahrain	45	4	67	63
Argentina	46	18	56	58
Slovakia	47	80	33	57
Brazil	48	72	53	27
Turkey	49	50	61	40
Hungary	50	48	39	72
Serbia	51	63	45	56
Croatia	52	51	43	70
Belarus	53	35	37	95
Armenia	54	64	44	66
Mexico	55	62	89	28
Costa Rica	56	31	51	82

Country	PILLAR	SUB-PILLARS		
	People	Individuals	Businesses	Governments
Bulgaria	57	55	52	62
Oman	58	59	72	49
Peru	59	53	50	84
Jordan	60	33	65	85
Kazakhstan	61	81	55	61
Philippines	62	65	77	60
Ukraine	63	68	48	87
Albania	64	61	57	83
Colombia	65	74	80	50
Romania	66	56	62	86
Thailand	67	49	78	79
Georgia	68	76	73	64
Moldova	69	77	71	65
Mauritius	70	73	68	69
Dominican Republic	71	78	82	54
North Macedonia	72	70	69	71
Lebanon	73	34	46	112
Azerbaijan	74	88	83	42
Ecuador	75	69	76	80
Iran (Islamic Republic of)	76	83	91	55
Trinidad and Tobago	77	37	70	102
Tunisia	78	91	75	51
South Africa	79	86	85	53
Viet Nam	80	67	86	89
India	81	103	87	36
Mongolia	82	71	98	91
Panama	83	75	93	94
Venezuela	84	60	58	114
Indonesia	85	85	99	68
Paraguay	86	82	81	101
Jamaica	87	94	60	88
Bosnia and Herzegovina	88	58	74	116
Morocco	89	87	95	90

Country	PILLAR	SUB-PILLARS		
	People	Individuals	Businesses	Governments
Egypt	90	95	88	78
Kenya	91	106	79	48
Honduras	92	97	84	81
Algeria	93	79	108	97
Kyrgyzstan	94	84	92	104
Rwanda	95	114	106	30
Ghana	96	99	102	75
Guatemala	97	92	90	100
Sri Lanka	98	96	110	92
Nigeria	99	111	64	93
Namibia	100	90	101	105
El Salvador	101	89	103	106
Botswana	102	93	97	108
Lao P.D.R.	103	100	100	103
Bangladesh	104	107	116	67
Eswatini	105	101	66	117
Senegal	106	109	113	73
Nepal	107	104	109	96
Tajikistan	108	102	96	109
Tanzania	109	113	115	76
Cambodia	110	98	118	113
Pakistan	111	116	94	99
Ethiopia	112	119	117	77
Uganda	113	112	114	98
Zambia	114	105	112	110
Cameroon	115	110	111	107
Zimbabwe	116	108	105	120
Madagascar	117	115	119	118
Malawi	118	117	107	119
Mozambique	119	118	121	111
Mali	120	121	104	115
Yemen	121	120	120	121

NRI 2019 - Annex Table 3 - Governance

Country	PILLAR	SUB-PILLARS		
	Governance	Trust	Regulation	Inclusion
Norway	1	2	3	8
New Zealand	2	3	7	1
Luxembourg	3	1	8	14
United States	4	11	1	4
United Kingdom	5	5	10	5
Singapore	6	13	5	2
Finland	7	7	2	9
Netherlands	8	10	4	6
Sweden	9	12	6	7
Denmark	10	4	9	10
Canada	11	14	15	3
Switzerland	12	8	11	18
Australia	13	9	12	16
France	14	6	16	15
Germany	15	19	13	17
Austria	16	18	14	21
Ireland	17	16	18	20
Estonia	18	22	19	11
Belgium	19	20	20	22
Japan	20	15	38	12
Hong Kong (China)	21	17	21	35
Spain	22	26	25	13
Israel	23	23	24	26
United Arab Emirates	24	27	23	23
Korea (Republic of)	25	30	27	19
Lithuania	26	24	34	24
Portugal	27	21	32	28
Slovenia	28	25	29	30
Malaysia	29	33	17	41
Iceland	30	29	22	43
Malta	31	41	26	36
Qatar	32	37	35	31
Slovakia	33	28	44	37
Latvia	34	31	40	39
Czech Republic	35	35	28	45
Italy	36	43	43	25
Cyprus	37	40	41	38
Poland	38	36	49	27
Chile	39	42	39	47
Croatia	40	34	61	44
Mauritius	41	32	45	60
Bahrain	42	61	37	32
Oman	43	53	33	49
Saudi Arabia	44	46	47	42
Turkey	45	45	31	66
Hungary	46	39	56	57
South Africa	47	38	69	46
China	48	51	52	48

Country	PILLAR	SUB-PILLARS		
	Governance	Trust	Regulation	Inclusion
Romania	49	44	36	86
Uruguay	50	52	51	59
Costa Rica	51	68	42	52
India	52	49	59	58
Bulgaria	53	47	53	67
Rwanda	54	60	30	79
Brazil	55	50	89	40
Russian Federation	56	54	91	29
Colombia	57	55	57	65
Greece	58	62	74	50
Thailand	59	67	58	56
Serbia	60	63	68	55
North Macedonia	61	64	54	63
Indonesia	62	56	48	84
Mexico	63	59	50	85
Georgia	64	58	46	87
Jordan	65	69	77	54
Kazakhstan	66	79	76	51
Ukraine	67	70	72	70
Belarus	68	87	83	34
Argentina	69	72	71	64
Panama	70	65	67	83
Kuwait	71	57	80	82
Viet Nam	72	48	73	97
Peru	73	75	66	81
Kenya	74	86	60	72
Iran (Islamic Republic of)	75	80	82	69
Ghana	76	77	64	88
Moldova	77	81	81	71
Trinidad and Tobago	78	100	75	53
Sri Lanka	79	78	97	62
Mongolia	80	89	105	33
Armenia	81	99	62	78
Tanzania	82	66	102	75
Jamaica	83	92	85	68
Azerbaijan	84	91	55	92
Dominican Republic	85	85	86	80
Bosnia and Herzegovina	86	88	88	77
Morocco	87	74	65	106
Philippines	88	71	78	100
Paraguay	89	97	93	73
Albania	90	83	63	108
Tunisia	91	84	79	101
Egypt	92	73	98	99
Kyrgyzstan	93	109	94	74
Uganda	94	90	96	91
Nepal	95	76	101	96
Senegal	96	102	87	90

Country	PILLAR	SUB-PILLARS		
	Governance	Trust	Regulation	Inclusion
Botswana	97	82	70	113
Bangladesh	98	105	106	61
Ecuador	99	96	92	93
Zambia	100	95	84	111
Pakistan	101	93	95	112
Namibia	102	101	108	98
Tajikistan	103	116	109	76
Guatemala	104	112	110	89
Mali	105	108	99	107
El Salvador	106	114	104	95
Madagascar	107	107	103	109
Algeria	108	106	111	102
Malawi	109	94	90	118

Country	PILLAR	SUB-PILLARS		
	Governance	Trust	Regulation	Inclusion
Honduras	110	118	100	104
Ethiopia	111	103	116	110
Venezuela	112	113	119	94
Nigeria	113	98	115	116
Mozambique	114	104	118	115
Lebanon	115	111	120	105
Cambodia	116	119	113	103
Cameroon	117	117	107	117
Eswatini	118	110	112	120
Zimbabwe	119	120	117	114
Lao P.D.R.	120	115	114	119
Yemen	121	121	121	121

## NRI 2019 - Annex Table 4 - Impact

Country	PILLAR	SUB-PILLARS		
	Impact	Economy	Quality of Life	SDG Contribution
Singapore	1	1	12	9
Switzerland	2	3	8	2
Sweden	3	5	6	12
Norway	4	13	1	4
Netherlands	5	9	7	15
Denmark	6	11	5	16
Finland	7	16	2	11
Germany	8	7	16	6
Ireland	9	6	17	17
Japan	10	4	31	5
Austria	11	17	9	10
Iceland	12	30	3	8
United Kingdom	13	18	18	3
Korea (Republic of)	14	2	64	32
Belgium	15	19	19	14
Luxembourg	16	23	15	13
France	17	14	22	37
Israel	18	12	39	18
Canada	19	29	10	27
United States	20	10	40	35
Malta	21	24	11	44
Australia	22	28	14	26
Czech Republic	23	27	20	25
New Zealand	24	49	4	39
Slovenia	25	41	13	29
Hong Kong (China)	26	22	74	1
Estonia	27	42	28	7
Slovakia	28	33	33	20

Country	PILLAR	SUB-PILLARS		
	Impact	Economy	Quality of Life	SDG Contribution
Qatar	29	8	23	82
Spain	30	35	38	23
Cyprus	31	39	29	33
Hungary	32	26	65	22
Malaysia	33	15	57	57
Italy	34	31	50	31
Poland	35	44	32	36
Portugal	36	60	27	19
Costa Rica	37	61	25	48
United Arab Emirates	38	36	21	75
Kazakhstan	39	55	36	45
Romania	40	45	44	52
Lithuania	41	48	70	24
Viet Nam	42	20	41	83
Croatia	43	53	63	30
Latvia	44	47	88	21
Philippines	45	21	66	77
Trinidad and Tobago	46	58	52	47
Bahrain	47	43	26	76
Mexico	48	38	62	59
China	49	32	48	78
Uruguay	50	76	34	50
Belarus	51	63	78	34
Greece	52	52	91	28
Oman	53	51	24	79
Chile	54	70	58	41
Serbia	55	46	69	53
Moldova	56	96	42	46

Country	PILLAR	SUB-PILLARS		
	Impact	Economy	Quality of Life	SDG Contribution
Bulgaria	57	62	84	42
Mauritius	58	100	49	40
Russian Federation	59	54	85	49
Thailand	60	40	35	87
Argentina	61	72	53	58
Kuwait	62	37	37	89
Azerbaijan	63	69	92	38
Albania	64	98	47	51
Ukraine	65	75	82	43
El Salvador	66	86	45	61
North Macedonia	67	79	76	55
Saudi Arabia	68	34	43	97
Kyrgyzstan	69	101	30	70
Armenia	70	97	61	56
Brazil	71	59	97	60
Jamaica	72	95	46	66
Colombia	73	77	72	63
Bosnia and Herzegovina	74	73	75	64
Ecuador	75	93	51	68
Turkey	76	56	107	54
Panama	77	94	56	72
Peru	78	89	67	71
Paraguay	79	57	73	88
Lao P.D.R.	80	25	81	101
Indonesia	81	67	68	84
Tajikistan	82	116	54	73
Sri Lanka	83	105	79	65
Georgia	84	99	90	62
Lebanon	85	91	95	67
Guatemala	86	84	55	92
Algeria	87	92	94	69
Tunisia	88	64	96	86
Iran (Islamic Republic of)	89	50	104	80

Country	PILLAR	SUB-PILLARS		
	Impact	Economy	Quality of Life	SDG Contribution
Venezuela	90	68	106	74
Dominican Republic	91	65	77	98
Honduras	92	109	71	85
Morocco	93	80	87	91
Jordan	94	78	80	96
Egypt	95	87	101	90
Cambodia	96	119	60	99
Mongolia	97	114	86	94
Bangladesh	98	113	59	105
South Africa	99	71	118	81
India	100	66	93	108
Pakistan	101	88	89	104
Ghana	102	108	100	100
Nepal	103	112	83	109
Senegal	104	82	110	102
Rwanda	105	74	99	115
Botswana	106	117	115	93
Nigeria	107	81	109	107
Kenya	108	110	98	112
Tanzania	109	104	103	111
Namibia	110	115	116	103
Malawi	111	85	113	113
Eswatini	112	121	120	95
Cameroon	113	111	105	114
Zimbabwe	114	103	114	110
Mozambique	115	102	111	116
Ethiopia	116	90	102	121
Yemen	117	107	121	106
Mali	118	118	108	118
Zambia	119	83	117	119
Uganda	120	106	112	120
Madagascar	121	120	119	117



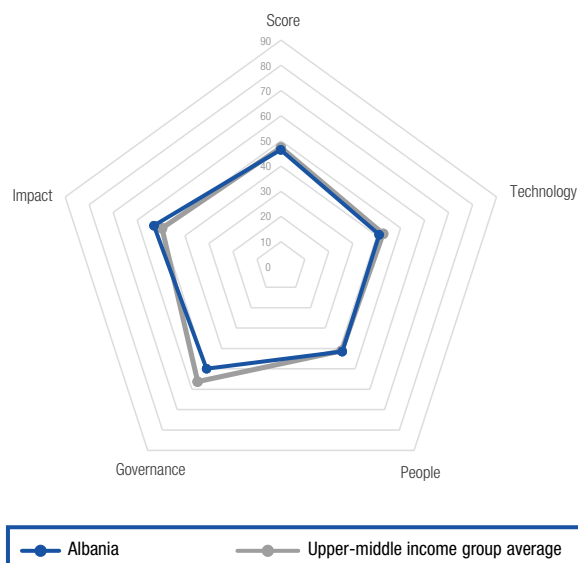


# Section 2:

## Country/Economy Profiles

# Albania

	Rank (out of 121)	Score
<b>Network Readiness Index</b>	<b>75</b>	<b>46.57</b>
<b>A. Technology pillar</b>	<b>77</b>	<b>41.31</b>
1st sub-pillar: Access	84	49.50
2nd sub-pillar: Content	65	43.51
3rd sub-pillar: Future Technologies	61	30.92
<b>B. People pillar</b>	<b>64</b>	<b>41.75</b>
1st sub-pillar: Individuals	61	55.89
2nd sub-pillar: Businesses	57	30.50
3rd sub-pillar: Governments	83	38.85
<b>C. Governance pillar</b>	<b>90</b>	<b>50.17</b>
1st sub-pillar: Trust	83	46.30
2nd sub-pillar: Regulation	63	64.27
3rd sub-pillar: Inclusion	108	39.94
<b>D. Impact pillar</b>	<b>64</b>	<b>53.07</b>
1st sub-pillar: Economy	98	9.15
2nd sub-pillar: Quality of Life	47	67.20
3rd sub-pillar: SDG Contribution	51	82.86



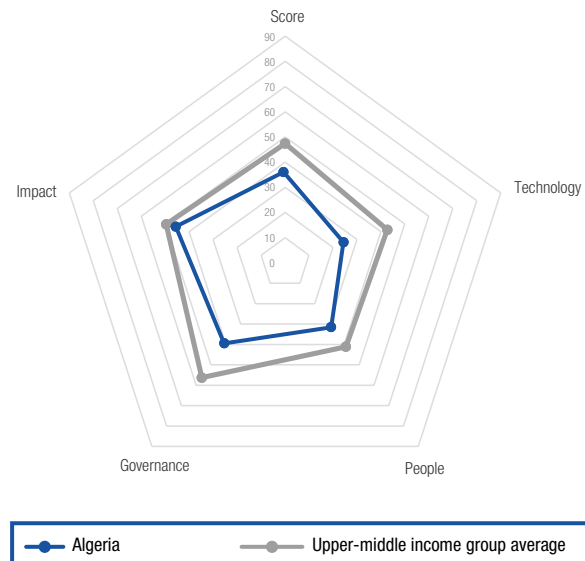
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs	83	52.38
1.1.2 Handset prices	82	37.43
1.1.3 Households with internet access	92	25.52
1.1.4 4G mobile network coverage	73	85.50
1.1.5 Fixed-broadband subscriptions	82	28.65
1.1.6 International Internet bandwidth	45	70.45
1.1.7 Internet access in schools	44	46.55
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation	-	-
1.2.2 Mobile apps development	64	59.96
1.2.3 Intellectual property receipts	41	0.94
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies	82	42.22
1.3.2 Company investment in emerging technology	107	15.27
1.3.3 Government procurement of advanced technology products	24	57.09
1.3.4 ICT PCT patent applications	n/a	n/a
1.3.5 Computer software spending	77	9.09
1.3.6 Robot density	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users	60	69.05
2.1.2 Active mobile-broadband subscriptions	81	23.27
2.1.3 Use of virtual social networks	69	50.10
2.1.4 Tertiary enrolment	51	39.87
2.1.5 Adult literacy rate	30	97.16
2.1.6 ICT skills	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website	56	53.48
2.2.2 Internet shopping	79	8.51
2.2.3 Professionals	58	28.26
2.2.4 Technicians and associate professionals	86	20.84
2.2.5 Extent of staff training	56	41.39
2.2.6 R&D expenditure by businesses	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services	57	70.77
2.3.2 Publication and use of open data	50	32.43
2.3.3 ICT use and government efficiency	56	46.09
2.3.4 R&D expenditure by governments and higher education	94	6.10

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law	83	44.39
3.1.2 Software piracy rate	74	20.27
3.1.3 Secure Internet servers	65	53.45
3.1.4 Cybersecurity	64	67.11
3.1.5 Online trust and safety	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality	56	57.62
3.2.2 Ease of doing business	75	66.36
3.2.3 Legal framework's adaptability to digital business models	55	45.05
3.2.4 E-commerce legislation	1	100.00
3.2.5 Social safety net protection	79	33.21
3.2.6 ICT regulatory environment	65	83.40
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation	59	72.61
3.3.2 Socioeconomic gap in use of digital payments	113	22.80
3.3.3 Availability of local online content	82	40.33
3.3.4 Gender gap in internet use	n/a	n/a
3.3.5 Rural gap in use of digital payments	112	24.03
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry	106	8.26
4.1.2 High-tech exports	117	0.09
4.1.3 PCT patent applications	n/a	n/a
4.1.4 Labour productivity per employee	72	19.10
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness	92	40.56
4.2.2 Freedom to make life choices	62	68.45
4.2.3 Income inequality	16	89.47
4.2.4 Healthy life expectancy at birth	42	70.33
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services	65	92.59
4.3.2 Pollution	54	86.30
4.3.3 Road safety	56	65.94
4.3.4 Reading proficiency in schools	28	86.13
4.3.5 Maths proficiency in schools	n/a	n/a
4.3.6 Use of clean fuels and technology	79	83.33

# Algeria

	Rank (out of 121)	Score
<b>Network Readiness Index</b>	<b>98</b>	<b>35.30</b>
<b>A. Technology pillar</b> .....	<b>109</b>	<b>24.81</b>
1st sub-pillar: Access.....	91	43.41
2nd sub-pillar: Content.....	108	13.29
3rd sub-pillar: Future Technologies.....	110	17.73
<b>B. People pillar</b> .....	<b>93</b>	<b>31.94</b>
1st sub-pillar: Individuals .....	79	50.84
2nd sub-pillar: Businesses .....	108	14.60
3rd sub-pillar: Governments .....	97	30.39
<b>C. Governance pillar</b> .....	<b>108</b>	<b>39.81</b>
1st sub-pillar: Trust .....	106	35.75
2nd sub-pillar: Regulation.....	111	39.58
3rd sub-pillar: Inclusion.....	102	44.11
<b>D. Impact pillar</b> .....	<b>87</b>	<b>44.63</b>
1st sub-pillar: Economy .....	92	9.80
2nd sub-pillar: Quality of Life .....	94	52.00
3rd sub-pillar: SDG Contribution.....	69	72.10



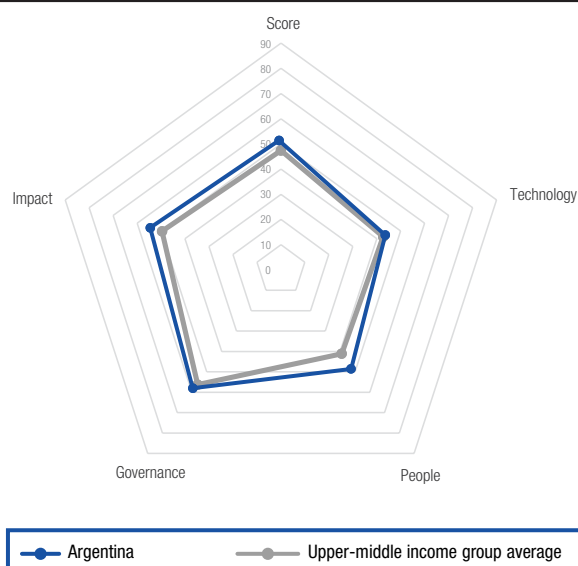
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	105	35.94
1.1.2 Handset prices.....	95	32.17
1.1.3 Households with internet access.....	54	72.67
1.1.4 4G mobile network coverage.....	112	30.64
1.1.5 Fixed-broadband subscriptions.....	83	28.20
1.1.6 International Internet bandwidth.....	100	60.87
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	116	17.30
1.2.3 Intellectual property receipts.....	97	0.01
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	111	27.35
1.3.2 Company investment in emerging technology.....	81	28.33
1.3.3 Government procurement of advanced technology products ..	81	32.97
1.3.4 ICT PCT patent applications.....	80	0.00
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	79	55.40
2.1.2 Active mobile-broadband subscriptions.....	34	37.15
2.1.3 Use of virtual social networks.....	61	53.22
2.1.4 Tertiary enrolment.....	55	37.22
2.1.5 Adult literacy rate.....	74	71.21
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	n/a	n/a
2.2.2 Internet shopping.....	101	3.56
2.2.3 Professionals.....	67	24.53
2.2.4 Technicians and associate professionals.....	88	20.05
2.2.5 Extent of staff training.....	108	23.94
2.2.6 R&D expenditure by businesses.....	74	0.90
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	117	13.08
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	90	33.27
2.3.4 R&D expenditure by governments and higher education.....	36	44.83

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	104	35.65
3.1.2 Software piracy rate.....	91	9.46
3.1.3 Secure Internet servers.....	103	35.89
3.1.4 Cybersecurity.....	102	26.64
3.1.5 Online trust and safety.....	34	71.08
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	117	23.58
3.2.2 Ease of doing business.....	114	32.48
3.2.3 Legal framework's adaptability to digital business models.....	90	32.07
3.2.4 E-commerce legislation.....	100	50.00
3.2.5 Social safety net protection.....	68	40.86
3.2.6 ICT regulatory environment.....	109	58.50
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	115	9.55
3.3.2 Socioeconomic gap in use of digital payments.....	74	60.38
3.3.3 Availability of local online content.....	84	39.43
3.3.4 Gender gap in internet use.....	83	21.20
3.3.5 Rural gap in use of digital payments.....	3	89.99
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	114	3.12
4.1.2 High-tech exports.....	111	1.13
4.1.3 PCT patent applications.....	79	0.06
4.1.4 Labour productivity per employee.....	50	34.90
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	90	41.36
4.2.2 Freedom to make life choices.....	117	12.68
4.2.3 Income inequality.....	11	93.16
4.2.4 Healthy life expectancy at birth.....	74	60.81
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	80	87.56
4.3.2 Pollution.....	98	66.78
4.3.3 Road safety.....	98	34.06
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Argentina

	Rank (out of 121)	Score
<b>Network Readiness Index</b>	<b>58</b>	<b>51.27</b>
<b>A. Technology pillar</b>	<b>66</b>	<b>44.39</b>
1st sub-pillar: Access	71	60.60
2nd sub-pillar: Content	45	52.57
3rd sub-pillar: Future Technologies	103	19.98
<b>B. People pillar</b>	<b>46</b>	<b>48.72</b>
1st sub-pillar: Individuals	18	68.52
2nd sub-pillar: Businesses	56	30.72
3rd sub-pillar: Governments	58	46.92
<b>C. Governance pillar</b>	<b>69</b>	<b>58.21</b>
1st sub-pillar: Trust	72	51.10
2nd sub-pillar: Regulation	71	61.66
3rd sub-pillar: Inclusion	64	61.85
<b>D. Impact pillar</b>	<b>61</b>	<b>53.78</b>
1st sub-pillar: Economy	72	17.11
2nd sub-pillar: Quality of Life	53	64.81
3rd sub-pillar: SDG Contribution	58	79.43



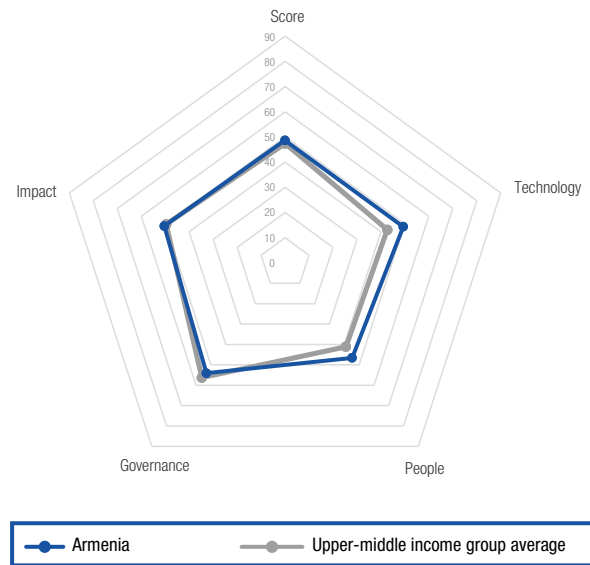
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs	69	60.86
1.1.2 Handset prices	67	44.12
1.1.3 Households with internet access	53	74.33
1.1.4 4G mobile network coverage	74	85.00
1.1.5 Fixed-broadband subscriptions	66	53.45
1.1.6 International Internet bandwidth	76	66.71
1.1.7 Internet access in schools	47	39.74
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation	-	-
1.2.2 Mobile apps development	55	64.42
1.2.3 Intellectual property receipts	30	1.73
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies	92	37.86
1.3.2 Company investment in emerging technology	80	29.12
1.3.3 Government procurement of advanced technology products	90	28.40
1.3.4 ICT PCT patent applications	72	1.16
1.3.5 Computer software spending	59	18.18
1.3.6 Robot density	41	5.17
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users	54	71.78
2.1.2 Active mobile-broadband subscriptions	58	30.59
2.1.3 Use of virtual social networks	14	76.09
2.1.4 Tertiary enrolment	4	65.65
2.1.5 Adult literacy rate	18	98.50
2.1.6 ICT skills	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website	37	65.81
2.2.2 Internet shopping	61	18.52
2.2.3 Professionals	66	24.76
2.2.4 Technicians and associate professionals	56	39.26
2.2.5 Extent of staff training	79	32.76
2.2.6 R&D expenditure by businesses	58	3.23
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services	56	72.31
2.3.2 Publication and use of open data	39	37.51
2.3.3 ICT use and government efficiency	66	41.97
2.3.4 R&D expenditure by governments and higher education	45	35.89

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law	73	47.86
3.1.2 Software piracy rate	68	29.73
3.1.3 Secure Internet servers	55	64.29
3.1.4 Cybersecurity	91	42.54
3.1.5 Online trust and safety	34	71.08
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality	88	46.06
3.2.2 Ease of doing business	102	50.82
3.2.3 Legal framework's adaptability to digital business models	70	40.68
3.2.4 E-commerce legislation	1	100.00
3.2.5 Social safety net protection	58	45.54
3.2.6 ICT regulatory environment	50	86.88
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation	83	57.32
3.3.2 Socioeconomic gap in use of digital payments	69	62.32
3.3.3 Availability of local online content	53	58.41
3.3.4 Gender gap in internet use	36	62.78
3.3.5 Rural gap in use of digital payments	60	68.43
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry	58	33.06
4.1.2 High-tech exports	73	10.10
4.1.3 PCT patent applications	62	0.47
4.1.4 Labour productivity per employee	61	24.82
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness	63	56.98
4.2.2 Freedom to make life choices	53	73.48
4.2.3 Income inequality	78	57.37
4.2.4 Healthy life expectancy at birth	39	71.43
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services	52	95.61
4.3.2 Pollution	26	93.12
4.3.3 Road safety	60	64.69
4.3.4 Reading proficiency in schools	48	61.71
4.3.5 Maths proficiency in schools	32	61.46
4.3.6 Use of clean fuels and technology	1	100.00

# Armenia

	Rank (out of 121)	Score
<b>Network Readiness Index</b>	<b>62</b>	<b>49.84</b>
<b>A. Technology pillar</b>	<b>53</b>	<b>49.73</b>
1st sub-pillar: Access	62	67.24
2nd sub-pillar: Content	41	54.65
3rd sub-pillar: Future Technologies	79	27.29
<b>B. People pillar</b>	<b>54</b>	<b>45.75</b>
1st sub-pillar: Individuals	64	55.20
2nd sub-pillar: Businesses	44	38.05
3rd sub-pillar: Governments	66	44.00
<b>C. Governance pillar</b>	<b>81</b>	<b>53.29</b>
1st sub-pillar: Trust	99	39.28
2nd sub-pillar: Regulation	62	64.40
3rd sub-pillar: Inclusion	78	56.19
<b>D. Impact pillar</b>	<b>70</b>	<b>50.58</b>
1st sub-pillar: Economy	97	9.18
2nd sub-pillar: Quality of Life	61	61.87
3rd sub-pillar: SDG Contribution	56	80.70



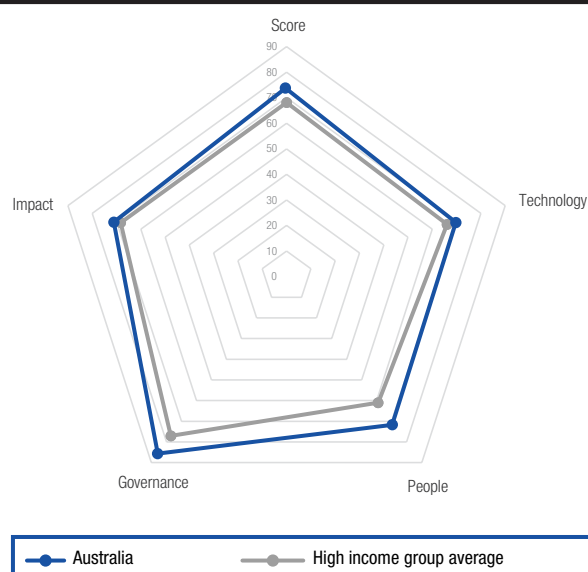
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs	80	55.81
1.1.2 Handset prices	74	41.74
1.1.3 Households with internet access	69	62.34
1.1.4 4G mobile network coverage	65	90.05
1.1.5 Fixed-broadband subscriptions	72	47.98
1.1.6 International Internet bandwidth	33	72.74
1.1.7 Internet access in schools	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation	-	-
1.2.2 Mobile apps development	53	65.74
1.2.3 Intellectual property receipts	98	0.00
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies	73	46.68
1.3.2 Company investment in emerging technology	52	41.71
1.3.3 Government procurement of advanced technology products	69	37.96
1.3.4 ICT PCT patent applications	74	1.02
1.3.5 Computer software spending	77	9.09
1.3.6 Robot density	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users	74	61.15
2.1.2 Active mobile-broadband subscriptions	66	28.63
2.1.3 Use of virtual social networks	78	46.99
2.1.4 Tertiary enrolment	52	39.58
2.1.5 Adult literacy rate	9	99.63
2.1.6 ICT skills	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website	26	73.99
2.2.2 Internet shopping	71	10.88
2.2.3 Professionals	45	36.86
2.2.4 Technicians and associate professionals	57	37.95
2.2.5 Extent of staff training	88	30.59
2.2.6 R&D expenditure by businesses	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services	93	51.54
2.3.2 Publication and use of open data	n/a	n/a
2.3.3 ICT use and government efficiency	32	60.67
2.3.4 R&D expenditure by governments and higher education	69	19.77

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law	104	35.65
3.1.2 Software piracy rate	91	9.46
3.1.3 Secure Internet servers	103	35.89
3.1.4 Cybersecurity	102	26.64
3.1.5 Online trust and safety	34	71.08
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality	117	23.58
3.2.2 Ease of doing business	114	32.48
3.2.3 Legal framework's adaptability to digital business models	90	32.07
3.2.4 E-commerce legislation	100	50.00
3.2.5 Social safety net protection	68	40.86
3.2.6 ICT regulatory environment	109	58.50
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation	115	9.55
3.3.2 Socioeconomic gap in use of digital payments	74	60.38
3.3.3 Availability of local online content	84	39.43
3.3.4 Gender gap in internet use	83	21.20
3.3.5 Rural gap in use of digital payments	3	89.99
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry	114	3.12
4.1.2 High-tech exports	111	1.13
4.1.3 PCT patent applications	79	0.06
4.1.4 Labour productivity per employee	50	34.90
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness	90	41.36
4.2.2 Freedom to make life choices	117	12.68
4.2.3 Income inequality	11	93.16
4.2.4 Healthy life expectancy at birth	74	60.81
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services	80	87.56
4.3.2 Pollution	98	66.78
4.3.3 Road safety	98	34.06
4.3.4 Reading proficiency in schools	n/a	n/a
4.3.5 Maths proficiency in schools	n/a	n/a
4.3.6 Use of clean fuels and technology	1	100.00

# Australia

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>13</b>	<b>74.80</b>
<b>A. Technology pillar.....</b>	<b>16</b>	<b>70.70</b>
1st sub-pillar: Access.....	8	88.71
2nd sub-pillar: Content.....	11	76.48
3rd sub-pillar: Future Technologies.....	30	46.92
<b>B. People pillar.....</b>	<b>11</b>	<b>71.66</b>
1st sub-pillar: Individuals .....	6	73.43
2nd sub-pillar: Businesses .....	19	62.92
3rd sub-pillar: Governments .....	12	78.62
<b>C. Governance pillar .....</b>	<b>13</b>	<b>85.68</b>
1st sub-pillar: Trust .....	9	86.80
2nd sub-pillar: Regulation.....	12	88.69
3rd sub-pillar: Inclusion.....	16	81.56
<b>D. Impact pillar .....</b>	<b>22</b>	<b>71.17</b>
1st sub-pillar: Economy .....	28	37.07
2nd sub-pillar: Quality of Life .....	14	83.85
3rd sub-pillar: SDG Contribution.....	26	92.60



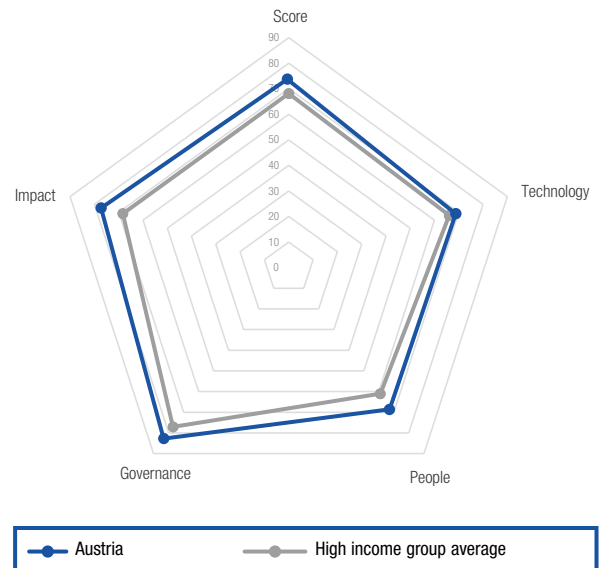
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	25	80.25
1.1.2 Handset prices.....	2	94.04
1.1.3 Households with internet access.....	32	85.19
1.1.4 4G mobile network coverage.....	24	99.00
1.1.5 Fixed-broadband subscriptions.....	28	92.80
1.1.6 International Internet bandwidth.....	55	69.67
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	16	86.15
1.2.3 Intellectual property receipts.....	29	1.81
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	27	76.11
1.3.2 Company investment in emerging technology.....	24	62.87
1.3.3 Government procurement of advanced technology products ..	63	40.36
1.3.4 ICT PCT patent applications.....	21	52.99
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	24	21.92
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	25	85.41
2.1.2 Active mobile-broadband subscriptions.....	9	53.66
2.1.3 Use of virtual social networks.....	18	71.93
2.1.4 Tertiary enrolment.....	2	82.72
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	24	76.29
2.2.2 Internet shopping.....	10	86.81
2.2.3 Professionals.....	17	57.45
2.2.4 Technicians and associate professionals.....	31	56.44
2.2.5 Extent of staff training.....	14	74.48
2.2.6 R&D expenditure by businesses.....	21	26.08
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	7	96.92
2.3.2 Publication and use of open data.....	6	81.15
2.3.3 ICT use and government efficiency.....	35	58.60
2.3.4 R&D expenditure by governments and higher education.....	10	77.80

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	14	92.45
3.1.2 Software piracy rate.....	5	95.95
3.1.3 Secure Internet servers.....	15	88.74
3.1.4 Cybersecurity.....	11	95.50
3.1.5 Online trust and safety.....	53	61.34
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	5	93.91
3.2.2 Ease of doing business.....	14	90.18
3.2.3 Legal framework's adaptability to digital business models....	25	64.14
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	12	87.17
3.2.6 ICT regulatory environment.....	8	96.72
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	5	98.08
3.3.2 Socioeconomic gap in use of digital payments.....	10	96.86
3.3.3 Availability of local online content.....	23	81.16
3.3.4 Gender gap in internet use.....	29	64.91
3.3.5 Rural gap in use of digital payments.....	63	66.79
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	55	34.38
4.1.2 High-tech exports.....	27	31.66
4.1.3 PCT patent applications.....	22	22.23
4.1.4 Labour productivity per employee.....	16	60.01
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	12	85.81
4.2.2 Freedom to make life choices.....	21	89.72
4.2.3 Income inequality.....	53	71.58
4.2.4 Healthy life expectancy at birth.....	9	88.28
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	8	99.97
4.3.2 Pollution.....	8	98.36
4.3.3 Road safety.....	17	90.94
4.3.4 Reading proficiency in schools.....	18	95.20
4.3.5 Maths proficiency in schools.....	22	71.13
4.3.6 Use of clean fuels and technology.....	1	100.00

# Austria

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>15</b>	<b>74.36</b>
<b>A. Technology pillar</b> .....	<b>19</b>	<b>69.59</b>
1st sub-pillar: Access.....	36	79.53
2nd sub-pillar: Content.....	19	71.26
3rd sub-pillar: Future Technologies.....	19	57.97
<b>B. People pillar</b> .....	<b>15</b>	<b>68.36</b>
1st sub-pillar: Individuals.....	36	62.17
2nd sub-pillar: Businesses.....	14	67.30
3rd sub-pillar: Governments.....	16	75.61
<b>C. Governance pillar</b> .....	<b>16</b>	<b>82.57</b>
1st sub-pillar: Trust.....	18	81.96
2nd sub-pillar: Regulation.....	14	87.01
3rd sub-pillar: Inclusion.....	21	78.74
<b>D. Impact pillar</b> .....	<b>11</b>	<b>76.91</b>
1st sub-pillar: Economy.....	17	47.33
2nd sub-pillar: Quality of Life.....	9	87.23
3rd sub-pillar: SDG Contribution.....	10	96.15



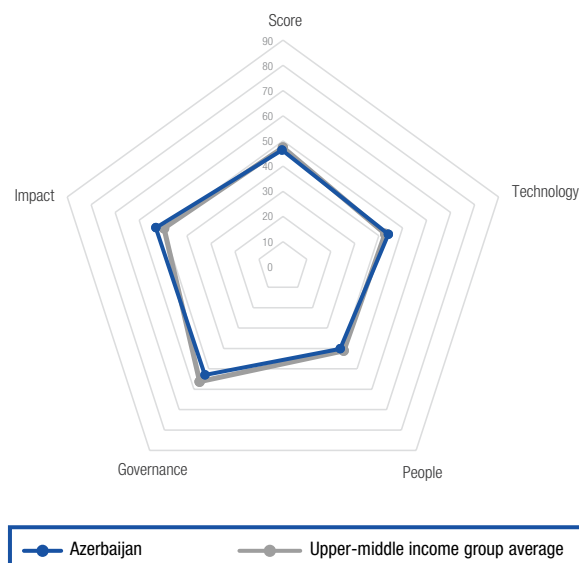
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs.....	16	84.44
1.1.2 Handset prices.....	19	69.12
1.1.3 Households with internet access.....	21	88.04
1.1.4 4G mobile network coverage.....	38	98.00
1.1.5 Fixed-broadband subscriptions.....	59	69.51
1.1.6 International Internet bandwidth.....	65	68.06
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	2	96.93
1.2.3 Intellectual property receipts.....	26	3.29
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	21	82.24
1.3.2 Company investment in emerging technology.....	26	61.41
1.3.3 Government procurement of advanced technology products ..	60	41.71
1.3.4 ICT PCT patent applications.....	18	56.16
1.3.5 Computer software spending.....	8	54.55
1.3.6 Robot density.....	12	51.73
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	23	86.71
2.1.2 Active mobile-broadband subscriptions.....	47	33.58
2.1.3 Use of virtual social networks.....	74	49.06
2.1.4 Tertiary enrolment.....	11	62.04
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	13	79.48
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	7	89.99
2.2.2 Internet shopping.....	29	56.59
2.2.3 Professionals.....	22	51.62
2.2.4 Technicians and associate professionals.....	15	75.32
2.2.5 Extent of staff training.....	16	74.00
2.2.6 R&D expenditure by businesses.....	6	56.30
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	32	85.39
2.3.2 Publication and use of open data.....	14	70.22
2.3.3 ICT use and government efficiency.....	30	62.26
2.3.4 R&D expenditure by governments and higher education.....	7	84.55

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	6	96.11
3.1.2 Software piracy rate.....	6	94.59
3.1.3 Secure Internet servers.....	26	82.95
3.1.4 Cybersecurity.....	30	88.49
3.1.5 Online trust and safety.....	68	47.64
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	18	85.44
3.2.2 Ease of doing business.....	26	85.81
3.2.3 Legal framework's adaptability to digital business models.....	30	60.83
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	4	99.05
3.2.6 ICT regulatory environment.....	31	90.93
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	45	80.25
3.3.2 Socioeconomic gap in use of digital payments.....	19	95.06
3.3.3 Availability of local online content.....	24	80.12
3.3.4 Gender gap in internet use.....	57	58.76
3.3.5 Rural gap in use of digital payments.....	9	79.51
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	17	58.29
4.1.2 High-tech exports.....	39	22.05
4.1.3 PCT patent applications.....	10	49.55
4.1.4 Labour productivity per employee.....	17	59.42
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	7	90.37
4.2.2 Freedom to make life choices.....	27	86.96
4.2.3 Income inequality.....	20	85.53
4.2.4 Healthy life expectancy at birth.....	16	86.08
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	7	99.98
4.3.2 Pollution.....	28	92.44
4.3.3 Road safety.....	15	92.19
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Azerbaijan

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>70</b>	<b>47.74</b>
<b>A. Technology pillar</b> .....	<b>63</b>	<b>44.98</b>
1st sub-pillar: Access.....	85	49.38
2nd sub-pillar: Content.....	81	34.36
3rd sub-pillar: Future Technologies.....	25	51.20
<b>B. People pillar</b> .....	<b>74</b>	<b>39.80</b>
1st sub-pillar: Individuals .....	88	42.25
2nd sub-pillar: Businesses .....	83	24.08
3rd sub-pillar: Governments .....	42	53.09
<b>C. Governance pillar</b> .....	<b>84</b>	<b>52.79</b>
1st sub-pillar: Trust .....	91	42.36
2nd sub-pillar: Regulation.....	55	66.47
3rd sub-pillar: Inclusion.....	92	49.54
<b>D. Impact pillar</b> .....	<b>63</b>	<b>53.39</b>
1st sub-pillar: Economy .....	69	18.02
2nd sub-pillar: Quality of Life .....	92	53.01
3rd sub-pillar: SDG Contribution.....	38	89.14



## The Network Readiness Index in detail

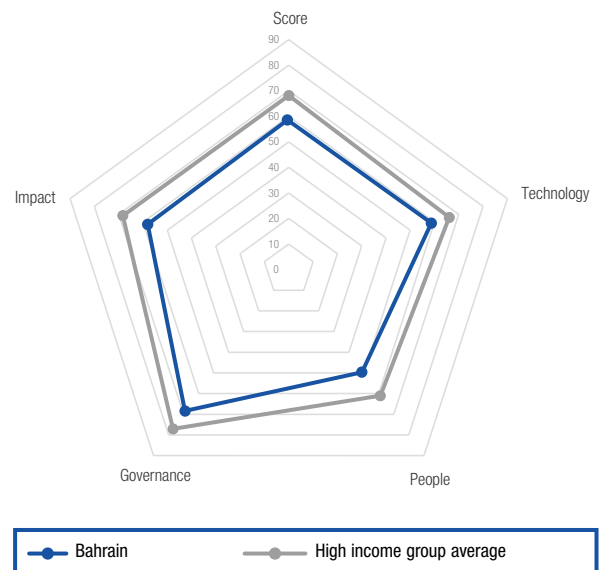
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	56	67.37
1.1.2 Handset prices.....	106	22.84
1.1.3 Households with internet access.....	50	76.74
1.1.4 4G mobile network coverage.....	100	49.00
1.1.5 Fixed-broadband subscriptions.....	95	8.20
1.1.6 International Internet bandwidth.....	66	68.05
1.1.7 Internet access in schools.....	41	53.44
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	77	52.42
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	43	64.03
1.3.2 Company investment in emerging technology.....	23	64.40
1.3.3 Government procurement of advanced technology products ..	13	67.26
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	40	77.91
2.1.2 Active mobile-broadband subscriptions.....	83	21.96
2.1.3 Use of virtual social networks.....	96	29.31
2.1.4 Tertiary enrolment.....	84	19.80
2.1.5 Adult literacy rate.....	6	99.72
2.1.6 ICT skills.....	59	4.79
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	96	18.69
2.2.2 Internet shopping.....	86	6.15
2.2.3 Professionals.....	50	31.85
2.2.4 Technicians and associate professionals.....	54	40.37
2.2.5 Extent of staff training.....	52	47.06
2.2.6 R&D expenditure by businesses.....	82	0.35
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	63	70.00
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	17	74.79
2.3.4 R&D expenditure by governments and higher education.....	81	14.47

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	96	39.65
3.1.2 Software piracy rate.....	89	10.81
3.1.3 Secure Internet servers.....	74	49.45
3.1.4 Cybersecurity.....	56	69.52
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	93	43.03
3.2.2 Ease of doing business.....	33	82.21
3.2.3 Legal framework's adaptability to digital business models....	20	69.74
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	39	59.90
3.2.6 ICT regulatory environment.....	96	68.92
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	76	63.70
3.3.2 Socioeconomic gap in use of digital payments.....	98	41.30
3.3.3 Availability of local online content.....	32	71.30
3.3.4 Gender gap in internet use.....	71	50.70
3.3.5 Rural gap in use of digital payments.....	114	20.72
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	77	25.71
4.1.2 High-tech exports.....	83	7.63
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	67	20.73
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	84	43.96
4.2.2 Freedom to make life choices.....	83	56.47
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	81	58.61
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	77	89.38
4.3.2 Pollution.....	57	85.93
4.3.3 Road safety.....	36	81.25
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00



# Bahrain

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>40</b>	<b>58.73</b>
<b>A. Technology pillar</b> .....	<b>37</b>	<b>59.30</b>
1st sub-pillar: Access.....	41	78.05
2nd sub-pillar: Content.....	64	46.46
3rd sub-pillar: Future Technologies.....	22	53.39
<b>B. People pillar</b> .....	<b>45</b>	<b>49.59</b>
1st sub-pillar: Individuals .....	4	75.17
2nd sub-pillar: Businesses .....	67	28.35
3rd sub-pillar: Governments .....	63	45.25
<b>C. Governance pillar</b> .....	<b>42</b>	<b>68.38</b>
1st sub-pillar: Trust .....	61	56.32
2nd sub-pillar: Regulation.....	37	74.77
3rd sub-pillar: Inclusion.....	32	74.05
<b>D. Impact pillar</b> .....	<b>47</b>	<b>57.63</b>
1st sub-pillar: Economy .....	43	28.15
2nd sub-pillar: Quality of Life .....	26	74.57
3rd sub-pillar: SDG Contribution.....	76	70.17



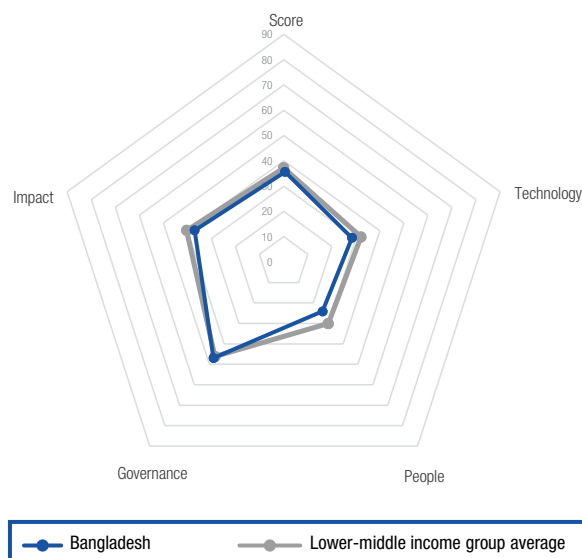
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	78	57.10
1.1.2 Handset prices.....	104	23.16
1.1.3 Households with internet access.....	7	97.38
1.1.4 4G mobile network coverage.....	1	100.00
1.1.5 Fixed-broadband subscriptions.....	20	94.83
1.1.6 International Internet bandwidth.....	25	73.86
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	44	69.32
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	33	72.94
1.3.2 Company investment in emerging technology.....	n/a	n/a
1.3.3 Government procurement of advanced technology products ..	21	59.95
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	4	98.88
2.1.2 Active mobile-broadband subscriptions.....	13	49.18
2.1.3 Use of virtual social networks.....	8	81.29
2.1.4 Tertiary enrolment.....	58	36.57
2.1.5 Adult literacy rate.....	33	96.11
2.1.6 ICT skills.....	7	88.98
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	n/a	n/a
2.2.2 Internet shopping.....	43	32.09
2.2.3 Professionals.....	78	18.27
2.2.4 Technicians and associate professionals.....	75	26.42
2.2.5 Extent of staff training.....	27	64.45
2.2.6 R&D expenditure by businesses.....	78	0.52
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	45	77.69
2.3.2 Publication and use of open data.....	72	18.91
2.3.3 ICT use and government efficiency.....	12	78.34
2.3.4 R&D expenditure by governments and higher education.....	95	6.06

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	45	62.75
3.1.2 Software piracy rate.....	46	50.00
3.1.3 Secure Internet servers.....	72	50.46
3.1.4 Cybersecurity.....	69	62.06
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	50	61.24
3.2.2 Ease of doing business.....	42	81.00
3.2.3 Legal framework's adaptability to digital business models.....	n/a	n/a
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	30	68.21
3.2.6 ICT regulatory environment.....	44	88.42
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	53	77.07
3.3.2 Socioeconomic gap in use of digital payments.....	48	77.50
3.3.3 Availability of local online content.....	n/a	n/a
3.3.4 Gender gap in internet use.....	23	66.36
3.3.5 Rural gap in use of digital payments.....	30	75.26
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	67	28.14
4.1.2 High-tech exports.....	106	1.99
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	23	54.32
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	40	66.03
4.2.2 Freedom to make life choices.....	25	87.36
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	42	70.33
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	1	100.00
4.3.2 Pollution.....	116	28.54
4.3.3 Road safety.....	33	83.44
4.3.4 Reading proficiency in schools.....	36	69.62
4.3.5 Maths proficiency in schools.....	48	39.39
4.3.6 Use of clean fuels and technology.....	1	100.00

# Bangladesh

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>101</b>	<b>34.48</b>
<b>A. Technology pillar.....</b>	<b>105</b>	<b>27.67</b>
1st sub-pillar: Access.....	100	37.41
2nd sub-pillar: Content.....	103	18.03
3rd sub-pillar: Future Technologies.....	78	27.57
<b>B. People pillar.....</b>	<b>104</b>	<b>25.13</b>
1st sub-pillar: Individuals .....	107	22.15
2nd sub-pillar: Businesses .....	116	9.99
3rd sub-pillar: Governments .....	67	43.26
<b>C. Governance pillar .....</b>	<b>98</b>	<b>47.78</b>
1st sub-pillar: Trust .....	105	37.16
2nd sub-pillar: Regulation.....	106	43.31
3rd sub-pillar: Inclusion.....	61	62.87
<b>D. Impact pillar .....</b>	<b>98</b>	<b>37.32</b>
1st sub-pillar: Economy .....	113	6.09
2nd sub-pillar: Quality of Life .....	59	62.41
3rd sub-pillar: SDG Contribution.....	105	43.45



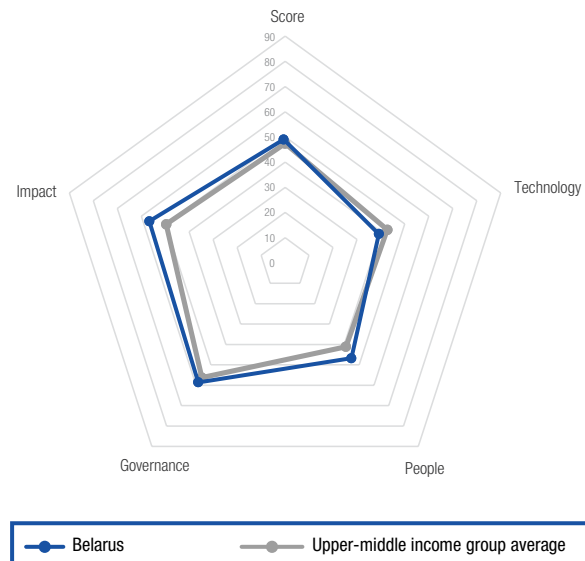
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	50	69.55
1.1.2 Handset prices.....	59	46.95
1.1.3 Households with internet access.....	120	0.51
1.1.4 4G mobile network coverage.....	96	58.00
1.1.5 Fixed-broadband subscriptions.....	90	20.00
1.1.6 International Internet bandwidth.....	89	63.07
1.1.7 Internet access in schools.....	64	3.75
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	107	30.09
1.2.3 Intellectual property receipts.....	95	0.01
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	98	35.28
1.3.2 Company investment in emerging technology.....	93	23.06
1.3.3 Government procurement of advanced technology products ..	79	33.77
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	116	5.79
2.1.2 Active mobile-broadband subscriptions.....	105	12.93
2.1.3 Use of virtual social networks.....	103	17.88
2.1.4 Tertiary enrolment.....	91	14.54
2.1.5 Adult literacy rate.....	84	59.59
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	101	10.00
2.2.2 Internet shopping.....	111	1.59
2.2.3 Professionals.....	101	10.74
2.2.4 Technicians and associate professionals.....	107	7.21
2.2.5 Extent of staff training.....	113	20.44
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	51	76.15
2.3.2 Publication and use of open data.....	87	10.57
2.3.3 ICT use and government efficiency.....	62	43.04
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	98	38.73
3.1.2 Software piracy rate.....	97	6.76
3.1.3 Secure Internet servers.....	95	40.52
3.1.4 Cybersecurity.....	78	55.48
3.1.5 Online trust and safety.....	74	44.29
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	111	33.22
3.2.2 Ease of doing business.....	118	26.20
3.2.3 Legal framework's adaptability to digital business models.....	72	39.01
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	114	12.67
3.2.6 ICT regulatory environment.....	85	73.75
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	51	77.71
3.3.2 Socioeconomic gap in use of digital payments.....	72	61.43
3.3.3 Availability of local online content.....	96	32.41
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	6	79.95
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	99	12.20
4.1.2 High-tech exports.....	113	0.58
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	96	5.49
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	105	30.03
4.2.2 Freedom to make life choices.....	28	86.35
4.2.3 Income inequality.....	31	80.53
4.2.4 Healthy life expectancy at birth.....	90	52.75
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	101	63.89
4.3.2 Pollution.....	113	40.63
4.3.3 Road safety.....	64	60.62
4.3.4 Reading proficiency in schools.....	58	46.84
4.3.5 Maths proficiency in schools.....	54	33.18
4.3.6 Use of clean fuels and technology.....	107	15.56

# Belarus

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>61</b>	<b>50.34</b>
<b>A. Technology pillar.....</b>	<b>79</b>	<b>40.16</b>
1st sub-pillar: Access.....	58	69.81
2nd sub-pillar: Content.....	55	48.79
3rd sub-pillar: Future Technologies.....	121	1.89
<b>B. People pillar.....</b>	<b>53</b>	<b>46.26</b>
1st sub-pillar: Individuals .....	35	62.44
2nd sub-pillar: Businesses .....	37	43.69
3rd sub-pillar: Governments .....	95	32.66
<b>C. Governance pillar .....</b>	<b>68</b>	<b>58.27</b>
1st sub-pillar: Trust .....	87	43.63
2nd sub-pillar: Regulation.....	83	57.15
3rd sub-pillar: Inclusion.....	34	74.04
<b>D. Impact pillar .....</b>	<b>51</b>	<b>56.66</b>
1st sub-pillar: Economy .....	63	21.31
2nd sub-pillar: Quality of Life .....	78	57.93
3rd sub-pillar: SDG Contribution.....	34	90.73



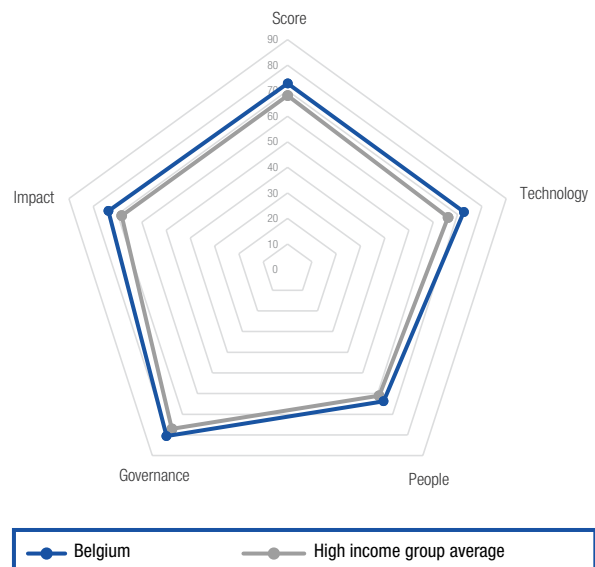
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	37	74.30
1.1.2 Handset prices.....	62	46.77
1.1.3 Households with internet access.....	59	70.60
1.1.4 4G mobile network coverage.....	81	75.70
1.1.5 Fixed-broadband subscriptions.....	65	57.86
1.1.6 International Internet bandwidth.....	13	76.50
1.1.7 Internet access in schools.....	32	86.95
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	58	63.44
1.2.3 Intellectual property receipts.....	55	0.65
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	n/a	n/a
1.3.2 Company investment in emerging technology.....	n/a	n/a
1.3.3 Government procurement of advanced technology products ..	n/a	n/a
1.3.4 ICT PCT patent applications.....	59	5.11
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	58	0.56
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	44	77.16
2.1.2 Active mobile-broadband subscriptions.....	51	32.92
2.1.3 Use of virtual social networks.....	87	38.67
2.1.4 Tertiary enrolment.....	10	63.78
2.1.5 Adult literacy rate.....	8	99.66
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	29	71.27
2.2.2 Internet shopping.....	37	38.49
2.2.3 Professionals.....	18	54.38
2.2.4 Technicians and associate professionals.....	48	44.22
2.2.5 Extent of staff training.....	n/a	n/a
2.2.6 R&D expenditure by businesses.....	41	10.08
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	57	70.77
2.3.2 Publication and use of open data.....	86	10.95
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	78	16.27

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	109	34.34
3.1.2 Software piracy rate.....	91	9.46
3.1.3 Secure Internet servers.....	48	69.43
3.1.4 Cybersecurity.....	70	61.29
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	104	36.88
3.2.2 Ease of doing business.....	48	77.93
3.2.3 Legal framework's adaptability to digital business models.....	n/a	n/a
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	n/a	n/a
3.2.6 ICT regulatory environment.....	115	38.80
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	33	86.62
3.3.2 Socioeconomic gap in use of digital payments.....	29	86.15
3.3.3 Availability of local online content.....	n/a	n/a
3.3.4 Gender gap in internet use.....	26	66.06
3.3.5 Rural gap in use of digital payments.....	78	57.32
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	29	51.75
4.1.2 High-tech exports.....	84	7.54
4.1.3 PCT patent applications.....	56	0.83
4.1.4 Labour productivity per employee.....	60	25.11
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	82	45.33
4.2.2 Freedom to make life choices.....	110	26.63
4.2.3 Income inequality.....	2	98.95
4.2.4 Healthy life expectancy at birth.....	74	60.81
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	49	96.22
4.3.2 Pollution.....	55	86.09
4.3.3 Road safety.....	37	80.62
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Belgium

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>20</b>	<b>72.62</b>
<b>A. Technology pillar</b> .....	<b>15</b>	<b>72.42</b>
1st sub-pillar: Access.....	17	85.79
2nd sub-pillar: Content.....	21	68.97
3rd sub-pillar: Future Technologies.....	16	62.52
<b>B. People pillar</b> .....	<b>21</b>	<b>63.79</b>
1st sub-pillar: Individuals .....	40	61.20
2nd sub-pillar: Businesses .....	13	67.32
3rd sub-pillar: Governments .....	25	62.84
<b>C. Governance pillar</b> .....	<b>19</b>	<b>80.62</b>
1st sub-pillar: Trust .....	20	79.91
2nd sub-pillar: Regulation.....	20	83.35
3rd sub-pillar: Inclusion.....	22	78.59
<b>D. Impact pillar</b> .....	<b>15</b>	<b>73.67</b>
1st sub-pillar: Economy .....	19	45.36
2nd sub-pillar: Quality of Life .....	19	80.18
3rd sub-pillar: SDG Contribution.....	14	95.48



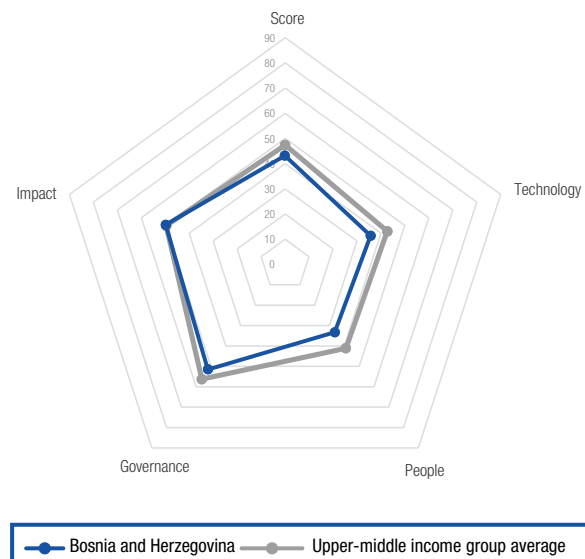
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	42	71.98
1.1.2 Handset prices.....	14	71.27
1.1.3 Households with internet access.....	27	86.42
1.1.4 4G mobile network coverage.....	1	100.00
1.1.5 Fixed-broadband subscriptions.....	12	96.76
1.1.6 International Internet bandwidth.....	23	74.08
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	33	76.60
1.2.3 Intellectual property receipts.....	24	3.68
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	12	89.19
1.3.2 Company investment in emerging technology.....	21	64.75
1.3.3 Government procurement of advanced technology products ..	38	48.06
1.3.4 ICT PCT patent applications.....	20	53.72
1.3.5 Computer software spending.....	4	63.64
1.3.6 Robot density.....	10	55.75
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	21	87.76
2.1.2 Active mobile-broadband subscriptions.....	67	28.58
2.1.3 Use of virtual social networks.....	38	64.66
2.1.4 Tertiary enrolment.....	19	58.06
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	16	66.95
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	10	84.93
2.2.2 Internet shopping.....	14	73.44
2.2.3 Professionals.....	11	65.50
2.2.4 Technicians and associate professionals.....	23	62.05
2.2.5 Extent of staff training.....	17	73.24
2.2.6 R&D expenditure by businesses.....	11	44.77
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	55	73.07
2.3.2 Publication and use of open data.....	29	45.28
2.3.3 ICT use and government efficiency.....	38	57.43
2.3.4 R&D expenditure by governments and higher education.....	11	75.59

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	21	84.53
3.1.2 Software piracy rate.....	13	90.54
3.1.3 Secure Internet servers.....	32	81.44
3.1.4 Cybersecurity.....	32	87.17
3.1.5 Online trust and safety.....	58	55.86
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	25	78.59
3.2.2 Ease of doing business.....	45	79.17
3.2.3 Legal framework's adaptability to digital business models....	47	47.40
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	5	98.78
3.2.6 ICT regulatory environment.....	11	96.14
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	59	72.61
3.3.2 Socioeconomic gap in use of digital payments.....	6	97.89
3.3.3 Availability of local online content.....	19	83.09
3.3.4 Gender gap in internet use.....	42	61.30
3.3.5 Rural gap in use of digital payments.....	13	78.08
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	14	63.25
4.1.2 High-tech exports.....	44	19.55
4.1.3 PCT patent applications.....	16	32.03
4.1.4 Labour productivity per employee.....	10	66.60
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	20	79.88
4.2.2 Freedom to make life choices.....	69	64.79
4.2.3 Income inequality.....	12	92.89
4.2.4 Healthy life expectancy at birth.....	26	83.15
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	17	99.66
4.3.2 Pollution.....	30	91.94
4.3.3 Road safety.....	19	90.31
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Bosnia and Herzegovina

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>81</b>	<b>42.72</b>
<b>A. Technology pillar.....</b>	<b>85</b>	<b>35.70</b>
1st sub-pillar: Access.....	88	45.78
2nd sub-pillar: Content.....	63	46.60
3rd sub-pillar: Future Technologies.....	115	14.71
<b>B. People pillar.....</b>	<b>88</b>	<b>33.65</b>
1st sub-pillar: Individuals .....	58	56.45
2nd sub-pillar: Businesses .....	74	25.94
3rd sub-pillar: Governments .....	116	18.58
<b>C. Governance pillar .....</b>	<b>86</b>	<b>51.88</b>
1st sub-pillar: Trust .....	88	42.68
2nd sub-pillar: Regulation.....	88	55.80
3rd sub-pillar: Inclusion.....	77	57.16
<b>D. Impact pillar .....</b>	<b>74</b>	<b>49.64</b>
1st sub-pillar: Economy .....	73	16.66
2nd sub-pillar: Quality of Life .....	75	58.77
3rd sub-pillar: SDG Contribution.....	64	73.48



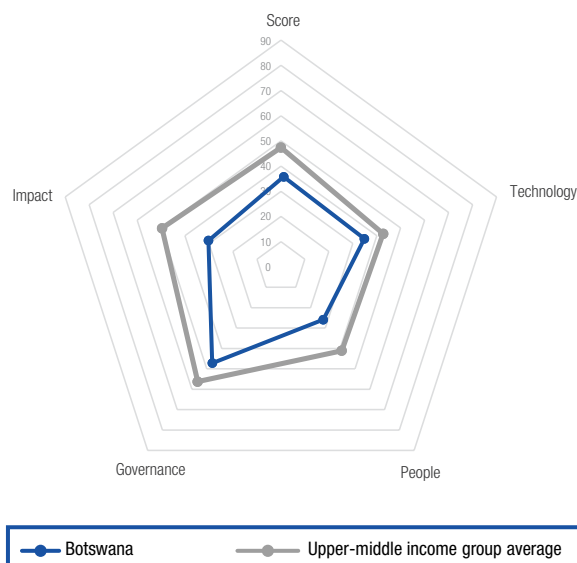
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	91	49.42
1.1.2 Handset prices.....	75	41.31
1.1.3 Households with internet access.....	65	67.13
1.1.4 4G mobile network coverage.....	120	0.00
1.1.5 Fixed-broadband subscriptions.....	73	46.79
1.1.6 International Internet bandwidth.....	51	70.04
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	82	50.19
1.2.3 Intellectual property receipts.....	36	1.19
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	76	44.95
1.3.2 Company investment in emerging technology.....	114	9.96
1.3.3 Government procurement of advanced technology products ..	108	21.98
1.3.4 ICT PCT patent applications.....	67	1.73
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	59	0.55
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	64	67.13
2.1.2 Active mobile-broadband subscriptions.....	89	20.24
2.1.3 Use of virtual social networks.....	76	48.02
2.1.4 Tertiary enrolment.....	n/a	n/a
2.1.5 Adult literacy rate.....	37	95.38
2.1.6 ICT skills.....	36	51.48
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	51	58.15
2.2.2 Internet shopping.....	67	15.07
2.2.3 Professionals.....	57	28.66
2.2.4 Technicians and associate professionals.....	55	39.83
2.2.5 Extent of staff training.....	116	12.19
2.2.6 R&D expenditure by businesses.....	67	1.71
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	106	36.93
2.3.2 Publication and use of open data.....	92	8.02
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	87	10.78

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	71	48.02
3.1.2 Software piracy rate.....	58	37.84
3.1.3 Secure Internet servers.....	54	64.57
3.1.4 Cybersecurity.....	107	20.29
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	84	46.87
3.2.2 Ease of doing business.....	82	62.28
3.2.3 Legal framework's adaptability to digital business models.....	111	18.80
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	115	11.87
3.2.6 ICT regulatory environment.....	18	94.98
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	104	35.67
3.3.2 Socioeconomic gap in use of digital payments.....	70	62.05
3.3.3 Availability of local online content.....	55	56.21
3.3.4 Gender gap in internet use.....	62	56.85
3.3.5 Rural gap in use of digital payments.....	32	75.01
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	82	23.31
4.1.2 High-tech exports.....	77	9.91
4.1.3 PCT patent applications.....	64	0.43
4.1.4 Labour productivity per employee.....	54	32.99
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	57	58.95
4.2.2 Freedom to make life choices.....	107	30.16
4.2.3 Income inequality.....	36	78.95
4.2.4 Healthy life expectancy at birth.....	49	67.03
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	57	94.40
4.3.2 Pollution.....	87	75.71
4.3.3 Road safety.....	67	59.38
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	88	64.44

# Botswana

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>100</b>	<b>34.85</b>
<b>A. Technology pillar</b> .....	<b>92</b>	<b>33.55</b>
1st sub-pillar: Access.....	89	45.76
2nd sub-pillar: Content.....	100	22.55
3rd sub-pillar: Future Technologies.....	55	32.33
<b>B. People pillar</b> .....	<b>102</b>	<b>26.68</b>
1st sub-pillar: Individuals .....	93	37.74
2nd sub-pillar: Businesses .....	97	19.90
3rd sub-pillar: Governments .....	108	22.40
<b>C. Governance pillar</b> .....	<b>97</b>	<b>47.96</b>
1st sub-pillar: Trust .....	82	47.42
2nd sub-pillar: Regulation.....	70	61.67
3rd sub-pillar: Inclusion.....	113	34.78
<b>D. Impact pillar</b> .....	<b>106</b>	<b>31.23</b>
1st sub-pillar: Economy .....	117	4.13
2nd sub-pillar: Quality of Life .....	115	33.09
3rd sub-pillar: SDG Contribution.....	93	56.46



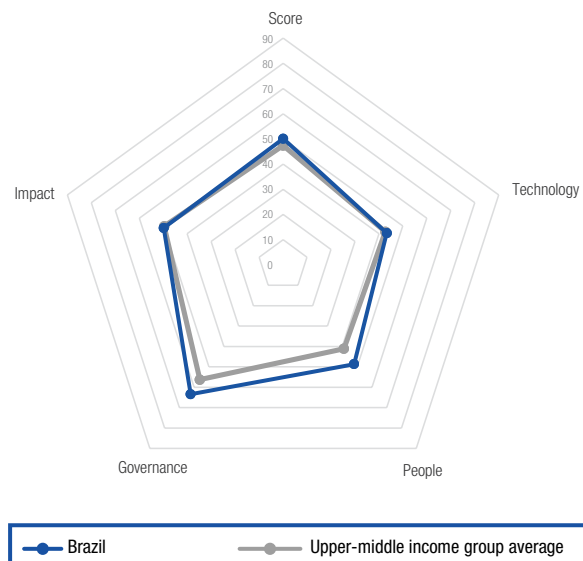
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	96	46.05
1.1.2 Handset prices.....	39	58.28
1.1.3 Households with internet access.....	83	42.09
1.1.4 4G mobile network coverage.....	93	65.00
1.1.5 Fixed-broadband subscriptions.....	105	1.18
1.1.6 International Internet bandwidth.....	94	61.98
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	97	39.65
1.2.3 Intellectual property receipts.....	88	0.04
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	88	40.72
1.3.2 Company investment in emerging technology.....	90	24.99
1.3.3 Government procurement of advanced technology products ..	27	54.54
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	90	41.40
2.1.2 Active mobile-broadband subscriptions.....	61	29.34
2.1.3 Use of virtual social networks.....	85	40.75
2.1.4 Tertiary enrolment.....	87	17.70
2.1.5 Adult literacy rate.....	67	80.97
2.1.6 ICT skills.....	55	16.26
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	88	23.37
2.2.2 Internet shopping.....	95	4.60
2.2.3 Professionals.....	88	16.00
2.2.4 Technicians and associate professionals.....	62	33.51
2.2.5 Extent of staff training.....	61	39.54
2.2.6 R&D expenditure by businesses.....	61	2.41
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	118	12.31
2.3.2 Publication and use of open data.....	93	5.89
2.3.3 ICT use and government efficiency.....	70	40.98
2.3.4 R&D expenditure by governments and higher education.....	55	30.40

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	42	63.97
3.1.2 Software piracy rate.....	83	12.16
3.1.3 Secure Internet servers.....	93	41.73
3.1.4 Cybersecurity.....	85	46.16
3.1.5 Online trust and safety.....	29	73.06
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	48	61.43
3.2.2 Ease of doing business.....	80	63.62
3.2.3 Legal framework's adaptability to digital business models....	76	38.34
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	57	45.93
3.2.6 ICT regulatory environment.....	60	85.72
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	117	8.91
3.3.2 Socioeconomic gap in use of digital payments.....	93	44.09
3.3.3 Availability of local online content.....	108	20.54
3.3.4 Gender gap in internet use.....	78	37.91
3.3.5 Rural gap in use of digital payments.....	72	62.45
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	109	7.08
4.1.2 High-tech exports.....	109	1.18
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	118	8.41
4.2.2 Freedom to make life choices.....	65	66.93
4.2.3 Income inequality.....	102	25.53
4.2.4 Healthy life expectancy at birth.....	105	31.50
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	92	78.64
4.3.2 Pollution.....	70	82.50
4.3.3 Road safety.....	98	34.06
4.3.4 Reading proficiency in schools.....	53	55.71
4.3.5 Maths proficiency in schools.....	58	27.88
4.3.6 Use of clean fuels and technology.....	90	60.00

# Brazil

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>59</b>	<b>51.07</b>
<b>A. Technology pillar.....</b>	<b>67</b>	<b>43.39</b>
1st sub-pillar: Access.....	72	60.11
2nd sub-pillar: Content.....	59	47.85
3rd sub-pillar: Future Technologies.....	95	22.22
<b>B. People pillar.....</b>	<b>48</b>	<b>48.02</b>
1st sub-pillar: Individuals .....	72	51.83
2nd sub-pillar: Businesses .....	53	32.02
3rd sub-pillar: Governments .....	27	60.21
<b>C. Governance pillar .....</b>	<b>55</b>	<b>62.79</b>
1st sub-pillar: Trust .....	50	61.69
2nd sub-pillar: Regulation.....	89	54.81
3rd sub-pillar: Inclusion.....	40	71.86
<b>D. Impact pillar .....</b>	<b>71</b>	<b>50.08</b>
1st sub-pillar: Economy .....	59	22.17
2nd sub-pillar: Quality of Life .....	97	51.21
3rd sub-pillar: SDG Contribution.....	60	76.85



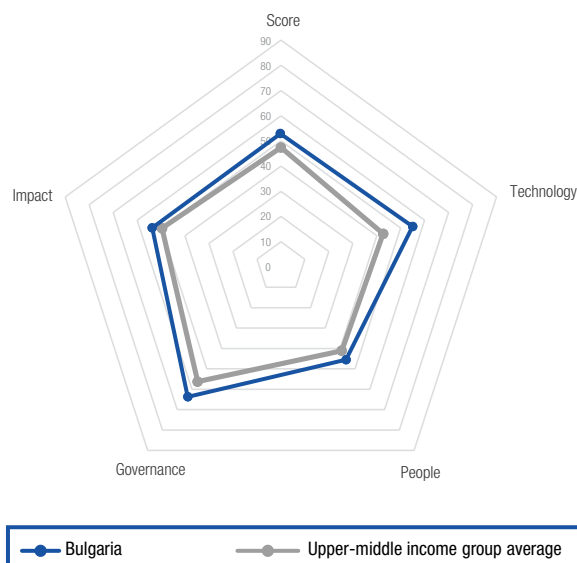
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	52	68.61
1.1.2 Handset prices.....	94	32.70
1.1.3 Households with internet access.....	72	58.13
1.1.4 4G mobile network coverage.....	75	83.05
1.1.5 Fixed-broadband subscriptions.....	69	52.04
1.1.6 International Internet bandwidth.....	80	64.33
1.1.7 Internet access in schools.....	38	61.89
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	49	67.09
1.2.3 Intellectual property receipts.....	31	1.67
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	74	46.23
1.3.2 Company investment in emerging technology.....	65	33.79
1.3.3 Government procurement of advanced technology products .....	104	24.24
1.3.4 ICT PCT patent applications.....	54	6.90
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	43	4.01
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	67	64.18
2.1.2 Active mobile-broadband subscriptions.....	44	33.65
2.1.3 Use of virtual social networks.....	35	65.70
2.1.4 Tertiary enrolment.....	56	37.21
2.1.5 Adult literacy rate.....	57	89.54
2.1.6 ICT skills.....	51	20.72
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	63	45.95
2.2.2 Internet shopping.....	63	18.19
2.2.3 Professionals.....	61	27.43
2.2.4 Technicians and associate professionals.....	64	32.73
2.2.5 Extent of staff training.....	68	35.81
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	22	91.54
2.3.2 Publication and use of open data.....	18	58.86
2.3.3 ICT use and government efficiency.....	95	30.23
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	76	47.00
3.1.2 Software piracy rate.....	36	58.11
3.1.3 Secure Internet servers.....	53	65.00
3.1.4 Cybersecurity.....	71	61.18
3.1.5 Online trust and safety.....	19	77.17
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	90	44.51
3.2.2 Ease of doing business.....	100	51.03
3.2.3 Legal framework's adaptability to digital business models.....	95	31.15
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	74	37.42
3.2.6 ICT regulatory environment.....	34	89.77
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	12	96.81
3.3.2 Socioeconomic gap in use of digital payments.....	77	58.01
3.3.3 Availability of local online content.....	42	63.28
3.3.4 Gender gap in internet use.....	27	65.94
3.3.5 Rural gap in use of digital payments.....	29	75.26
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	39	45.11
4.1.2 High-tech exports.....	35	24.54
4.1.3 PCT patent applications.....	54	0.94
4.1.4 Labour productivity per employee.....	74	18.08
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	43	65.27
4.2.2 Freedom to make life choices.....	90	51.41
4.2.3 Income inequality.....	102	25.53
4.2.4 Healthy life expectancy at birth.....	69	62.64
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	71	91.09
4.3.2 Pollution.....	23	93.50
4.3.3 Road safety.....	86	46.88
4.3.4 Reading proficiency in schools.....	41	66.50
4.3.5 Maths proficiency in schools.....	31	63.13
4.3.6 Use of clean fuels and technology.....	1	100.00

# Bulgaria

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>49</b>	<b>54.77</b>
<b>A. Technology pillar</b> .....	<b>42</b>	<b>56.11</b>
1st sub-pillar: Access.....	50	74.03
2nd sub-pillar: Content.....	30	65.08
3rd sub-pillar: Future Technologies.....	68	29.21
<b>B. People pillar</b> .....	<b>57</b>	<b>45.06</b>
1st sub-pillar: Individuals .....	55	57.09
2nd sub-pillar: Businesses .....	52	32.73
3rd sub-pillar: Governments .....	62	45.36
<b>C. Governance pillar</b> .....	<b>53</b>	<b>63.54</b>
1st sub-pillar: Trust .....	47	62.38
2nd sub-pillar: Regulation.....	53	67.15
3rd sub-pillar: Inclusion.....	67	61.10
<b>D. Impact pillar</b> .....	<b>57</b>	<b>54.37</b>
1st sub-pillar: Economy .....	62	21.39
2nd sub-pillar: Quality of Life .....	84	54.83
3rd sub-pillar: SDG Contribution.....	42	86.88



## The Network Readiness Index in detail

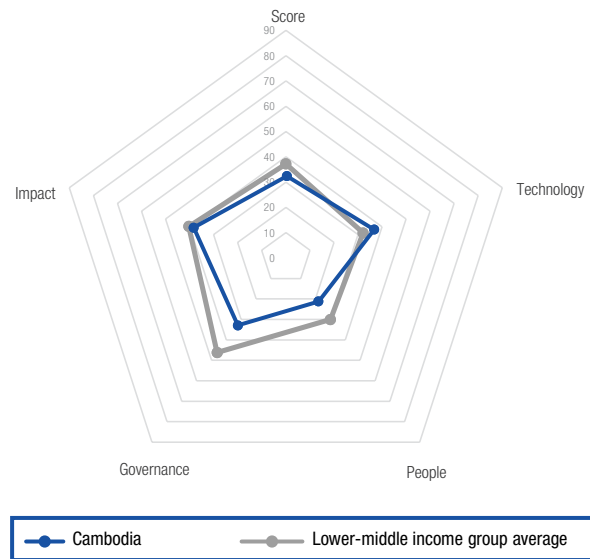
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	62	64.87
1.1.2 Handset prices.....	93	33.06
1.1.3 Households with internet access.....	60	70.27
1.1.4 4G mobile network coverage.....	16	99.71
1.1.5 Fixed-broadband subscriptions.....	10	97.71
1.1.6 International Internet bandwidth.....	11	78.57
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	28	80.12
1.2.3 Intellectual property receipts.....	42	0.93
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	66	51.66
1.3.2 Company investment in emerging technology.....	50	42.09
1.3.3 Government procurement of advanced technology products ..	59	42.07
1.3.4 ICT PCT patent applications.....	48	9.81
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	45	2.34
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	73	61.19
2.1.2 Active mobile-broadband subscriptions.....	27	39.47
2.1.3 Use of virtual social networks.....	61	53.22
2.1.4 Tertiary enrolment.....	26	51.87
2.1.5 Adult literacy rate.....	26	97.49
2.1.6 ICT skills.....	44	39.28
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	62	47.38
2.2.2 Internet shopping.....	48	27.91
2.2.3 Professionals.....	37	42.67
2.2.4 Technicians and associate professionals.....	53	40.67
2.2.5 Extent of staff training.....	107	24.01
2.2.6 R&D expenditure by businesses.....	38	13.74
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	54	73.85
2.3.2 Publication and use of open data.....	41	37.14
2.3.3 ICT use and government efficiency.....	46	51.15
2.3.4 R&D expenditure by governments and higher education.....	71	19.31

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	62	52.66
3.1.2 Software piracy rate.....	52	43.24
3.1.3 Secure Internet servers.....	12	90.02
3.1.4 Cybersecurity.....	48	76.97
3.1.5 Online trust and safety.....	66	49.01
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	42	64.11
3.2.2 Ease of doing business.....	57	73.84
3.2.3 Legal framework's adaptability to digital business models....	73	38.90
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	81	32.80
3.2.6 ICT regulatory environment.....	25	93.25
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	35	85.35
3.3.2 Socioeconomic gap in use of digital payments.....	86	50.14
3.3.3 Availability of local online content.....	59	55.19
3.3.4 Gender gap in internet use.....	50	59.35
3.3.5 Rural gap in use of digital payments.....	81	55.45
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	50	37.85
4.1.2 High-tech exports.....	45	19.17
4.1.3 PCT patent applications.....	46	2.07
4.1.4 Labour productivity per employee.....	59	26.48
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	88	42.52
4.2.2 Freedom to make life choices.....	98	45.32
4.2.3 Income inequality.....	60	67.37
4.2.4 Healthy life expectancy at birth.....	60	64.10
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	73	90.18
4.3.2 Pollution.....	61	85.23
4.3.3 Road safety.....	45	76.56
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	70	95.56



# Cambodia

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>107</b>	<b>32.29</b>
<b>A. Technology pillar.....</b>	<b>82</b>	<b>36.24</b>
1st sub-pillar: Access.....	75	58.00
2nd sub-pillar: Content.....	101	21.37
3rd sub-pillar: Future Technologies.....	67	29.33
<b>B. People pillar.....</b>	<b>110</b>	<b>21.28</b>
1st sub-pillar: Individuals .....	98	34.07
2nd sub-pillar: Businesses .....	118	9.70
3rd sub-pillar: Governments .....	113	20.06
<b>C. Governance pillar .....</b>	<b>116</b>	<b>32.92</b>
1st sub-pillar: Trust .....	119	20.23
2nd sub-pillar: Regulation.....	113	34.59
3rd sub-pillar: Inclusion.....	103	43.93
<b>D. Impact pillar .....</b>	<b>96</b>	<b>38.71</b>
1st sub-pillar: Economy .....	119	2.16
2nd sub-pillar: Quality of Life .....	60	62.03
3rd sub-pillar: SDG Contribution.....	99	51.95



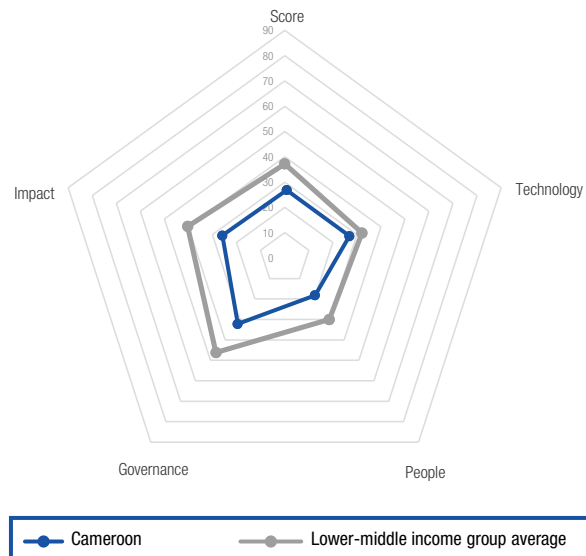
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	87	49.89
1.1.2 Handset prices.....	100	29.07
1.1.3 Households with internet access.....	85	35.99
1.1.4 4G mobile network coverage.....	78	80.30
1.1.5 Fixed-broadband subscriptions.....	41	85.21
1.1.6 International Internet bandwidth.....	72	67.57
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	91	46.55
1.2.3 Intellectual property receipts.....	85	0.06
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	86	41.39
1.3.2 Company investment in emerging technology.....	54	39.10
1.3.3 Government procurement of advanced technology products ..	72	36.85
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	95	33.61
2.1.2 Active mobile-broadband subscriptions.....	55	31.48
2.1.3 Use of virtual social networks.....	69	50.10
2.1.4 Tertiary enrolment.....	97	9.07
2.1.5 Adult literacy rate.....	76	69.85
2.1.6 ICT skills.....	57	10.30
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	103	7.27
2.2.2 Internet shopping.....	98	3.88
2.2.3 Professionals.....	106	6.95
2.2.4 Technicians and associate professionals.....	114	3.28
2.2.5 Extent of staff training.....	65	36.44
2.2.6 R&D expenditure by businesses.....	81	0.40
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	116	16.93
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	76	39.19
2.3.4 R&D expenditure by governments and higher education.....	101	4.07

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	117	27.91
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	100	37.46
3.1.4 Cybersecurity.....	113	15.57
3.1.5 Online trust and safety.....	88	0.00
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	98	40.29
3.2.2 Ease of doing business.....	111	41.76
3.2.3 Legal framework's adaptability to digital business models.....	69	40.83
3.2.4 E-commerce legislation.....	117	0.00
3.2.5 Social safety net protection.....	104	21.71
3.2.6 ICT regulatory environment.....	104	62.93
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	118	6.37
3.3.2 Socioeconomic gap in use of digital payments.....	84	50.34
3.3.3 Availability of local online content.....	77	43.24
3.3.4 Gender gap in internet use.....	20	66.71
3.3.5 Rural gap in use of digital payments.....	89	52.97
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	119	0.00
4.1.2 High-tech exports.....	99	3.51
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	99	2.96
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	87	43.00
4.2.2 Freedom to make life choices.....	2	99.51
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	97	43.59
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	103	58.94
4.3.2 Pollution.....	78	79.40
4.3.3 Road safety.....	78	52.81
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	106	16.67

# Cameroon

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>113</b>	<b>25.94</b>
<b>A. Technology pillar</b> .....	<b>108</b>	<b>25.80</b>
1st sub-pillar: Access.....	93	42.02
2nd sub-pillar: Content.....	116	7.60
3rd sub-pillar: Future Technologies.....	76	27.79
<b>B. People pillar</b> .....	<b>115</b>	<b>18.82</b>
1st sub-pillar: Individuals .....	110	21.42
2nd sub-pillar: Businesses .....	111	12.11
3rd sub-pillar: Governments .....	107	22.94
<b>C. Governance pillar</b> .....	<b>117</b>	<b>32.63</b>
1st sub-pillar: Trust .....	117	25.60
2nd sub-pillar: Regulation.....	107	43.31
3rd sub-pillar: Inclusion.....	117	28.99
<b>D. Impact pillar</b> .....	<b>113</b>	<b>26.50</b>
1st sub-pillar: Economy .....	111	7.06
2nd sub-pillar: Quality of Life .....	105	40.88
3rd sub-pillar: SDG Contribution.....	114	31.56



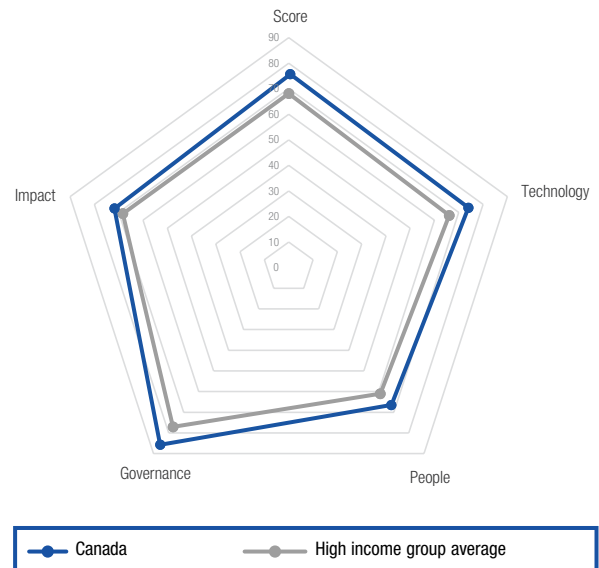
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	100	39.53
1.1.2 Handset prices.....	73	41.76
1.1.3 Households with internet access.....	105	16.46
1.1.4 4G mobile network coverage.....	92	65.48
1.1.5 Fixed-broadband subscriptions.....	n/a	n/a
1.1.6 International Internet bandwidth.....	117	46.87
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	111	25.74
1.2.3 Intellectual property receipts.....	83	0.07
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	109	28.41
1.3.2 Company investment in emerging technology.....	83	27.59
1.3.3 Government procurement of advanced technology products ..	71	36.99
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	110	14.92
2.1.2 Active mobile-broadband subscriptions.....	113	7.24
2.1.3 Use of virtual social networks.....	108	11.64
2.1.4 Tertiary enrolment.....	99	8.79
2.1.5 Adult literacy rate.....	80	64.49
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	104	5.19
2.2.2 Internet shopping.....	102	3.51
2.2.3 Professionals.....	100	11.32
2.2.4 Technicians and associate professionals.....	101	11.76
2.2.5 Extent of staff training.....	93	28.79
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	104	40.00
2.3.2 Publication and use of open data.....	95	5.15
2.3.3 ICT use and government efficiency.....	100	23.67
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	116	28.71
3.1.2 Software piracy rate.....	83	12.16
3.1.3 Secure Internet servers.....	119	13.68
3.1.4 Cybersecurity.....	88	45.29
3.1.5 Online trust and safety.....	85	28.16
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	110	33.81
3.2.2 Ease of doing business.....	117	28.06
3.2.3 Legal framework's adaptability to digital business models....	77	38.28
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	101	23.31
3.2.6 ICT regulatory environment.....	105	61.39
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	110	23.56
3.3.2 Socioeconomic gap in use of digital payments.....	101	40.99
3.3.3 Availability of local online content.....	103	24.45
3.3.4 Gender gap in internet use.....	84	14.60
3.3.5 Rural gap in use of digital payments.....	104	41.37
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	101	9.44
4.1.2 High-tech exports.....	79	9.30
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	103	2.43
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	80	45.69
4.2.2 Freedom to make life choices.....	67	66.62
4.2.3 Income inequality.....	92	43.16
4.2.4 Healthy life expectancy at birth.....	117	8.06
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	113	33.69
4.3.2 Pollution.....	115	32.81
4.3.3 Road safety.....	113	14.38
4.3.4 Reading proficiency in schools.....	64	29.06
4.3.5 Maths proficiency in schools.....	37	57.21
4.3.6 Use of clean fuels and technology.....	104	22.22

# Canada

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>14</b>	<b>74.72</b>
<b>A. Technology pillar.....</b>	<b>13</b>	<b>73.13</b>
1st sub-pillar: Access.....	28	81.47
2nd sub-pillar: Content.....	13	76.29
3rd sub-pillar: Future Technologies.....	17	61.63
<b>B. People pillar.....</b>	<b>17</b>	<b>67.20</b>
1st sub-pillar: Individuals .....	47	59.06
2nd sub-pillar: Businesses .....	18	63.12
3rd sub-pillar: Governments .....	10	79.42
<b>C. Governance pillar .....</b>	<b>11</b>	<b>86.39</b>
1st sub-pillar: Trust .....	14	84.97
2nd sub-pillar: Regulation.....	15	86.09
3rd sub-pillar: Inclusion.....	3	88.12
<b>D. Impact pillar .....</b>	<b>19</b>	<b>72.14</b>
1st sub-pillar: Economy .....	29	36.95
2nd sub-pillar: Quality of Life .....	10	86.93
3rd sub-pillar: SDG Contribution.....	27	92.53



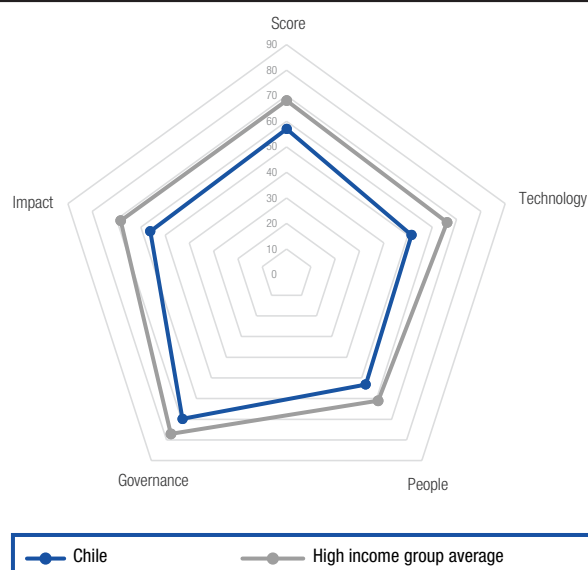
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	40	72.45
1.1.2 Handset prices.....	17	69.66
1.1.3 Households with internet access.....	16	90.65
1.1.4 4G mobile network coverage.....	24	99.00
1.1.5 Fixed-broadband subscriptions.....	39	86.69
1.1.6 International Internet bandwidth.....	46	70.35
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	20	84.15
1.2.3 Intellectual property receipts.....	20	5.29
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	14	87.70
1.3.2 Company investment in emerging technology.....	20	65.56
1.3.3 Government procurement of advanced technology products ..	61	41.43
1.3.4 ICT PCT patent applications.....	15	60.60
1.3.5 Computer software spending.....	4	63.64
1.3.6 Robot density.....	14	50.86
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	14	90.37
2.1.2 Active mobile-broadband subscriptions.....	63	28.98
2.1.3 Use of virtual social networks.....	32	66.74
2.1.4 Tertiary enrolment.....	31	50.15
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	19	77.76
2.2.2 Internet shopping.....	9	87.95
2.2.3 Professionals.....	27	48.30
2.2.4 Technicians and associate professionals.....	16	73.53
2.2.5 Extent of staff training.....	19	70.38
2.2.6 R&D expenditure by businesses.....	24	20.82
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	17	92.31
2.3.2 Publication and use of open data.....	2	89.54
2.3.3 ICT use and government efficiency.....	25	66.81
2.3.4 R&D expenditure by governments and higher education.....	14	69.02

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	12	93.72
3.1.2 Software piracy rate.....	13	90.54
3.1.3 Secure Internet servers.....	16	88.22
3.1.4 Cybersecurity.....	9	95.72
3.1.5 Online trust and safety.....	56	56.62
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	14	88.09
3.2.2 Ease of doing business.....	22	87.40
3.2.3 Legal framework's adaptability to digital business models.....	22	68.98
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	13	85.80
3.2.6 ICT regulatory environment.....	56	86.30
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	27	89.81
3.3.2 Socioeconomic gap in use of digital payments.....	3	99.49
3.3.3 Availability of local online content.....	16	86.08
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	15	77.09
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	47	38.92
4.1.2 High-tech exports.....	29	29.79
4.1.3 PCT patent applications.....	20	23.67
4.1.4 Labour productivity per employee.....	22	55.42
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	13	85.78
4.2.2 Freedom to make life choices.....	4	96.61
4.2.3 Income inequality.....	43	76.32
4.2.4 Healthy life expectancy at birth.....	7	89.01
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	33	98.95
4.3.2 Pollution.....	5	99.16
4.3.3 Road safety.....	19	90.31
4.3.4 Reading proficiency in schools.....	17	96.48
4.3.5 Maths proficiency in schools.....	24	70.29
4.3.6 Use of clean fuels and technology.....	1	100.00

# Chile

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>42</b>	<b>57.38</b>
<b>A. Technology pillar</b> .....	<b>48</b>	<b>51.42</b>
1st sub-pillar: Access.....	43	76.25
2nd sub-pillar: Content.....	53	49.18
3rd sub-pillar: Future Technologies.....	69	28.84
<b>B. People pillar</b> .....	<b>41</b>	<b>52.69</b>
1st sub-pillar: Individuals .....	21	67.82
2nd sub-pillar: Businesses .....	41	40.30
3rd sub-pillar: Governments .....	45	49.94
<b>C. Governance pillar</b> .....	<b>39</b>	<b>69.30</b>
1st sub-pillar: Trust .....	42	66.68
2nd sub-pillar: Regulation.....	39	73.17
3rd sub-pillar: Inclusion.....	47	68.05
<b>D. Impact pillar</b> .....	<b>54</b>	<b>56.09</b>
1st sub-pillar: Economy .....	70	17.63
2nd sub-pillar: Quality of Life .....	58	62.48
3rd sub-pillar: SDG Contribution.....	41	88.17



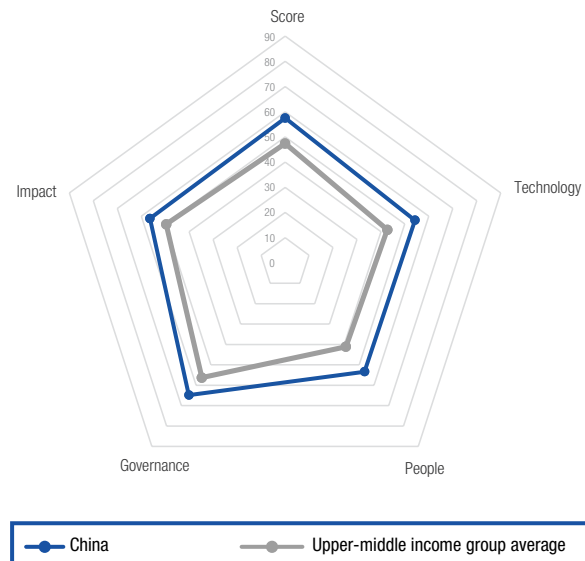
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	65	63.29
1.1.2 Handset prices.....	25	65.32
1.1.3 Households with internet access.....	26	86.71
1.1.4 4G mobile network coverage.....	71	88.00
1.1.5 Fixed-broadband subscriptions.....	46	80.46
1.1.6 International Internet bandwidth.....	26	73.74
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	60	63.16
1.2.3 Intellectual property receipts.....	66	0.35
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	28	74.88
1.3.2 Company investment in emerging technology.....	68	33.21
1.3.3 Government procurement of advanced technology products ..	96	27.74
1.3.4 ICT PCT patent applications.....	49	9.24
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	57	0.70
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	31	80.72
2.1.2 Active mobile-broadband subscriptions.....	41	35.07
2.1.3 Use of virtual social networks.....	13	77.13
2.1.4 Tertiary enrolment.....	6	64.55
2.1.5 Adult literacy rate.....	39	94.46
2.1.6 ICT skills.....	29	55.02
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	18	78.02
2.2.2 Internet shopping.....	46	29.38
2.2.3 Professionals.....	52	31.42
2.2.4 Technicians and associate professionals.....	41	50.30
2.2.5 Extent of staff training.....	47	49.15
2.2.6 R&D expenditure by businesses.....	57	3.54
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	37	81.54
2.3.2 Publication and use of open data.....	27	47.41
2.3.3 ICT use and government efficiency.....	43	53.66
2.3.4 R&D expenditure by governments and higher education.....	76	17.14

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	25	78.77
3.1.2 Software piracy rate.....	48	45.95
3.1.3 Secure Internet servers.....	39	76.76
3.1.4 Cybersecurity.....	81	49.45
3.1.5 Online trust and safety.....	11	82.50
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	20	81.00
3.2.2 Ease of doing business.....	55	74.91
3.2.3 Legal framework's adaptability to digital business models....	36	55.61
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	49	48.71
3.2.6 ICT regulatory environment.....	80	78.77
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	46	79.61
3.3.2 Socioeconomic gap in use of digital payments.....	51	75.11
3.3.3 Availability of local online content.....	36	66.95
3.3.4 Gender gap in internet use.....	48	59.87
3.3.5 Rural gap in use of digital payments.....	76	58.69
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	83	22.58
4.1.2 High-tech exports.....	67	12.09
4.1.3 PCT patent applications.....	43	2.60
4.1.4 Labour productivity per employee.....	53	33.25
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	29	70.38
4.2.2 Freedom to make life choices.....	77	60.19
4.2.3 Income inequality.....	92	43.16
4.2.4 Healthy life expectancy at birth.....	30	76.19
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	11	99.89
4.3.2 Pollution.....	68	82.73
4.3.3 Road safety.....	52	69.38
4.3.4 Reading proficiency in schools.....	21	90.74
4.3.5 Maths proficiency in schools.....	6	86.28
4.3.6 Use of clean fuels and technology.....	1	100.00

# China

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>41</b>	<b>57.63</b>
<b>A. Technology pillar</b> .....	<b>44</b>	<b>54.46</b>
1st sub-pillar: Access.....	42	77.36
2nd sub-pillar: Content.....	78	35.37
3rd sub-pillar: Future Technologies.....	26	50.66
<b>B. People pillar</b> .....	<b>36</b>	<b>53.89</b>
1st sub-pillar: Individuals .....	52	57.77
2nd sub-pillar: Businesses .....	25	54.85
3rd sub-pillar: Governments .....	47	49.06
<b>C. Governance pillar</b> .....	<b>48</b>	<b>65.42</b>
1st sub-pillar: Trust .....	51	60.83
2nd sub-pillar: Regulation.....	52	67.52
3rd sub-pillar: Inclusion.....	48	67.92
<b>D. Impact pillar</b> .....	<b>49</b>	<b>56.73</b>
1st sub-pillar: Economy .....	32	34.90
2nd sub-pillar: Quality of Life .....	48	66.22
3rd sub-pillar: SDG Contribution.....	78	69.06



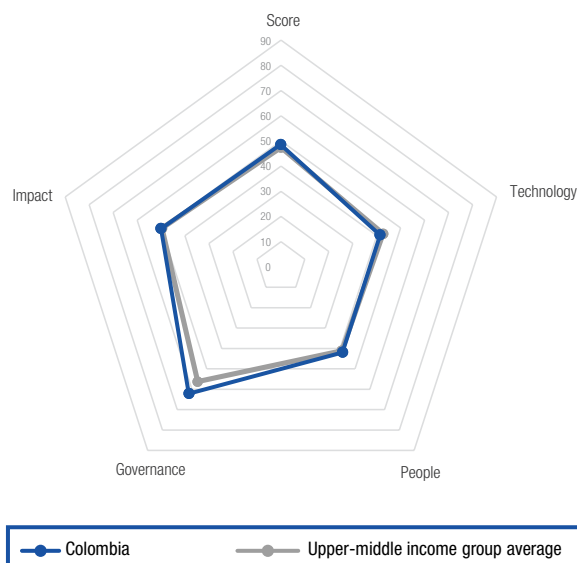
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	26	79.82
1.1.2 Handset prices.....	63	46.73
1.1.3 Households with internet access.....	75	56.86
1.1.4 4G mobile network coverage.....	21	99.40
1.1.5 Fixed-broadband subscriptions.....	7	98.47
1.1.6 International Internet bandwidth.....	81	63.98
1.1.7 Internet access in schools.....	29	96.23
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	68	58.93
1.2.3 Intellectual property receipts.....	44	0.86
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	75	44.95
1.3.2 Company investment in emerging technology.....	33	56.31
1.3.3 Government procurement of advanced technology products ..	10	74.25
1.3.4 ICT PCT patent applications.....	22	52.42
1.3.5 Computer software spending.....	21	36.36
1.3.6 Robot density.....	21	39.65
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	87	49.53
2.1.2 Active mobile-broadband subscriptions.....	35	36.64
2.1.3 Use of virtual social networks.....	21	70.89
2.1.4 Tertiary enrolment.....	57	36.66
2.1.5 Adult literacy rate.....	38	95.14
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	45	61.66
2.2.2 Internet shopping.....	28	58.06
2.2.3 Professionals.....	n/a	n/a
2.2.4 Technicians and associate professionals.....	n/a	n/a
2.2.5 Extent of staff training.....	33	57.78
2.2.6 R&D expenditure by businesses.....	12	41.92
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	34	84.61
2.3.2 Publication and use of open data.....	69	19.64
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	37	42.91

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	69	48.74
3.1.2 Software piracy rate.....	65	31.08
3.1.3 Secure Internet servers.....	68	52.05
3.1.4 Cybersecurity.....	29	88.71
3.1.5 Online trust and safety.....	8	83.56
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	80	48.44
3.2.2 Ease of doing business.....	30	84.37
3.2.3 Legal framework's adaptability to digital business models.....	23	68.91
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	40	59.37
3.2.6 ICT regulatory environment.....	114	44.02
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	29	89.17
3.3.2 Socioeconomic gap in use of digital payments.....	76	58.25
3.3.3 Availability of local online content.....	49	60.03
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	67	64.25
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	26	52.90
4.1.2 High-tech exports.....	8	58.53
4.1.3 PCT patent applications.....	28	8.48
4.1.4 Labour productivity per employee.....	69	19.71
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	86	43.20
4.2.2 Freedom to make life choices.....	30	84.93
4.2.3 Income inequality.....	68	64.21
4.2.4 Healthy life expectancy at birth.....	35	72.53
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	87	84.47
4.3.2 Pollution.....	110	50.99
4.3.3 Road safety.....	83	51.56
4.3.4 Reading proficiency in schools.....	30	82.28
4.3.5 Maths proficiency in schools.....	7	86.18
4.3.6 Use of clean fuels and technology.....	91	58.89

# Colombia

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>69</b>	<b>48.77</b>
<b>A. Technology pillar</b> .....	<b>76</b>	<b>41.51</b>
1st sub-pillar: Access.....	74	58.72
2nd sub-pillar: Content.....	66	43.21
3rd sub-pillar: Future Technologies.....	93	22.61
<b>B. People pillar</b> .....	<b>65</b>	<b>41.72</b>
1st sub-pillar: Individuals .....	74	51.81
2nd sub-pillar: Businesses .....	80	25.07
3rd sub-pillar: Governments .....	50	48.29
<b>C. Governance pillar</b> .....	<b>57</b>	<b>61.94</b>
1st sub-pillar: Trust .....	55	58.59
2nd sub-pillar: Regulation.....	57	65.47
3rd sub-pillar: Inclusion.....	65	61.76
<b>D. Impact pillar</b> .....	<b>73</b>	<b>49.91</b>
1st sub-pillar: Economy .....	77	15.39
2nd sub-pillar: Quality of Life .....	72	59.31
3rd sub-pillar: SDG Contribution.....	63	75.05



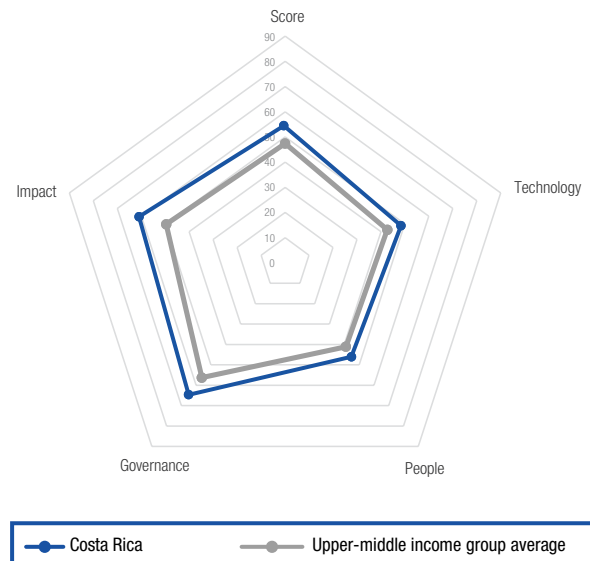
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	88	49.55
1.1.2 Handset prices.....	56	49.24
1.1.3 Households with internet access.....	80	46.60
1.1.4 4G mobile network coverage.....	38	98.00
1.1.5 Fixed-broadband subscriptions.....	67	53.44
1.1.6 International Internet bandwidth.....	16	75.07
1.1.7 Internet access in schools.....	48	39.14
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	84	49.29
1.2.3 Intellectual property receipts.....	47	0.80
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	78	43.45
1.3.2 Company investment in emerging technology.....	66	33.67
1.3.3 Government procurement of advanced technology products ..	70	37.93
1.3.4 ICT PCT patent applications.....	65	2.20
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	62	0.19
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	77	58.38
2.1.2 Active mobile-broadband subscriptions.....	93	18.98
2.1.3 Use of virtual social networks.....	30	67.78
2.1.4 Tertiary enrolment.....	49	40.14
2.1.5 Adult literacy rate.....	48	92.43
2.1.6 ICT skills.....	48	33.11
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	42	63.04
2.2.2 Internet shopping.....	72	10.78
2.2.3 Professionals.....	111	3.63
2.2.4 Technicians and associate professionals.....	58	37.93
2.2.5 Extent of staff training.....	81	31.98
2.2.6 R&D expenditure by businesses.....	60	3.05
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	30	86.92
2.3.2 Publication and use of open data.....	24	51.65
2.3.3 ICT use and government efficiency.....	51	48.83
2.3.4 R&D expenditure by governments and higher education.....	97	5.78

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	85	44.03
3.1.2 Software piracy rate.....	40	55.41
3.1.3 Secure Internet servers.....	64	55.27
3.1.4 Cybersecurity.....	74	59.87
3.1.5 Online trust and safety.....	16	78.39
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	53	58.63
3.2.2 Ease of doing business.....	61	70.45
3.2.3 Legal framework's adaptability to digital business models....	67	42.21
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	64	42.74
3.2.6 ICT regulatory environment.....	80	78.77
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	23	91.08
3.3.2 Socioeconomic gap in use of digital payments.....	79	55.86
3.3.3 Availability of local online content.....	72	48.63
3.3.4 Gender gap in internet use.....	15	67.56
3.3.5 Rural gap in use of digital payments.....	100	45.66
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	65	28.92
4.1.2 High-tech exports.....	60	13.76
4.1.3 PCT patent applications.....	60	0.57
4.1.4 Labour productivity per employee.....	73	18.29
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	51	60.95
4.2.2 Freedom to make life choices.....	52	74.60
4.2.3 Income inequality.....	98	35.00
4.2.4 Healthy life expectancy at birth.....	50	66.67
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	70	91.38
4.3.2 Pollution.....	39	89.26
4.3.3 Road safety.....	84	50.62
4.3.4 Reading proficiency in schools.....	37	68.13
4.3.5 Maths proficiency in schools.....	40	52.03
4.3.6 Use of clean fuels and technology.....	66	98.89

# Costa Rica

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>50</b>	<b>54.59</b>
<b>A. Technology pillar</b> .....	<b>56</b>	<b>48.74</b>
1st sub-pillar: Access.....	66	63.42
2nd sub-pillar: Content.....	50	50.23
3rd sub-pillar: Future Technologies.....	54	32.59
<b>B. People pillar</b> .....	<b>56</b>	<b>45.44</b>
1st sub-pillar: Individuals .....	31	63.53
2nd sub-pillar: Businesses .....	51	33.76
3rd sub-pillar: Governments .....	82	39.03
<b>C. Governance pillar</b> .....	<b>51</b>	<b>63.98</b>
1st sub-pillar: Trust .....	68	54.32
2nd sub-pillar: Regulation.....	42	71.44
3rd sub-pillar: Inclusion.....	52	66.19
<b>D. Impact pillar</b> .....	<b>37</b>	<b>60.18</b>
1st sub-pillar: Economy .....	61	21.51
2nd sub-pillar: Quality of Life .....	25	75.01
3rd sub-pillar: SDG Contribution.....	48	84.03



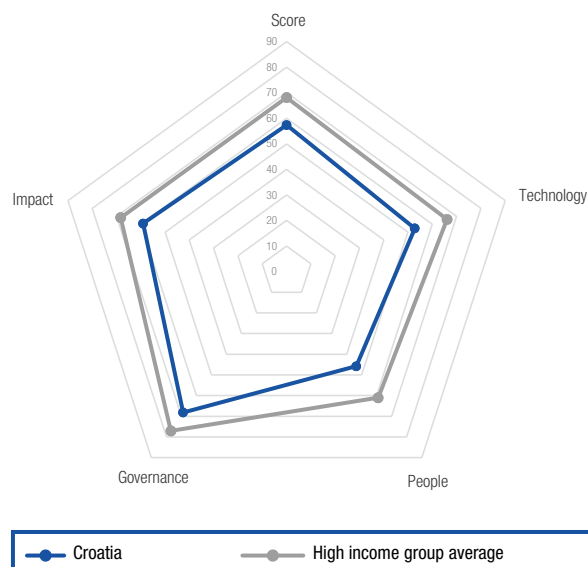
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	35	74.54
1.1.2 Handset prices.....	51	52.49
1.1.3 Households with internet access.....	57	71.28
1.1.4 4G mobile network coverage.....	68	89.90
1.1.5 Fixed-broadband subscriptions.....	86	23.71
1.1.6 International Internet bandwidth.....	31	72.94
1.1.7 Internet access in schools.....	39	59.08
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	50	66.32
1.2.3 Intellectual property receipts.....	74	0.18
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	45	62.32
1.3.2 Company investment in emerging technology.....	48	44.01
1.3.3 Government procurement of advanced technology products .....	101	26.18
1.3.4 ICT PCT patent applications.....	61	3.16
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	55	71.55
2.1.2 Active mobile-broadband subscriptions.....	32	37.37
2.1.3 Use of virtual social networks.....	18	71.93
2.1.4 Tertiary enrolment.....	50	40.05
2.1.5 Adult literacy rate.....	31	96.73
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	63	45.95
2.2.2 Internet shopping.....	55	23.13
2.2.3 Professionals.....	49	31.96
2.2.4 Technicians and associate professionals.....	51	42.30
2.2.5 Extent of staff training.....	36	55.38
2.2.6 R&D expenditure by businesses.....	54	3.81
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	73	63.85
2.3.2 Publication and use of open data.....	68	19.87
2.3.3 ICT use and government efficiency.....	58	45.34
2.3.4 R&D expenditure by governments and higher education.....	58	27.07

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	41	64.25
3.1.2 Software piracy rate.....	54	41.89
3.1.3 Secure Internet servers.....	62	60.53
3.1.4 Cybersecurity.....	106	22.15
3.1.5 Online trust and safety.....	10	82.80
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	47	61.97
3.2.2 Ease of doing business.....	67	69.00
3.2.3 Legal framework's adaptability to digital business models.....	65	42.59
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	28	69.36
3.2.6 ICT regulatory environment.....	60	85.72
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	57	73.89
3.3.2 Socioeconomic gap in use of digital payments.....	57	70.91
3.3.3 Availability of local online content.....	40	65.01
3.3.4 Gender gap in internet use.....	8	68.61
3.3.5 Rural gap in use of digital payments.....	91	52.52
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	76	26.40
4.1.2 High-tech exports.....	23	35.09
4.1.3 PCT patent applications.....	50	1.01
4.1.4 Labour productivity per employee.....	63	23.52
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	14	85.06
4.2.2 Freedom to make life choices.....	8	95.71
4.2.3 Income inequality.....	94	38.68
4.2.4 Healthy life expectancy at birth.....	28	80.59
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	39	98.36
4.3.2 Pollution.....	47	88.57
4.3.3 Road safety.....	73	56.25
4.3.4 Reading proficiency in schools.....	29	82.89
4.3.5 Maths proficiency in schools.....	17	78.11
4.3.6 Use of clean fuels and technology.....	1	100.00

# Croatia

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>44</b>	<b>56.75</b>
<b>A. Technology pillar</b> .....	<b>45</b>	<b>52.75</b>
1st sub-pillar: Access.....	49	74.54
2nd sub-pillar: Content.....	31	64.76
3rd sub-pillar: Future Technologies.....	107	18.95
<b>B. People pillar</b> .....	<b>52</b>	<b>46.45</b>
1st sub-pillar: Individuals .....	51	58.13
2nd sub-pillar: Businesses .....	43	39.63
3rd sub-pillar: Governments .....	70	41.58
<b>C. Governance pillar</b> .....	<b>40</b>	<b>68.82</b>
1st sub-pillar: Trust .....	34	71.94
2nd sub-pillar: Regulation.....	61	64.47
3rd sub-pillar: Inclusion.....	44	70.04
<b>D. Impact pillar</b> .....	<b>43</b>	<b>58.97</b>
1st sub-pillar: Economy .....	53	23.82
2nd sub-pillar: Quality of Life .....	63	61.69
3rd sub-pillar: SDG Contribution.....	30	91.40



## The Network Readiness Index in detail

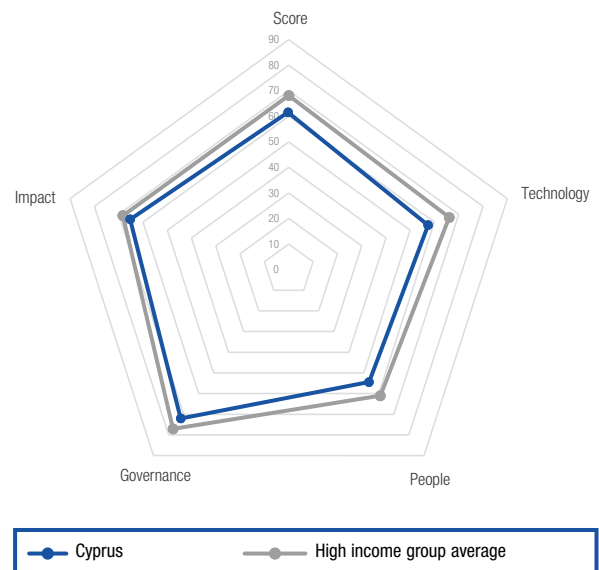
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	44	70.84
1.1.2 Handset prices.....	61	46.85
1.1.3 Households with internet access.....	42	80.28
1.1.4 4G mobile network coverage.....	35	98.50
1.1.5 Fixed-broadband subscriptions.....	52	76.31
1.1.6 International Internet bandwidth.....	19	74.44
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	41	72.10
1.2.3 Intellectual property receipts.....	38	1.07
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	63	53.04
1.3.2 Company investment in emerging technology.....	101	19.02
1.3.3 Government procurement of advanced technology products ..	117	12.92
1.3.4 ICT PCT patent applications.....	40	17.65
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	46	2.01
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	58	69.99
2.1.2 Active mobile-broadband subscriptions.....	59	30.10
2.1.3 Use of virtual social networks.....	78	46.99
2.1.4 Tertiary enrolment.....	36	48.39
2.1.5 Adult literacy rate.....	16	98.68
2.1.6 ICT skills.....	31	54.62
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	34	66.98
2.2.2 Internet shopping.....	38	37.96
2.2.3 Professionals.....	33	45.65
2.2.4 Technicians and associate professionals.....	22	62.68
2.2.5 Extent of staff training.....	115	13.81
2.2.6 R&D expenditure by businesses.....	40	10.68
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	72	64.62
2.3.2 Publication and use of open data.....	57	26.75
2.3.3 ICT use and government efficiency.....	87	34.63
2.3.4 R&D expenditure by governments and higher education.....	40	40.31

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	48	60.74
3.1.2 Software piracy rate.....	43	52.70
3.1.3 Secure Internet servers.....	20	84.30
3.1.4 Cybersecurity.....	26	90.02
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	49	61.27
3.2.2 Ease of doing business.....	49	76.75
3.2.3 Legal framework's adaptability to digital business models.....	107	23.45
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	92	29.21
3.2.6 ICT regulatory environment.....	11	96.14
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	57	73.89
3.3.2 Socioeconomic gap in use of digital payments.....	28	86.57
3.3.3 Availability of local online content.....	67	51.20
3.3.4 Gender gap in internet use.....	59	58.08
3.3.5 Rural gap in use of digital payments.....	5	80.46
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	46	39.18
4.1.2 High-tech exports.....	53	16.85
4.1.3 PCT patent applications.....	41	2.70
4.1.4 Labour productivity per employee.....	48	36.54
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	67	51.63
4.2.2 Freedom to make life choices.....	103	37.57
4.2.3 Income inequality.....	21	83.95
4.2.4 Healthy life expectancy at birth.....	33	73.63
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	46	97.44
4.3.2 Pollution.....	52	87.25
4.3.3 Road safety.....	35	83.12
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	68	97.78



# Cyprus

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>36</b>	<b>61.78</b>
<b>A. Technology pillar.....</b>	<b>38</b>	<b>57.40</b>
1st sub-pillar: Access.....	47	74.89
2nd sub-pillar: Content.....	25	66.88
3rd sub-pillar: Future Technologies.....	62	30.43
<b>B. People pillar.....</b>	<b>37</b>	<b>53.66</b>
1st sub-pillar: Individuals .....	17	68.58
2nd sub-pillar: Businesses .....	36	44.85
3rd sub-pillar: Governments .....	52	47.55
<b>C. Governance pillar .....</b>	<b>37</b>	<b>71.26</b>
1st sub-pillar: Trust .....	40	68.87
2nd sub-pillar: Regulation.....	41	71.96
3rd sub-pillar: Inclusion.....	38	72.96
<b>D. Impact pillar .....</b>	<b>31</b>	<b>64.78</b>
1st sub-pillar: Economy .....	39	29.97
2nd sub-pillar: Quality of Life .....	29	73.56
3rd sub-pillar: SDG Contribution.....	33	90.81



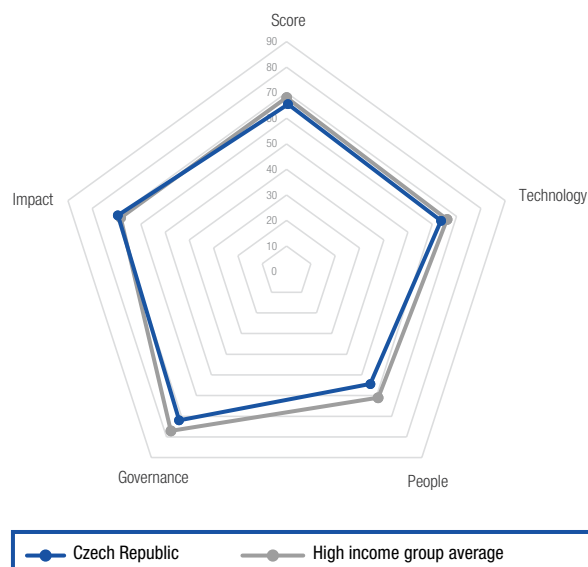
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	75	57.37
1.1.2 Handset prices.....	43	56.98
1.1.3 Households with internet access.....	31	85.25
1.1.4 4G mobile network coverage.....	43	97.53
1.1.5 Fixed-broadband subscriptions.....	56	72.66
1.1.6 International Internet bandwidth.....	10	79.58
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	12	88.01
1.2.3 Intellectual property receipts.....	81	0.08
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	64	52.61
1.3.2 Company investment in emerging technology.....	87	25.56
1.3.3 Government procurement of advanced technology products ..	75	34.67
1.3.4 ICT PCT patent applications.....	32	21.12
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	29	83.06
2.1.2 Active mobile-broadband subscriptions.....	21	43.11
2.1.3 Use of virtual social networks.....	6	84.41
2.1.4 Tertiary enrolment.....	45	43.66
2.1.5 Adult literacy rate.....	23	97.99
2.1.6 ICT skills.....	23	59.28
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	32	68.67
2.2.2 Internet shopping.....	36	41.45
2.2.3 Professionals.....	25	48.79
2.2.4 Technicians and associate professionals.....	34	55.60
2.2.5 Extent of staff training.....	46	49.32
2.2.6 R&D expenditure by businesses.....	52	5.24
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	51	76.15
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	71	40.77
2.3.4 R&D expenditure by governments and higher education.....	61	25.74

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	35	70.52
3.1.2 Software piracy rate.....	34	60.81
3.1.3 Secure Internet servers.....	42	74.74
3.1.4 Cybersecurity.....	57	69.41
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	32	73.82
3.2.2 Ease of doing business.....	52	76.27
3.2.3 Legal framework's adaptability to digital business models.....	66	42.24
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	45	52.93
3.2.6 ICT regulatory environment.....	55	86.49
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	46	79.61
3.3.2 Socioeconomic gap in use of digital payments.....	37	82.14
3.3.3 Availability of local online content.....	38	65.70
3.3.4 Gender gap in internet use.....	16	67.33
3.3.5 Rural gap in use of digital payments.....	53	70.01
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	61	32.27
4.1.2 High-tech exports.....	19	37.63
4.1.3 PCT patent applications.....	42	2.62
4.1.4 Labour productivity per employee.....	29	47.36
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	36	67.05
4.2.2 Freedom to make life choices.....	73	61.51
4.2.3 Income inequality.....	43	76.32
4.2.4 Healthy life expectancy at birth.....	6	89.38
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	28	99.19
4.3.2 Pollution.....	51	87.52
4.3.3 Road safety.....	14	92.50
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	20	74.82
4.3.6 Use of clean fuels and technology.....	1	100.00

# Czech Republic

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>30</b>	<b>65.09</b>
<b>A. Technology pillar</b> .....	<b>31</b>	<b>63.00</b>
1st sub-pillar: Access.....	33	80.12
2nd sub-pillar: Content.....	23	68.23
3rd sub-pillar: Future Technologies.....	37	40.67
<b>B. People pillar</b> .....	<b>33</b>	<b>54.89</b>
1st sub-pillar: Individuals .....	66	54.86
2nd sub-pillar: Businesses .....	22	59.44
3rd sub-pillar: Governments .....	44	50.38
<b>C. Governance pillar</b> .....	<b>35</b>	<b>72.48</b>
1st sub-pillar: Trust .....	35	70.05
2nd sub-pillar: Regulation.....	28	77.73
3rd sub-pillar: Inclusion.....	45	69.65
<b>D. Impact pillar</b> .....	<b>23</b>	<b>69.97</b>
1st sub-pillar: Economy .....	27	38.26
2nd sub-pillar: Quality of Life .....	20	78.94
3rd sub-pillar: SDG Contribution.....	25	92.70



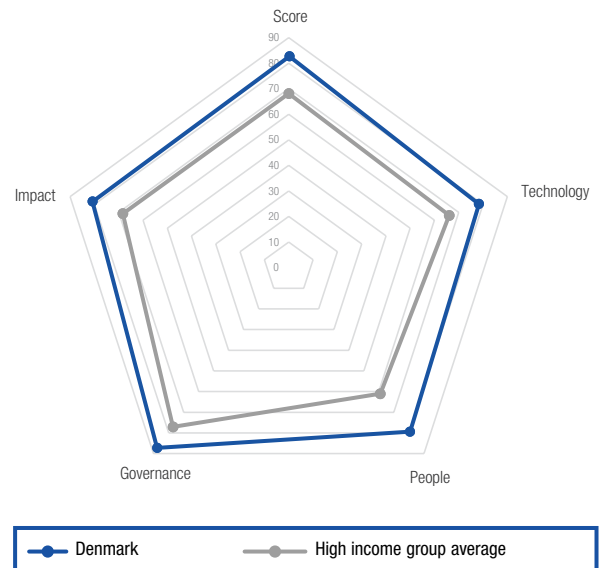
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	27	79.73
1.1.2 Handset prices.....	29	64.40
1.1.3 Households with internet access.....	45	79.18
1.1.4 4G mobile network coverage.....	12	99.80
1.1.5 Fixed-broadband subscriptions.....	33	88.76
1.1.6 International Internet bandwidth.....	59	68.86
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	29	80.05
1.2.3 Intellectual property receipts.....	34	1.27
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	31	74.25
1.3.2 Company investment in emerging technology.....	36	51.38
1.3.3 Government procurement of advanced technology products ..	84	31.71
1.3.4 ICT PCT patent applications.....	37	19.35
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	20	40.05
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	37	78.89
2.1.2 Active mobile-broadband subscriptions.....	45	33.64
2.1.3 Use of virtual social networks.....	61	53.22
2.1.4 Tertiary enrolment.....	39	46.59
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	21	61.97
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	13	83.33
2.2.2 Internet shopping.....	19	69.31
2.2.3 Professionals.....	39	41.15
2.2.4 Technicians and associate professionals.....	14	75.49
2.2.5 Extent of staff training.....	32	58.74
2.2.6 R&D expenditure by businesses.....	19	28.59
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	80	61.54
2.3.2 Publication and use of open data.....	31	44.44
2.3.3 ICT use and government efficiency.....	86	35.57
2.3.4 R&D expenditure by governments and higher education.....	18	59.96

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	28	77.27
3.1.2 Software piracy rate.....	20	77.03
3.1.3 Secure Internet servers.....	11	90.90
3.1.4 Cybersecurity.....	72	60.31
3.1.5 Online trust and safety.....	72	44.75
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	23	79.20
3.2.2 Ease of doing business.....	40	81.56
3.2.3 Legal framework's adaptability to digital business models....	58	44.87
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	26	70.38
3.2.6 ICT regulatory environment.....	32	90.35
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	86	56.69
3.3.2 Socioeconomic gap in use of digital payments.....	50	76.14
3.3.3 Availability of local online content.....	13	87.28
3.3.4 Gender gap in internet use.....	58	58.09
3.3.5 Rural gap in use of digital payments.....	52	70.07
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	11	66.96
4.1.2 High-tech exports.....	20	37.20
4.1.3 PCT patent applications.....	31	6.41
4.1.4 Labour productivity per employee.....	38	42.47
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	16	82.84
4.2.2 Freedom to make life choices.....	75	60.56
4.2.3 Income inequality.....	4	97.63
4.2.4 Healthy life expectancy at birth.....	32	74.73
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	23	99.35
4.3.2 Pollution.....	38	89.37
4.3.3 Road safety.....	21	90.00
4.3.4 Reading proficiency in schools.....	12	97.80
4.3.5 Maths proficiency in schools.....	16	79.70
4.3.6 Use of clean fuels and technology.....	1	100.00

# Denmark

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>6</b>	<b>81.08</b>
<b>A. Technology pillar.....</b>	<b>11</b>	<b>77.22</b>
1st sub-pillar: Access.....	13	86.70
2nd sub-pillar: Content.....	8	79.05
3rd sub-pillar: Future Technologies.....	11	65.92
<b>B. People pillar.....</b>	<b>1</b>	<b>79.54</b>
1st sub-pillar: Individuals .....	5	74.18
2nd sub-pillar: Businesses .....	2	79.89
3rd sub-pillar: Governments .....	3	84.55
<b>C. Governance pillar .....</b>	<b>10</b>	<b>87.28</b>
1st sub-pillar: Trust .....	4	88.94
2nd sub-pillar: Regulation.....	9	89.71
3rd sub-pillar: Inclusion.....	10	83.19
<b>D. Impact pillar .....</b>	<b>6</b>	<b>80.27</b>
1st sub-pillar: Economy .....	11	54.39
2nd sub-pillar: Quality of Life .....	5	91.33
3rd sub-pillar: SDG Contribution.....	16	95.09



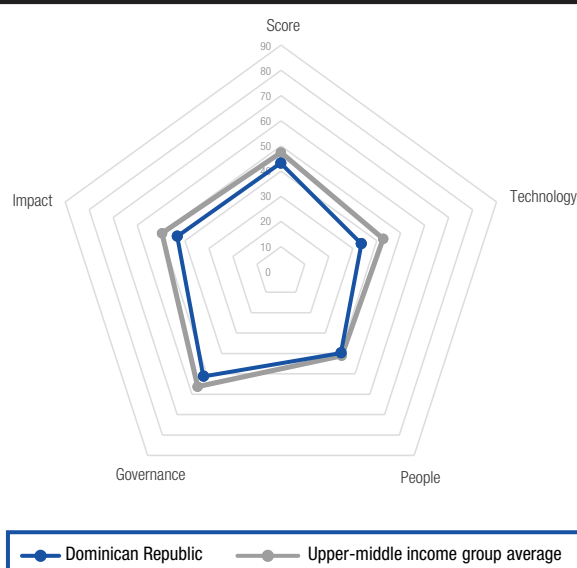
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	31	77.33
1.1.2 Handset prices.....	20	67.49
1.1.3 Households with internet access.....	8	96.80
1.1.4 4G mobile network coverage.....	1	100.00
1.1.5 Fixed-broadband subscriptions.....	22	93.95
1.1.6 International Internet bandwidth.....	40	71.32
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	7	91.56
1.2.3 Intellectual property receipts.....	12	12.24
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	18	85.34
1.3.2 Company investment in emerging technology.....	14	74.95
1.3.3 Government procurement of advanced technology products ..	34	50.29
1.3.4 ICT PCT patent applications.....	16	59.56
1.3.5 Computer software spending.....	8	54.55
1.3.6 Robot density.....	7	70.85
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	6	97.76
2.1.2 Active mobile-broadband subscriptions.....	10	53.56
2.1.3 Use of virtual social networks.....	21	70.89
2.1.4 Tertiary enrolment.....	18	58.77
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	5	89.90
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	2	99.93
2.2.2 Internet shopping.....	1	100.00
2.2.3 Professionals.....	4	70.36
2.2.4 Technicians and associate professionals.....	12	76.22
2.2.5 Extent of staff training.....	8	82.06
2.2.6 R&D expenditure by businesses.....	9	50.75
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	1	100.00
2.3.2 Publication and use of open data.....	13	70.52
2.3.3 ICT use and government efficiency.....	24	67.70
2.3.4 R&D expenditure by governments and higher education.....	1	100.00

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	8	95.14
3.1.2 Software piracy rate.....	8	93.24
3.1.3 Secure Internet servers.....	1	100.00
3.1.4 Cybersecurity.....	23	91.34
3.1.5 Online trust and safety.....	48	64.99
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	13	88.35
3.2.2 Ease of doing business.....	4	97.39
3.2.3 Legal framework's adaptability to digital business models.....	24	64.53
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	2	99.20
3.2.6 ICT regulatory environment.....	42	88.81
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	1	100.00
3.3.2 Socioeconomic gap in use of digital payments.....	2	99.79
3.3.3 Availability of local online content.....	30	73.45
3.3.4 Gender gap in internet use.....	24	66.18
3.3.5 Rural gap in use of digital payments.....	18	76.53
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	8	69.29
4.1.2 High-tech exports.....	31	26.49
4.1.3 PCT patent applications.....	7	63.10
4.1.4 Labour productivity per employee.....	18	58.66
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	2	95.64
4.2.2 Freedom to make life choices.....	12	94.21
4.2.3 Income inequality.....	14	91.58
4.2.4 Healthy life expectancy at birth.....	24	83.88
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	14	99.73
4.3.2 Pollution.....	14	95.04
4.3.3 Road safety.....	7	95.94
4.3.4 Reading proficiency in schools.....	10	98.15
4.3.5 Maths proficiency in schools.....	13	81.69
4.3.6 Use of clean fuels and technology.....	1	100.00

# Dominican Republic

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>82</b>	<b>42.59</b>
<b>A. Technology pillar.....</b>	<b>90</b>	<b>33.79</b>
1st sub-pillar: Access.....	86	48.69
2nd sub-pillar: Content.....	88	28.57
3rd sub-pillar: Future Technologies.....	87	24.12
<b>B. People pillar.....</b>	<b>71</b>	<b>40.85</b>
1st sub-pillar: Individuals .....	78	51.10
2nd sub-pillar: Businesses .....	82	24.18
3rd sub-pillar: Governments .....	54	47.26
<b>C. Governance pillar .....</b>	<b>85</b>	<b>52.38</b>
1st sub-pillar: Trust .....	85	45.28
2nd sub-pillar: Regulation.....	86	56.05
3rd sub-pillar: Inclusion.....	80	55.80
<b>D. Impact pillar .....</b>	<b>91</b>	<b>43.34</b>
1st sub-pillar: Economy .....	65	19.49
2nd sub-pillar: Quality of Life .....	77	58.25
3rd sub-pillar: SDG Contribution.....	98	52.29



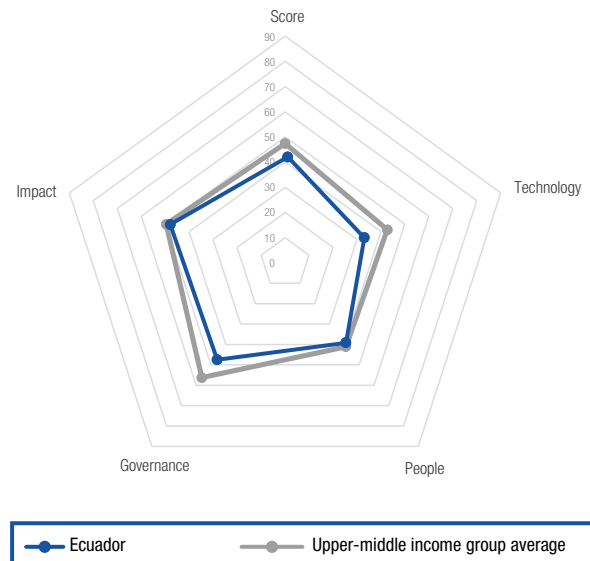
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	93	48.79
1.1.2 Handset prices.....	65	46.33
1.1.3 Households with internet access.....	91	27.05
1.1.4 4G mobile network coverage.....	57	93.72
1.1.5 Fixed-broadband subscriptions.....	80	34.39
1.1.6 International Internet bandwidth.....	70	67.69
1.1.7 Internet access in schools.....	54	22.85
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	88	48.23
1.2.3 Intellectual property receipts.....	98	0.00
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	67	51.65
1.3.2 Company investment in emerging technology.....	92	23.14
1.3.3 Government procurement of advanced technology products .....	109	21.70
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	51	72.37
2.1.2 Active mobile-broadband subscriptions.....	82	22.47
2.1.3 Use of virtual social networks.....	60	54.26
2.1.4 Tertiary enrolment.....	47	43.52
2.1.5 Adult literacy rate.....	54	90.39
2.1.6 ICT skills.....	49	23.61
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	80	30.38
2.2.2 Internet shopping.....	75	9.51
2.2.3 Professionals.....	76	18.75
2.2.4 Technicians and associate professionals.....	76	25.84
2.2.5 Extent of staff training.....	66	36.42
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	77	62.31
2.3.2 Publication and use of open data.....	51	32.21
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	84	44.30
3.1.2 Software piracy rate.....	79	18.92
3.1.3 Secure Internet servers.....	94	40.93
3.1.4 Cybersecurity.....	89	45.07
3.1.5 Online trust and safety.....	19	77.17
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	76	49.71
3.2.2 Ease of doing business.....	95	52.63
3.2.3 Legal framework's adaptability to digital business models.....	97	30.30
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	82	31.96
3.2.6 ICT regulatory environment.....	8	96.72
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	76	63.70
3.3.2 Socioeconomic gap in use of digital payments.....	87	49.80
3.3.3 Availability of local online content.....	81	40.85
3.3.4 Gender gap in internet use.....	13	67.65
3.3.5 Rural gap in use of digital payments.....	80	57.03
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	n/a	n/a
4.1.2 High-tech exports.....	54	16.23
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	65	22.75
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	72	49.49
4.2.2 Freedom to make life choices.....	44	78.28
4.2.3 Income inequality.....	91	45.53
4.2.4 Healthy life expectancy at birth.....	80	59.71
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	82	87.19
4.3.2 Pollution.....	31	91.85
4.3.3 Road safety.....	119	0.31
4.3.4 Reading proficiency in schools.....	66	25.36
4.3.5 Maths proficiency in schools.....	67	13.49
4.3.6 Use of clean fuels and technology.....	70	95.56

# Ecuador

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>85</b>	<b>41.98</b>
<b>A. Technology pillar.....</b>	<b>94</b>	<b>31.97</b>
1st sub-pillar: Access.....	92	42.27
2nd sub-pillar: Content.....	83	33.24
3rd sub-pillar: Future Technologies.....	102	20.40
<b>B. People pillar.....</b>	<b>75</b>	<b>39.30</b>
1st sub-pillar: Individuals .....	69	53.01
2nd sub-pillar: Businesses .....	76	25.63
3rd sub-pillar: Governments .....	80	39.26
<b>C. Governance pillar .....</b>	<b>99</b>	<b>47.60</b>
1st sub-pillar: Trust .....	96	40.12
2nd sub-pillar: Regulation.....	92	53.34
3rd sub-pillar: Inclusion.....	93	49.35
<b>D. Impact pillar .....</b>	<b>75</b>	<b>49.03</b>
1st sub-pillar: Economy .....	93	9.63
2nd sub-pillar: Quality of Life .....	51	65.16
3rd sub-pillar: SDG Contribution.....	68	72.32



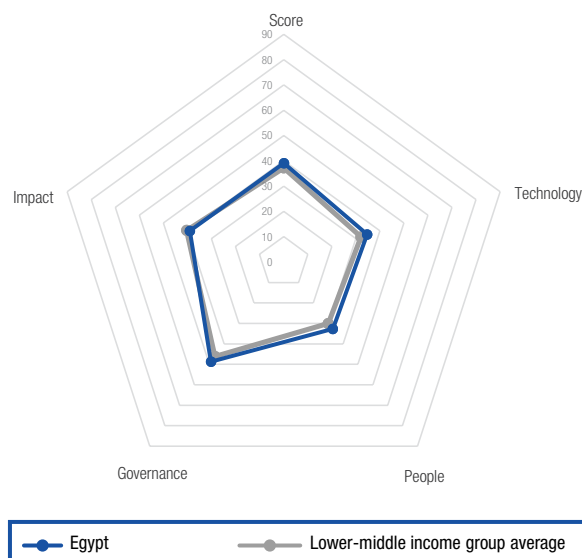
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	98	44.80
1.1.2 Handset prices.....	89	34.65
1.1.3 Households with internet access.....	86	33.00
1.1.4 4G mobile network coverage.....	86	70.87
1.1.5 Fixed-broadband subscriptions.....	85	24.75
1.1.6 International Internet bandwidth.....	116	49.93
1.1.7 Internet access in schools.....	50	37.91
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	78	52.03
1.2.3 Intellectual property receipts.....	98	0.00
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	90	39.67
1.3.2 Company investment in emerging technology.....	104	16.84
1.3.3 Government procurement of advanced technology products ..	99	27.32
1.3.4 ICT PCT patent applications.....	80	0.00
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	83	52.83
2.1.2 Active mobile-broadband subscriptions.....	90	19.95
2.1.3 Use of virtual social networks.....	21	70.89
2.1.4 Tertiary enrolment.....	66	32.46
2.1.5 Adult literacy rate.....	59	88.92
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	21	77.50
2.2.2 Internet shopping.....	81	7.70
2.2.3 Professionals.....	82	17.78
2.2.4 Technicians and associate professionals.....	87	20.11
2.2.5 Extent of staff training.....	101	25.92
2.2.6 R&D expenditure by businesses.....	53	4.75
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	63	70.00
2.3.2 Publication and use of open data.....	66	21.62
2.3.3 ICT use and government efficiency.....	61	43.65
2.3.4 R&D expenditure by governments and higher education.....	66	21.76

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	97	38.96
3.1.2 Software piracy rate.....	70	28.38
3.1.3 Secure Internet servers.....	79	47.61
3.1.4 Cybersecurity.....	96	38.16
3.1.5 Online trust and safety.....	70	47.49
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	114	31.81
3.2.2 Ease of doing business.....	104	48.62
3.2.3 Legal framework's adaptability to digital business models.....	92	31.62
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	53	46.66
3.2.6 ICT regulatory environment.....	56	86.30
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	78	63.06
3.3.2 Socioeconomic gap in use of digital payments.....	110	32.57
3.3.3 Availability of local online content.....	90	35.46
3.3.4 Gender gap in internet use.....	33	63.21
3.3.5 Rural gap in use of digital payments.....	92	52.47
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	93	15.17
4.1.2 High-tech exports.....	75	9.99
4.1.3 PCT patent applications.....	77	0.07
4.1.4 Labour productivity per employee.....	80	13.29
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	45	63.96
4.2.2 Freedom to make life choices.....	42	78.91
4.2.3 Income inequality.....	89	48.16
4.2.4 Healthy life expectancy at birth.....	44	69.60
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	79	88.12
4.3.2 Pollution.....	37	89.64
4.3.3 Road safety.....	88	41.88
4.3.4 Reading proficiency in schools.....	47	62.02
4.3.5 Maths proficiency in schools.....	39	52.24
4.3.6 Use of clean fuels and technology.....	1	100.00

# Egypt

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>92</b>	<b>38.58</b>
<b>A. Technology pillar</b> .....	<b>88</b>	<b>34.35</b>
1st sub-pillar: Access.....	79	53.31
2nd sub-pillar: Content.....	98	24.03
3rd sub-pillar: Future Technologies.....	85	25.71
<b>B. People pillar</b> .....	<b>90</b>	<b>32.68</b>
1st sub-pillar: Individuals .....	95	35.70
2nd sub-pillar: Businesses .....	88	22.38
3rd sub-pillar: Governments .....	78	39.95
<b>C. Governance pillar</b> .....	<b>92</b>	<b>48.54</b>
1st sub-pillar: Trust .....	73	51.07
2nd sub-pillar: Regulation.....	98	49.36
3rd sub-pillar: Inclusion.....	99	45.18
<b>D. Impact pillar</b> .....	<b>95</b>	<b>38.74</b>
1st sub-pillar: Economy .....	87	11.78
2nd sub-pillar: Quality of Life .....	101	45.49
3rd sub-pillar: SDG Contribution.....	90	58.95



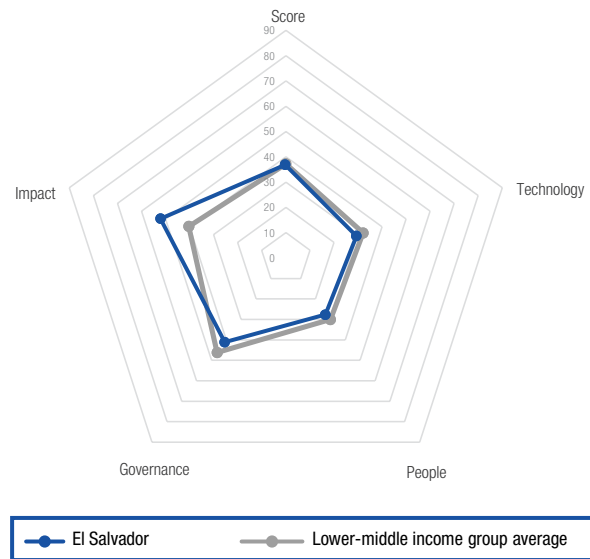
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	32	77.03
1.1.2 Handset prices.....	91	34.14
1.1.3 Households with internet access.....	78	47.77
1.1.4 4G mobile network coverage.....	69	89.00
1.1.5 Fixed-broadband subscriptions.....	93	14.60
1.1.6 International Internet bandwidth.....	85	63.29
1.1.7 Internet access in schools.....	43	47.37
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	95	41.69
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	84	41.56
1.3.2 Company investment in emerging technology.....	73	31.72
1.3.3 Government procurement of advanced technology products ..	55	43.15
1.3.4 ICT PCT patent applications.....	71	1.24
1.3.5 Computer software spending.....	21	36.36
1.3.6 Robot density.....	61	0.22
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	92	41.32
2.1.2 Active mobile-broadband subscriptions.....	92	19.64
2.1.3 Use of virtual social networks.....	87	38.67
2.1.4 Tertiary enrolment.....	76	25.29
2.1.5 Adult literacy rate.....	87	55.34
2.1.6 ICT skills.....	47	33.97
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	66	42.97
2.2.2 Internet shopping.....	107	3.09
2.2.3 Professionals.....	59	28.16
2.2.4 Technicians and associate professionals.....	71	30.97
2.2.5 Extent of staff training.....	96	28.26
2.2.6 R&D expenditure by businesses.....	75	0.83
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	97	48.46
2.3.2 Publication and use of open data.....	80	13.89
2.3.3 ICT use and government efficiency.....	57	45.62
2.3.4 R&D expenditure by governments and higher education.....	29	51.83

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	87	43.93
3.1.2 Software piracy rate.....	55	40.54
3.1.3 Secure Internet servers.....	108	30.25
3.1.4 Cybersecurity.....	25	90.24
3.1.5 Online trust and safety.....	65	50.38
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	112	32.32
3.2.2 Ease of doing business.....	94	52.75
3.2.3 Legal framework's adaptability to digital business models....	78	38.16
3.2.4 E-commerce legislation.....	100	50.00
3.2.5 Social safety net protection.....	65	42.06
3.2.6 ICT regulatory environment.....	75	80.89
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	95	47.77
3.3.2 Socioeconomic gap in use of digital payments.....	106	37.66
3.3.3 Availability of local online content.....	54	57.52
3.3.4 Gender gap in internet use.....	81	29.83
3.3.5 Rural gap in use of digital payments.....	88	53.11
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	90	17.62
4.1.2 High-tech exports.....	108	1.64
4.1.3 PCT patent applications.....	74	0.11
4.1.4 Labour productivity per employee.....	56	27.74
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	114	19.75
4.2.2 Freedom to make life choices.....	104	35.44
4.2.3 Income inequality.....	24	82.11
4.2.4 Healthy life expectancy at birth.....	96	44.69
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	53	95.58
4.3.2 Pollution.....	118	16.99
4.3.3 Road safety.....	41	78.12
4.3.4 Reading proficiency in schools.....	71	4.07
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# El Salvador

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>94</b>	<b>37.27</b>
<b>A. Technology pillar</b> .....	<b>97</b>	<b>29.65</b>
1st sub-pillar: Access.....	97	39.16
2nd sub-pillar: Content.....	75	36.95
3rd sub-pillar: Future Technologies.....	117	12.84
<b>B. People pillar</b> .....	<b>101</b>	<b>27.08</b>
1st sub-pillar: Individuals.....	89	41.64
2nd sub-pillar: Businesses.....	103	15.89
3rd sub-pillar: Governments.....	106	23.72
<b>C. Governance pillar</b> .....	<b>106</b>	<b>40.55</b>
1st sub-pillar: Trust.....	114	27.69
2nd sub-pillar: Regulation.....	104	45.85
3rd sub-pillar: Inclusion.....	95	48.10
<b>D. Impact pillar</b> .....	<b>66</b>	<b>51.78</b>
1st sub-pillar: Economy.....	86	11.95
2nd sub-pillar: Quality of Life.....	45	67.78
3rd sub-pillar: SDG Contribution.....	61	75.60



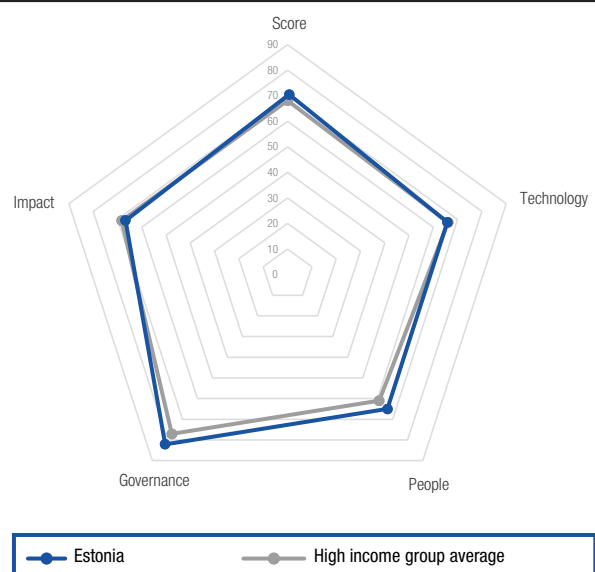
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs.....	99	39.95
1.1.2 Handset prices.....	69	43.74
1.1.3 Households with internet access.....	111	11.51
1.1.4 4G mobile network coverage.....	90	68.00
1.1.5 Fixed-broadband subscriptions.....	106	1.06
1.1.6 International Internet bandwidth.....	22	74.08
1.1.7 Internet access in schools.....	51	35.77
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	80	51.39
1.2.3 Intellectual property receipts.....	25	3.44
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	93	37.24
1.3.2 Company investment in emerging technology.....	112	12.04
1.3.3 Government procurement of advanced technology products.....	115	14.94
1.3.4 ICT PCT patent applications.....	80	0.00
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	102	26.73
2.1.2 Active mobile-broadband subscriptions.....	88	20.41
2.1.3 Use of virtual social networks.....	49	58.42
2.1.4 Tertiary enrolment.....	81	20.45
2.1.5 Adult literacy rate.....	64	82.18
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	78	31.02
2.2.2 Internet shopping.....	97	3.91
2.2.3 Professionals.....	86	16.29
2.2.4 Technicians and associate professionals.....	92	17.64
2.2.5 Extent of staff training.....	104	25.01
2.2.6 R&D expenditure by businesses.....	68	1.48
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	87	58.46
2.3.2 Publication and use of open data.....	81	13.88
2.3.3 ICT use and government efficiency.....	105	15.73
2.3.4 R&D expenditure by governments and higher education.....	92	6.81

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	108	34.52
3.1.2 Software piracy rate.....	83	12.16
3.1.3 Secure Internet servers.....	99	38.41
3.1.4 Cybersecurity.....	117	11.51
3.1.5 Online trust and safety.....	75	41.86
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	70	50.56
3.2.2 Ease of doing business.....	83	61.94
3.2.3 Legal framework's adaptability to digital business models.....	106	23.83
3.2.4 E-commerce legislation.....	100	50.00
3.2.5 Social safety net protection.....	112	16.37
3.2.6 ICT regulatory environment.....	89	72.40
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	79	60.51
3.3.2 Socioeconomic gap in use of digital payments.....	100	41.00
3.3.3 Availability of local online content.....	94	33.24
3.3.4 Gender gap in internet use.....	67	54.81
3.3.5 Rural gap in use of digital payments.....	94	50.94
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	79	24.23
4.1.2 High-tech exports.....	68	11.61
4.1.3 PCT patent applications.....	85	0.01
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	37	67.05
4.2.2 Freedom to make life choices.....	45	77.48
4.2.3 Income inequality.....	65	65.79
4.2.4 Healthy life expectancy at birth.....	74	60.81
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	74	89.99
4.3.2 Pollution.....	75	80.03
4.3.3 Road safety.....	91	39.06
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	73	93.33

# Estonia

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>23</b>	<b>69.30</b>
<b>A. Technology pillar.....</b>	<b>28</b>	<b>64.34</b>
1st sub-pillar: Access.....	26	82.62
2nd sub-pillar: Content.....	15	71.64
3rd sub-pillar: Future Technologies.....	41	38.77
<b>B. People pillar.....</b>	<b>20</b>	<b>64.70</b>
1st sub-pillar: Individuals .....	13	70.45
2nd sub-pillar: Businesses .....	26	54.57
3rd sub-pillar: Governments .....	19	69.07
<b>C. Governance pillar .....</b>	<b>18</b>	<b>81.63</b>
1st sub-pillar: Trust .....	22	78.27
2nd sub-pillar: Regulation.....	19	83.60
3rd sub-pillar: Inclusion.....	11	83.02
<b>D. Impact pillar .....</b>	<b>27</b>	<b>66.54</b>
1st sub-pillar: Economy .....	42	28.67
2nd sub-pillar: Quality of Life .....	28	74.08
3rd sub-pillar: SDG Contribution.....	7	96.87



## The Network Readiness Index in detail

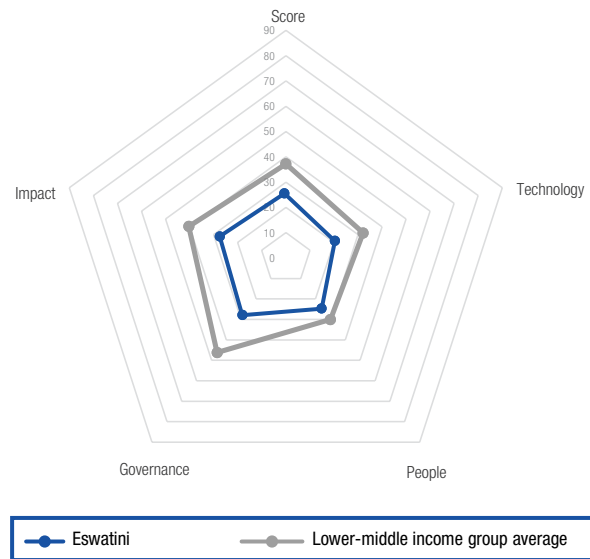
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	33	75.27
1.1.2 Handset prices.....	46	55.61
1.1.3 Households with internet access.....	17	89.85
1.1.4 4G mobile network coverage.....	24	99.00
1.1.5 Fixed-broadband subscriptions.....	42	85.12
1.1.6 International Internet bandwidth.....	27	73.46
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	22	84.08
1.2.3 Intellectual property receipts.....	65	0.41
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	25	77.27
1.3.2 Company investment in emerging technology.....	35	55.43
1.3.3 Government procurement of advanced technology products ..	48	45.81
1.3.4 ICT PCT patent applications.....	24	39.38
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	40	5.63
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	19	88.54
2.1.2 Active mobile-broadband subscriptions.....	5	57.66
2.1.3 Use of virtual social networks.....	56	56.34
2.1.4 Tertiary enrolment.....	30	50.68
2.1.5 Adult literacy rate.....	3	99.86
2.1.6 ICT skills.....	15	69.64
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	20	77.58
2.2.2 Internet shopping.....	24	59.87
2.2.3 Professionals.....	19	53.98
2.2.4 Technicians and associate professionals.....	26	59.68
2.2.5 Extent of staff training.....	30	60.46
2.2.6 R&D expenditure by businesses.....	34	15.84
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	26	89.23
2.3.2 Publication and use of open data.....	44	36.31
2.3.3 ICT use and government efficiency.....	2	89.01
2.3.4 R&D expenditure by governments and higher education.....	17	61.74

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	22	81.63
3.1.2 Software piracy rate.....	29	64.86
3.1.3 Secure Internet servers.....	9	92.13
3.1.4 Cybersecurity.....	5	97.15
3.1.5 Online trust and safety.....	59	55.56
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	17	85.83
3.2.2 Ease of doing business.....	17	89.12
3.2.3 Legal framework's adaptability to digital business models....	5	86.35
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	46	52.28
3.2.6 ICT regulatory environment.....	45	88.03
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	27	89.81
3.3.2 Socioeconomic gap in use of digital payments.....	16	95.47
3.3.3 Availability of local online content.....	14	86.73
3.3.4 Gender gap in internet use.....	21	66.52
3.3.5 Rural gap in use of digital payments.....	17	76.59
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	53	35.38
4.1.2 High-tech exports.....	25	32.07
4.1.3 PCT patent applications.....	30	7.03
4.1.4 Labour productivity per employee.....	41	40.20
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	47	63.20
4.2.2 Freedom to make life choices.....	33	82.67
4.2.3 Income inequality.....	32	79.74
4.2.4 Healthy life expectancy at birth.....	41	70.70
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	26	99.25
4.3.2 Pollution.....	6	98.86
4.3.3 Road safety.....	22	89.38
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00



# Eswatini

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>114</b>	<b>25.19</b>
<b>A. Technology pillar.....</b>	<b>111</b>	<b>20.92</b>
1st sub-pillar: Access.....	111	28.36
2nd sub-pillar: Content.....	107	13.85
3rd sub-pillar: Future Technologies.....	101	20.55
<b>B. People pillar.....</b>	<b>105</b>	<b>24.93</b>
1st sub-pillar: Individuals .....	101	29.13
2nd sub-pillar: Businesses .....	66	29.02
3rd sub-pillar: Governments .....	117	16.64
<b>C. Governance pillar .....</b>	<b>118</b>	<b>28.12</b>
1st sub-pillar: Trust .....	110	31.36
2nd sub-pillar: Regulation.....	112	35.22
3rd sub-pillar: Inclusion.....	120	17.77
<b>D. Impact pillar .....</b>	<b>112</b>	<b>26.79</b>
1st sub-pillar: Economy .....	121	1.17
2nd sub-pillar: Quality of Life .....	120	25.27
3rd sub-pillar: SDG Contribution.....	95	53.92



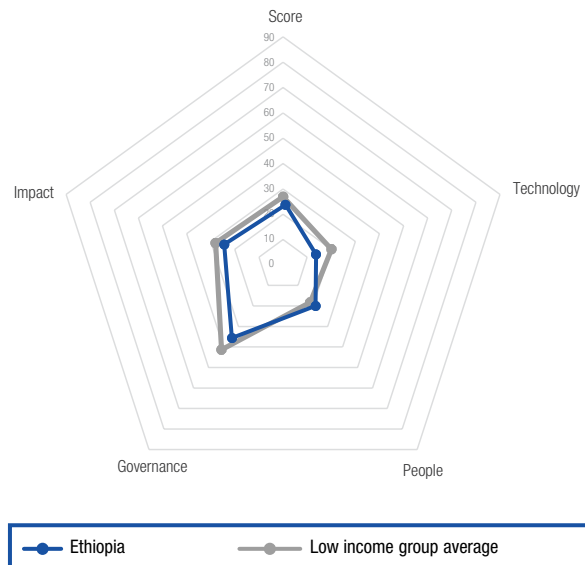
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	102	38.10
1.1.2 Handset prices.....	112	17.24
1.1.3 Households with internet access.....	94	22.12
1.1.4 4G mobile network coverage.....	98	54.00
1.1.5 Fixed-broadband subscriptions.....	111	0.09
1.1.6 International Internet bandwidth.....	113	51.73
1.1.7 Internet access in schools.....	56	15.25
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	103	34.11
1.2.3 Intellectual property receipts.....	93	0.01
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	117	17.13
1.3.2 Company investment in emerging technology.....	116	4.30
1.3.3 Government procurement of advanced technology products ..	64	40.21
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	n/a	n/a
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	90	41.40
2.1.2 Active mobile-broadband subscriptions.....	117	4.07
2.1.3 Use of virtual social networks.....	106	13.72
2.1.4 Tertiary enrolment.....	108	4.36
2.1.5 Adult literacy rate.....	65	82.09
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	54	56.99
2.2.2 Internet shopping.....	n/a	n/a
2.2.3 Professionals.....	56	29.95
2.2.4 Technicians and associate professionals.....	94	16.96
2.2.5 Extent of staff training.....	57	41.16
2.2.6 R&D expenditure by businesses.....	87	0.05
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	109	30.77
2.3.2 Publication and use of open data.....	101	0.28
2.3.3 ICT use and government efficiency.....	103	18.94
2.3.4 R&D expenditure by governments and higher education.....	77	16.56

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	74	47.67
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	104	33.91
3.1.4 Cybersecurity.....	115	12.50
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	101	38.11
3.2.2 Ease of doing business.....	98	51.76
3.2.3 Legal framework's adaptability to digital business models.....	113	10.95
3.2.4 E-commerce legislation.....	110	25.00
3.2.5 Social safety net protection.....	91	29.51
3.2.6 ICT regulatory environment.....	110	55.98
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	109	24.21
3.3.2 Socioeconomic gap in use of digital payments.....	n/a	n/a
3.3.3 Availability of local online content.....	109	11.34
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	n/a	n/a
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	117	1.79
4.1.2 High-tech exports.....	114	0.56
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	111	24.04
4.2.2 Freedom to make life choices.....	100	42.00
4.2.3 Income inequality.....	101	30.26
4.2.4 Healthy life expectancy at birth.....	119	4.76
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	105	52.09
4.3.2 Pollution.....	50	88.12
4.3.3 Road safety.....	106	24.38
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	93	51.11

# Ethiopia

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>116</b>	<b>23.37</b>
<b>A. Technology pillar</b> .....	<b>119</b>	<b>12.62</b>
1st sub-pillar: Access.....	120	14.67
2nd sub-pillar: Content.....	121	0.31
3rd sub-pillar: Future Technologies.....	89	22.90
<b>B. People pillar</b> .....	<b>112</b>	<b>20.09</b>
1st sub-pillar: Individuals .....	119	9.64
2nd sub-pillar: Businesses .....	117	9.92
3rd sub-pillar: Governments .....	77	40.69
<b>C. Governance pillar</b> .....	<b>111</b>	<b>35.57</b>
1st sub-pillar: Trust .....	103	37.21
2nd sub-pillar: Regulation.....	116	33.06
3rd sub-pillar: Inclusion.....	110	36.44
<b>D. Impact pillar</b> .....	<b>116</b>	<b>25.21</b>
1st sub-pillar: Economy .....	90	10.66
2nd sub-pillar: Quality of Life .....	102	45.44
3rd sub-pillar: SDG Contribution.....	121	19.54



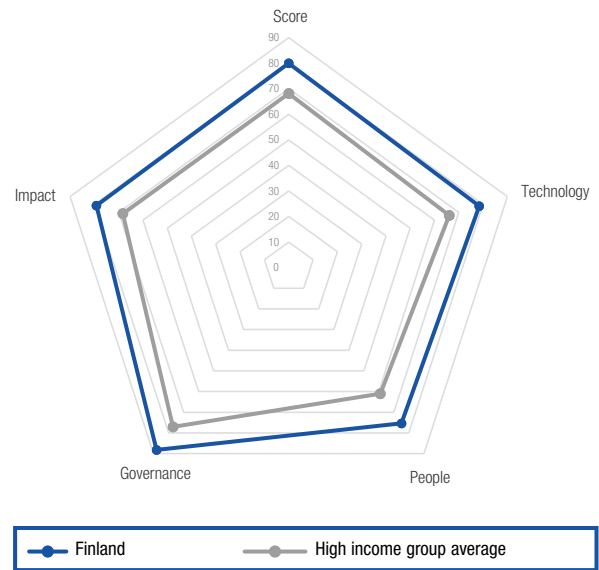
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	114	24.34
1.1.2 Handset prices.....	119	2.68
1.1.3 Households with internet access.....	107	12.49
1.1.4 4G mobile network coverage.....	118	7.00
1.1.5 Fixed-broadband subscriptions.....	102	3.08
1.1.6 International Internet bandwidth.....	120	38.41
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	120	1.52
1.2.3 Intellectual property receipts.....	96	0.01
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	114	21.72
1.3.2 Company investment in emerging technology.....	95	22.20
1.3.3 Government procurement of advanced technology products ..	39	47.67
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	113	9.81
2.1.2 Active mobile-broadband subscriptions.....	115	4.86
2.1.3 Use of virtual social networks.....	117	2.91
2.1.4 Tertiary enrolment.....	106	5.36
2.1.5 Adult literacy rate.....	94	25.27
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	92	21.03
2.2.2 Internet shopping.....	115	0.00
2.2.3 Professionals.....	110	4.62
2.2.4 Technicians and associate professionals.....	112	4.71
2.2.5 Extent of staff training.....	92	29.00
2.2.6 R&D expenditure by businesses.....	84	0.18
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	85	59.23
2.3.2 Publication and use of open data.....	78	16.14
2.3.3 ICT use and government efficiency.....	89	33.44
2.3.4 R&D expenditure by governments and higher education.....	24	53.97

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	89	43.57
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	121	0.00
3.1.4 Cybersecurity.....	99	28.40
3.1.5 Online trust and safety.....	21	76.86
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	115	29.97
3.2.2 Ease of doing business.....	115	31.38
3.2.3 Legal framework's adaptability to digital business models....	94	31.35
3.2.4 E-commerce legislation.....	100	50.00
3.2.5 Social safety net protection.....	77	34.79
3.2.6 ICT regulatory environment.....	119	20.85
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	91	51.59
3.3.2 Socioeconomic gap in use of digital payments.....	115	19.44
3.3.3 Availability of local online content.....	102	24.54
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	95	50.20
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	85	20.30
4.1.2 High-tech exports.....	69	11.06
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	106	0.63
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	108	27.53
4.2.2 Freedom to make life choices.....	92	49.03
4.2.3 Income inequality.....	47	73.68
4.2.4 Healthy life expectancy at birth.....	105	31.50
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	121	0.00
4.3.2 Pollution.....	96	67.69
4.3.3 Road safety.....	105	25.00
4.3.4 Reading proficiency in schools.....	70	9.17
4.3.5 Maths proficiency in schools.....	63	15.37
4.3.6 Use of clean fuels and technology.....	111	0.00

# Finland

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>7</b>	<b>80.34</b>
<b>A. Technology pillar.....</b>	<b>5</b>	<b>78.66</b>
1st sub-pillar: Access.....	15	86.44
2nd sub-pillar: Content.....	9	78.32
3rd sub-pillar: Future Technologies.....	6	71.21
<b>B. People pillar.....</b>	<b>5</b>	<b>75.28</b>
1st sub-pillar: Individuals .....	12	70.99
2nd sub-pillar: Businesses .....	5	75.71
3rd sub-pillar: Governments .....	11	79.14
<b>C. Governance pillar .....</b>	<b>7</b>	<b>88.15</b>
1st sub-pillar: Trust .....	7	87.51
2nd sub-pillar: Regulation.....	2	92.30
3rd sub-pillar: Inclusion.....	9	84.64
<b>D. Impact pillar .....</b>	<b>7</b>	<b>79.27</b>
1st sub-pillar: Economy .....	16	48.64
2nd sub-pillar: Quality of Life .....	2	93.19
3rd sub-pillar: SDG Contribution.....	11	95.99



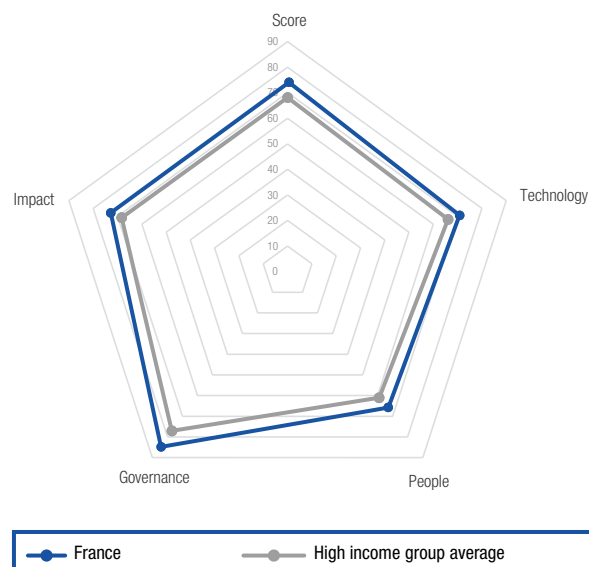
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	22	82.27
1.1.2 Handset prices.....	16	70.36
1.1.3 Households with internet access.....	20	88.21
1.1.4 4G mobile network coverage.....	9	99.90
1.1.5 Fixed-broadband subscriptions.....	25	93.26
1.1.6 International Internet bandwidth.....	43	71.09
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	23	83.22
1.2.3 Intellectual property receipts.....	6	28.27
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	1	100.00
1.3.2 Company investment in emerging technology.....	6	86.85
1.3.3 Government procurement of advanced technology products ..	19	60.98
1.3.4 ICT PCT patent applications.....	4	83.34
1.3.5 Computer software spending.....	8	54.55
1.3.6 Robot density.....	19	41.52
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	20	88.02
2.1.2 Active mobile-broadband subscriptions.....	4	61.65
2.1.3 Use of virtual social networks.....	49	58.42
2.1.4 Tertiary enrolment.....	7	64.35
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	10	82.49
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	1	100.00
2.2.2 Internet shopping.....	12	77.92
2.2.3 Professionals.....	10	65.92
2.2.4 Technicians and associate professionals.....	7	84.06
2.2.5 Extent of staff training.....	9	80.65
2.2.6 R&D expenditure by businesses.....	10	45.74
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	8	96.16
2.3.2 Publication and use of open data.....	21	55.89
2.3.3 ICT use and government efficiency.....	11	78.93
2.3.4 R&D expenditure by governments and higher education.....	4	85.59

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	1	100.00
3.1.2 Software piracy rate.....	13	90.54
3.1.3 Secure Internet servers.....	13	89.02
3.1.4 Cybersecurity.....	21	91.78
3.1.5 Online trust and safety.....	44	66.21
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	7	90.76
3.2.2 Ease of doing business.....	19	88.35
3.2.3 Legal framework's adaptability to digital business models.....	11	82.74
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	7	98.11
3.2.6 ICT regulatory environment.....	22	93.83
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	1	100.00
3.3.2 Socioeconomic gap in use of digital payments.....	5	98.64
3.3.3 Availability of local online content.....	15	86.14
3.3.4 Gender gap in internet use.....	40	61.70
3.3.5 Rural gap in use of digital payments.....	16	76.73
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	27	52.82
4.1.2 High-tech exports.....	52	16.91
4.1.3 PCT patent applications.....	6	67.93
4.1.4 Labour productivity per employee.....	19	56.91
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	1	100.00
4.2.2 Freedom to make life choices.....	11	94.76
4.2.3 Income inequality.....	7	94.47
4.2.4 Healthy life expectancy at birth.....	25	83.52
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	18	99.64
4.3.2 Pollution.....	2	99.83
4.3.3 Road safety.....	13	93.75
4.3.4 Reading proficiency in schools.....	5	99.08
4.3.5 Maths proficiency in schools.....	11	83.66
4.3.6 Use of clean fuels and technology.....	1	100.00

# France

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>18</b>	<b>73.42</b>
<b>A. Technology pillar</b> .....	<b>18</b>	<b>69.93</b>
1st sub-pillar: Access.....	23	83.83
2nd sub-pillar: Content.....	26	66.80
3rd sub-pillar: Future Technologies.....	18	59.17
<b>B. People pillar</b> .....	<b>19</b>	<b>65.88</b>
1st sub-pillar: Individuals .....	54	57.14
2nd sub-pillar: Businesses .....	20	62.54
3rd sub-pillar: Governments .....	13	77.96
<b>C. Governance pillar</b> .....	<b>14</b>	<b>84.85</b>
1st sub-pillar: Trust .....	6	87.80
2nd sub-pillar: Regulation.....	16	84.58
3rd sub-pillar: Inclusion.....	15	82.16
<b>D. Impact pillar</b> .....	<b>17</b>	<b>73.04</b>
1st sub-pillar: Economy .....	14	51.87
2nd sub-pillar: Quality of Life .....	22	77.82
3rd sub-pillar: SDG Contribution.....	37	89.42



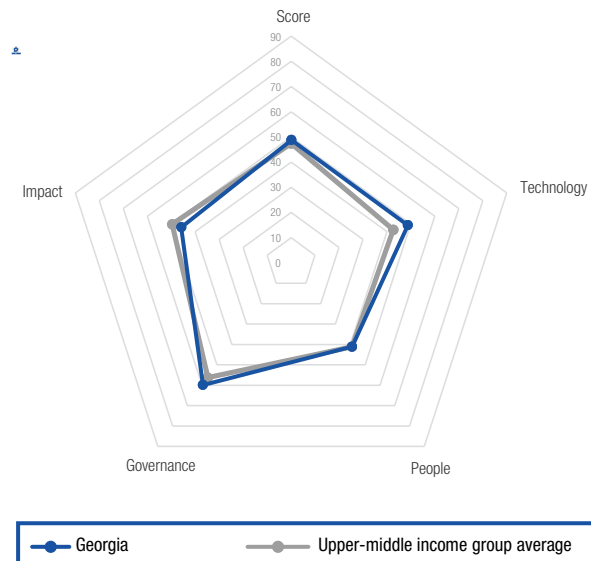
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	61	65.09
1.1.2 Handset prices.....	7	81.65
1.1.3 Households with internet access.....	40	81.19
1.1.4 4G mobile network coverage.....	24	99.00
1.1.5 Fixed-broadband subscriptions.....	23	93.56
1.1.6 International Internet bandwidth.....	62	68.34
1.1.7 Internet access in schools.....	27	97.99
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	27	80.84
1.2.3 Intellectual property receipts.....	11	13.76
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	19	85.05
1.3.2 Company investment in emerging technology.....	22	64.53
1.3.3 Government procurement of advanced technology products ..	36	49.51
1.3.4 ICT PCT patent applications.....	19	55.86
1.3.5 Computer software spending.....	8	54.55
1.3.6 Robot density.....	17	45.52
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	32	80.40
2.1.2 Active mobile-broadband subscriptions.....	40	35.09
2.1.3 Use of virtual social networks.....	54	57.38
2.1.4 Tertiary enrolment.....	37	47.73
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	18	65.11
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	35	65.95
2.2.2 Internet shopping.....	16	71.18
2.2.3 Professionals.....	28	47.55
2.2.4 Technicians and associate professionals.....	5	87.12
2.2.5 Extent of staff training.....	24	67.34
2.2.6 R&D expenditure by businesses.....	13	36.08
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	4	97.70
2.3.2 Publication and use of open data.....	3	85.13
2.3.3 ICT use and government efficiency.....	29	62.55
2.3.4 R&D expenditure by governments and higher education.....	15	66.46

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	20	86.18
3.1.2 Software piracy rate.....	20	77.03
3.1.3 Secure Internet servers.....	19	84.67
3.1.4 Cybersecurity.....	3	98.57
3.1.5 Online trust and safety.....	4	92.54
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	27	77.25
3.2.2 Ease of doing business.....	31	82.38
3.2.3 Legal framework's adaptability to digital business models....	40	53.22
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	6	98.51
3.2.6 ICT regulatory environment.....	11	96.14
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	13	96.18
3.3.2 Socioeconomic gap in use of digital payments.....	12	96.36
3.3.3 Availability of local online content.....	21	82.44
3.3.4 Gender gap in internet use.....	49	59.65
3.3.5 Rural gap in use of digital payments.....	21	76.15
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	13	63.98
4.1.2 High-tech exports.....	9	49.11
4.1.3 PCT patent applications.....	15	33.33
4.1.4 Labour productivity per employee.....	14	61.07
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	23	75.17
4.2.2 Freedom to make life choices.....	66	66.64
4.2.3 Income inequality.....	32	79.74
4.2.4 Healthy life expectancy at birth.....	5	89.74
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	30	99.11
4.3.2 Pollution.....	24	93.33
4.3.3 Road safety.....	16	91.25
4.3.4 Reading proficiency in schools.....	19	94.42
4.3.5 Maths proficiency in schools.....	35	58.39
4.3.6 Use of clean fuels and technology.....	1	100.00

# Georgia

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>68</b>	<b>48.81</b>
<b>A. Technology pillar.....</b>	<b>57</b>	<b>48.56</b>
1st sub-pillar: Access.....	44	76.07
2nd sub-pillar: Content.....	62	47.13
3rd sub-pillar: Future Technologies.....	94	22.47
<b>B. People pillar.....</b>	<b>68</b>	<b>40.95</b>
1st sub-pillar: Individuals .....	76	51.47
2nd sub-pillar: Businesses .....	73	26.85
3rd sub-pillar: Governments .....	64	44.55
<b>C. Governance pillar .....</b>	<b>64</b>	<b>59.76</b>
1st sub-pillar: Trust .....	58	57.27
2nd sub-pillar: Regulation.....	46	68.60
3rd sub-pillar: Inclusion.....	87	53.41
<b>D. Impact pillar .....</b>	<b>84</b>	<b>45.98</b>
1st sub-pillar: Economy .....	99	8.85
2nd sub-pillar: Quality of Life .....	90	53.78
3rd sub-pillar: SDG Contribution.....	62	75.31



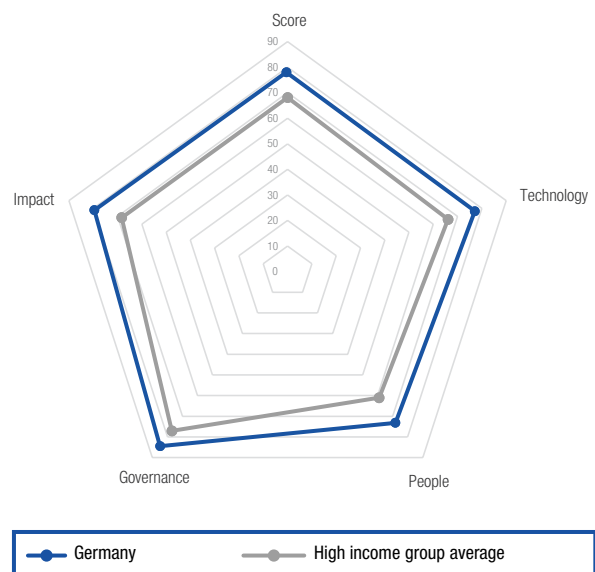
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	34	74.78
1.1.2 Handset prices.....	81	38.69
1.1.3 Households with internet access.....	64	67.48
1.1.4 4G mobile network coverage.....	15	99.72
1.1.5 Fixed-broadband subscriptions.....	49	77.49
1.1.6 International Internet bandwidth.....	20	74.33
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	59	63.32
1.2.3 Intellectual property receipts.....	87	0.04
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	103	32.35
1.3.2 Company investment in emerging technology.....	91	23.97
1.3.3 Government procurement of advanced technology products ..	67	38.46
1.3.4 ICT PCT patent applications.....	50	8.46
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	76	60.29
2.1.2 Active mobile-broadband subscriptions.....	99	16.09
2.1.3 Use of virtual social networks.....	29	68.81
2.1.4 Tertiary enrolment.....	44	43.83
2.1.5 Adult literacy rate.....	13	99.05
2.1.6 ICT skills.....	51	20.72
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	68	39.98
2.2.2 Internet shopping.....	89	5.54
2.2.3 Professionals.....	54	30.88
2.2.4 Technicians and associate professionals.....	68	31.93
2.2.5 Extent of staff training.....	102	25.90
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	69	66.15
2.3.2 Publication and use of open data.....	40	37.44
2.3.3 ICT use and government efficiency.....	34	58.79
2.3.4 R&D expenditure by governments and higher education.....	80	15.80

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	46	60.81
3.1.2 Software piracy rate.....	89	10.81
3.1.3 Secure Internet servers.....	50	65.58
3.1.4 Cybersecurity.....	20	91.89
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	28	76.14
3.2.2 Ease of doing business.....	7	94.64
3.2.3 Legal framework's adaptability to digital business models.....	39	53.59
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	110	17.82
3.2.6 ICT regulatory environment.....	20	94.41
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	83	57.32
3.3.2 Socioeconomic gap in use of digital payments.....	82	54.31
3.3.3 Availability of local online content.....	71	49.27
3.3.4 Gender gap in internet use.....	54	59.01
3.3.5 Rural gap in use of digital payments.....	99	47.13
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	94	14.46
4.1.2 High-tech exports.....	88	6.31
4.1.3 PCT patent applications.....	52	0.97
4.1.4 Labour productivity per employee.....	79	13.68
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	101	33.36
4.2.2 Freedom to make life choices.....	79	57.09
4.2.3 Income inequality.....	64	66.05
4.2.4 Healthy life expectancy at birth.....	81	58.61
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	67	92.36
4.3.2 Pollution.....	69	82.54
4.3.3 Road safety.....	64	60.62
4.3.4 Reading proficiency in schools.....	24	87.05
4.3.5 Maths proficiency in schools.....	43	47.07
4.3.6 Use of clean fuels and technology.....	80	82.22

# Germany

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>9</b>	<b>78.23</b>
<b>A. Technology pillar</b> .....	<b>10</b>	<b>77.51</b>
1st sub-pillar: Access.....	27	81.89
2nd sub-pillar: Content.....	17	71.43
3rd sub-pillar: Future Technologies.....	2	79.21
<b>B. People pillar</b> .....	<b>10</b>	<b>72.60</b>
1st sub-pillar: Individuals .....	41	61.08
2nd sub-pillar: Businesses .....	6	75.46
3rd sub-pillar: Governments .....	6	81.27
<b>C. Governance pillar</b> .....	<b>15</b>	<b>83.94</b>
1st sub-pillar: Trust .....	19	81.78
2nd sub-pillar: Regulation.....	13	88.60
3rd sub-pillar: Inclusion.....	17	81.43
<b>D. Impact pillar</b> .....	<b>8</b>	<b>78.87</b>
1st sub-pillar: Economy .....	7	56.82
2nd sub-pillar: Quality of Life .....	16	82.69
3rd sub-pillar: SDG Contribution.....	6	97.09



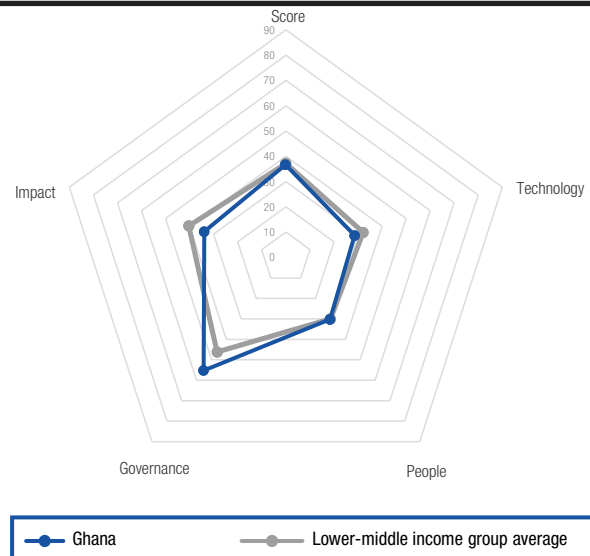
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	11	90.26
1.1.2 Handset prices.....	41	58.03
1.1.3 Households with internet access.....	18	89.22
1.1.4 4G mobile network coverage.....	44	97.50
1.1.5 Fixed-broadband subscriptions.....	34	88.06
1.1.6 International Internet bandwidth.....	63	68.24
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	21	84.14
1.2.3 Intellectual property receipts.....	17	7.40
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	16	85.98
1.3.2 Company investment in emerging technology.....	7	85.74
1.3.3 Government procurement of advanced technology products ..	6	84.20
1.3.4 ICT PCT patent applications.....	13	64.79
1.3.5 Computer software spending.....	8	54.55
1.3.6 Robot density.....	1	100.00
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	16	88.97
2.1.2 Active mobile-broadband subscriptions.....	57	30.97
2.1.3 Use of virtual social networks.....	82	44.91
2.1.4 Tertiary enrolment.....	28	51.13
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	6	89.44
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	8	89.30
2.2.2 Internet shopping.....	11	85.73
2.2.3 Professionals.....	31	46.06
2.2.4 Technicians and associate professionals.....	2	98.91
2.2.5 Extent of staff training.....	10	79.37
2.2.6 R&D expenditure by businesses.....	7	53.39
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	17	92.31
2.3.2 Publication and use of open data.....	16	69.52
2.3.3 ICT use and government efficiency.....	14	78.12
2.3.4 R&D expenditure by governments and higher education.....	5	85.11

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	16	90.52
3.1.2 Software piracy rate.....	8	93.24
3.1.3 Secure Internet servers.....	8	93.34
3.1.4 Cybersecurity.....	24	91.01
3.1.5 Online trust and safety.....	76	40.79
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	12	89.94
3.2.2 Ease of doing business.....	21	87.52
3.2.3 Legal framework's adaptability to digital business models....	13	81.62
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	19	76.98
3.2.6 ICT regulatory environment.....	15	95.56
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	23	91.08
3.3.2 Socioeconomic gap in use of digital payments.....	13	96.12
3.3.3 Availability of local online content.....	9	89.25
3.3.4 Gender gap in internet use.....	64	55.49
3.3.5 Rural gap in use of digital payments.....	31	75.20
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	4	78.58
4.1.2 High-tech exports.....	28	29.87
4.1.3 PCT patent applications.....	8	62.95
4.1.4 Labour productivity per employee.....	21	55.89
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	15	84.59
4.2.2 Freedom to make life choices.....	38	80.65
4.2.3 Income inequality.....	23	82.37
4.2.4 Healthy life expectancy at birth.....	26	83.15
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	21	99.49
4.3.2 Pollution.....	25	93.25
4.3.3 Road safety.....	8	95.62
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Ghana

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>95</b>	<b>37.07</b>
<b>A. Technology pillar.....</b>	<b>100</b>	<b>28.93</b>
1st sub-pillar: Access.....	104	34.25
2nd sub-pillar: Content.....	102	19.01
3rd sub-pillar: Future Technologies.....	52	33.54
<b>B. People pillar.....</b>	<b>96</b>	<b>30.11</b>
1st sub-pillar: Individuals .....	99	32.59
2nd sub-pillar: Businesses .....	102	16.91
3rd sub-pillar: Governments .....	75	40.83
<b>C. Governance pillar .....</b>	<b>76</b>	<b>55.28</b>
1st sub-pillar: Trust .....	77	49.42
2nd sub-pillar: Regulation.....	64	63.71
3rd sub-pillar: Inclusion.....	88	52.72
<b>D. Impact pillar .....</b>	<b>102</b>	<b>33.94</b>
1st sub-pillar: Economy .....	108	7.54
2nd sub-pillar: Quality of Life .....	100	47.05
3rd sub-pillar: SDG Contribution.....	100	47.23



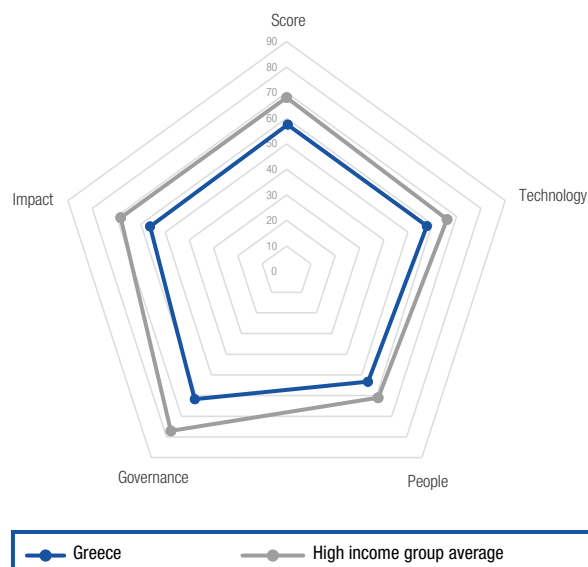
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	60	65.34
1.1.2 Handset prices.....	79	39.03
1.1.3 Households with internet access.....	87	31.23
1.1.4 4G mobile network coverage.....	108	34.86
1.1.5 Fixed-broadband subscriptions.....	112	0.06
1.1.6 International Internet bandwidth.....	99	61.20
1.1.7 Internet access in schools.....	61	8.03
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	109	28.45
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	95	36.44
1.3.2 Company investment in emerging technology.....	45	45.11
1.3.3 Government procurement of advanced technology products ..	31	52.61
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	97	32.50
2.1.2 Active mobile-broadband subscriptions.....	39	35.14
2.1.3 Use of virtual social networks.....	104	16.84
2.1.4 Tertiary enrolment.....	95	10.95
2.1.5 Adult literacy rate.....	77	67.54
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	95	18.95
2.2.2 Internet shopping.....	91	5.41
2.2.3 Professionals.....	81	17.86
2.2.4 Technicians and associate professionals.....	104	10.24
2.2.5 Extent of staff training.....	48	49.01
2.2.6 R&D expenditure by businesses.....	92	0.01
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	69	66.15
2.3.2 Publication and use of open data.....	61	25.96
2.3.3 ICT use and government efficiency.....	77	39.02
2.3.4 R&D expenditure by governments and higher education.....	52	32.20

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	56	54.97
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	111	26.11
3.1.4 Cybersecurity.....	86	45.83
3.1.5 Online trust and safety.....	36	70.78
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	77	49.65
3.2.2 Ease of doing business.....	97	52.58
3.2.3 Legal framework's adaptability to digital business models.....	45	47.57
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	62	43.23
3.2.6 ICT regulatory environment.....	40	89.19
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	81	57.96
3.3.2 Socioeconomic gap in use of digital payments.....	58	70.42
3.3.3 Availability of local online content.....	100	28.35
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	85	54.14
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	118	0.69
4.1.2 High-tech exports.....	55	15.65
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	93	6.29
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	69	50.49
4.2.2 Freedom to make life choices.....	78	58.92
4.2.3 Income inequality.....	86	51.32
4.2.4 Healthy life expectancy at birth.....	108	27.47
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	112	34.00
4.3.2 Pollution.....	94	70.41
4.3.3 Road safety.....	102	30.62
4.3.4 Reading proficiency in schools.....	35	70.98
4.3.5 Maths proficiency in schools.....	38	55.17
4.3.6 Use of clean fuels and technology.....	104	22.22

# Greece

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>43</b>	<b>57.07</b>
<b>A. Technology pillar</b> .....	<b>40</b>	<b>57.02</b>
1st sub-pillar: Access.....	37	78.60
2nd sub-pillar: Content.....	34	63.84
3rd sub-pillar: Future Technologies.....	71	28.62
<b>B. People pillar</b> .....	<b>40</b>	<b>53.25</b>
1st sub-pillar: Individuals .....	24	66.60
2nd sub-pillar: Businesses .....	47	36.10
3rd sub-pillar: Governments .....	35	57.04
<b>C. Governance pillar</b> .....	<b>58</b>	<b>61.62</b>
1st sub-pillar: Trust .....	62	56.28
2nd sub-pillar: Regulation.....	74	60.96
3rd sub-pillar: Inclusion.....	50	67.63
<b>D. Impact pillar</b> .....	<b>52</b>	<b>56.39</b>
1st sub-pillar: Economy .....	52	23.98
2nd sub-pillar: Quality of Life .....	91	53.24
3rd sub-pillar: SDG Contribution.....	28	91.94



## The Network Readiness Index in detail

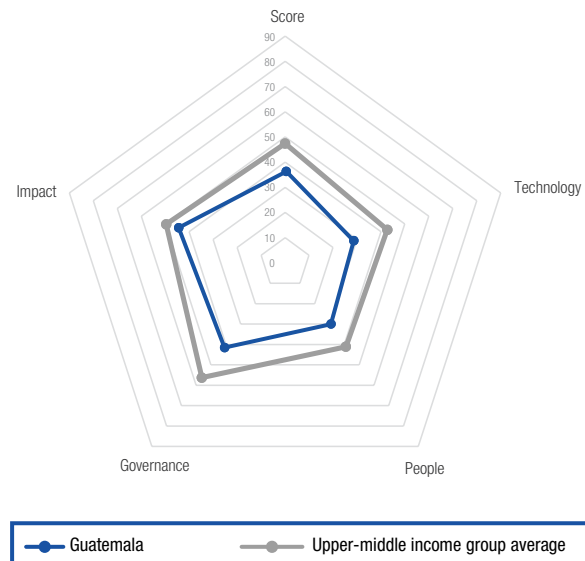
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	48	69.95
1.1.2 Handset prices.....	26	65.09
1.1.3 Households with internet access.....	62	69.02
1.1.4 4G mobile network coverage.....	34	98.80
1.1.5 Fixed-broadband subscriptions.....	17	95.64
1.1.6 International Internet bandwidth.....	30	73.08
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	36	75.63
1.2.3 Intellectual property receipts.....	53	0.67
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	60	54.91
1.3.2 Company investment in emerging technology.....	103	17.06
1.3.3 Government procurement of advanced technology products ..	114	18.55
1.3.4 ICT PCT patent applications.....	34	19.90
1.3.5 Computer software spending.....	8	54.55
1.3.6 Robot density.....	37	6.74
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	57	70.28
2.1.2 Active mobile-broadband subscriptions.....	56	31.14
2.1.3 Use of virtual social networks.....	61	53.22
2.1.4 Tertiary enrolment.....	1	100.00
2.1.5 Adult literacy rate.....	34	95.96
2.1.6 ICT skills.....	39	48.98
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	48	59.98
2.2.2 Internet shopping.....	47	28.40
2.2.3 Professionals.....	24	49.72
2.2.4 Technicians and associate professionals.....	60	34.12
2.2.5 Extent of staff training.....	90	30.27
2.2.6 R&D expenditure by businesses.....	36	14.15
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	41	80.00
2.3.2 Publication and use of open data.....	36	38.94
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	28	52.20

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	53	56.82
3.1.2 Software piracy rate.....	58	37.84
3.1.3 Secure Internet servers.....	46	72.73
3.1.4 Cybersecurity.....	77	55.70
3.1.5 Online trust and safety.....	55	58.30
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	55	57.91
3.2.2 Ease of doing business.....	72	67.55
3.2.3 Legal framework's adaptability to digital business models.....	108	21.30
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	98	25.97
3.2.6 ICT regulatory environment.....	27	93.05
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	34	85.99
3.3.2 Socioeconomic gap in use of digital payments.....	45	78.80
3.3.3 Availability of local online content.....	65	51.74
3.3.4 Gender gap in internet use.....	60	57.88
3.3.5 Rural gap in use of digital payments.....	70	63.76
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	75	26.53
4.1.2 High-tech exports.....	36	24.27
4.1.3 PCT patent applications.....	40	3.02
4.1.4 Labour productivity per employee.....	39	42.12
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	73	48.99
4.2.2 Freedom to make life choices.....	118	8.30
4.2.3 Income inequality.....	55	71.05
4.2.4 Healthy life expectancy at birth.....	21	84.62
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	24	99.33
4.3.2 Pollution.....	44	88.76
4.3.3 Road safety.....	38	79.69
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00



# Guatemala

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>96</b>	<b>36.07</b>
<b>A. Technology pillar.....</b>	<b>104</b>	<b>28.04</b>
1st sub-pillar: Access.....	105	33.61
2nd sub-pillar: Content.....	90	27.82
3rd sub-pillar: Future Technologies.....	91	22.67
<b>B. People pillar.....</b>	<b>97</b>	<b>30.01</b>
1st sub-pillar: Individuals .....	92	39.21
2nd sub-pillar: Businesses .....	90	21.87
3rd sub-pillar: Governments .....	100	28.96
<b>C. Governance pillar .....</b>	<b>104</b>	<b>41.48</b>
1st sub-pillar: Trust .....	112	30.99
2nd sub-pillar: Regulation.....	110	40.99
3rd sub-pillar: Inclusion.....	89	52.46
<b>D. Impact pillar .....</b>	<b>86</b>	<b>44.75</b>
1st sub-pillar: Economy .....	84	12.43
2nd sub-pillar: Quality of Life .....	55	64.32
3rd sub-pillar: SDG Contribution.....	92	57.50



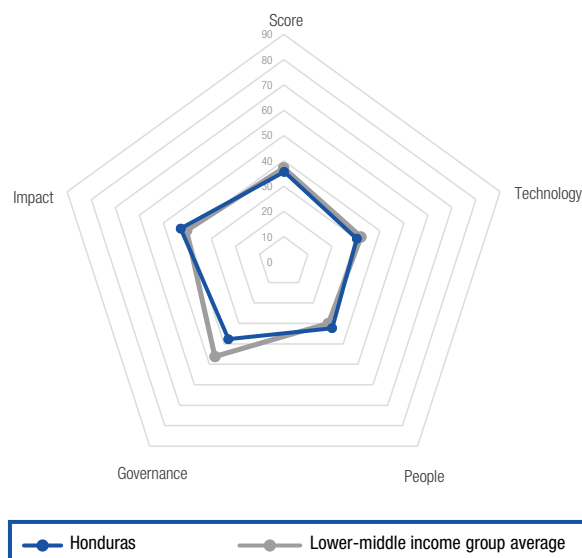
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	111	29.41
1.1.2 Handset prices.....	64	46.42
1.1.3 Households with internet access.....	102	18.49
1.1.4 4G mobile network coverage.....	104	40.35
1.1.5 Fixed-broadband subscriptions.....	n/a	n/a
1.1.6 International Internet bandwidth.....	105	58.23
1.1.7 Internet access in schools.....	60	8.74
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	94	43.74
1.2.3 Intellectual property receipts.....	89	0.03
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	50	59.60
1.3.2 Company investment in emerging technology.....	71	32.25
1.3.3 Government procurement of advanced technology products ..	111	21.52
1.3.4 ICT PCT patent applications.....	80	0.00
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	70	61.43
2.1.2 Active mobile-broadband subscriptions.....	116	4.29
2.1.3 Use of virtual social networks.....	83	43.87
2.1.4 Tertiary enrolment.....	90	15.44
2.1.5 Adult literacy rate.....	75	71.03
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	59	51.15
2.2.2 Internet shopping.....	85	6.47
2.2.3 Professionals.....	94	12.87
2.2.4 Technicians and associate professionals.....	102	10.67
2.2.5 Extent of staff training.....	45	50.05
2.2.6 R&D expenditure by businesses.....	94	0.00
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	81	60.77
2.3.2 Publication and use of open data.....	62	23.72
2.3.3 ICT use and government efficiency.....	93	30.64
2.3.4 R&D expenditure by governments and higher education.....	104	0.70

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	115	29.37
3.1.2 Software piracy rate.....	82	14.86
3.1.3 Secure Internet servers.....	102	36.73
3.1.4 Cybersecurity.....	105	25.44
3.1.5 Online trust and safety.....	67	48.55
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	83	47.11
3.2.2 Ease of doing business.....	86	57.24
3.2.3 Legal framework's adaptability to digital business models.....	74	38.59
3.2.4 E-commerce legislation.....	110	25.00
3.2.5 Social safety net protection.....	93	29.15
3.2.6 ICT regulatory environment.....	113	48.85
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	86	56.69
3.3.2 Socioeconomic gap in use of digital payments.....	83	53.69
3.3.3 Availability of local online content.....	89	35.61
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	69	63.86
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	66	28.43
4.1.2 High-tech exports.....	72	10.11
4.1.3 PCT patent applications.....	78	0.07
4.1.4 Labour productivity per employee.....	85	11.10
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	24	74.35
4.2.2 Freedom to make life choices.....	22	88.21
4.2.3 Income inequality.....	94	38.68
4.2.4 Healthy life expectancy at birth.....	83	56.04
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	96	73.13
4.3.2 Pollution.....	77	79.85
4.3.3 Road safety.....	71	56.56
4.3.4 Reading proficiency in schools.....	55	53.87
4.3.5 Maths proficiency in schools.....	49	39.36
4.3.6 Use of clean fuels and technology.....	98	42.22

# Honduras

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>97</b>	<b>35.88</b>
<b>A. Technology pillar.....</b>	<b>96</b>	<b>30.29</b>
1st sub-pillar: Access.....	108	32.34
2nd sub-pillar: Content.....	94	26.44
3rd sub-pillar: Future Technologies.....	59	32.08
<b>B. People pillar.....</b>	<b>92</b>	<b>32.34</b>
1st sub-pillar: Individuals .....	97	34.52
2nd sub-pillar: Businesses .....	84	23.44
3rd sub-pillar: Governments .....	81	39.06
<b>C. Governance pillar .....</b>	<b>110</b>	<b>37.69</b>
1st sub-pillar: Trust .....	118	22.11
2nd sub-pillar: Regulation.....	100	47.87
3rd sub-pillar: Inclusion.....	104	43.08
<b>D. Impact pillar .....</b>	<b>92</b>	<b>43.19</b>
1st sub-pillar: Economy .....	109	7.39
2nd sub-pillar: Quality of Life .....	71	59.35
3rd sub-pillar: SDG Contribution.....	85	62.84



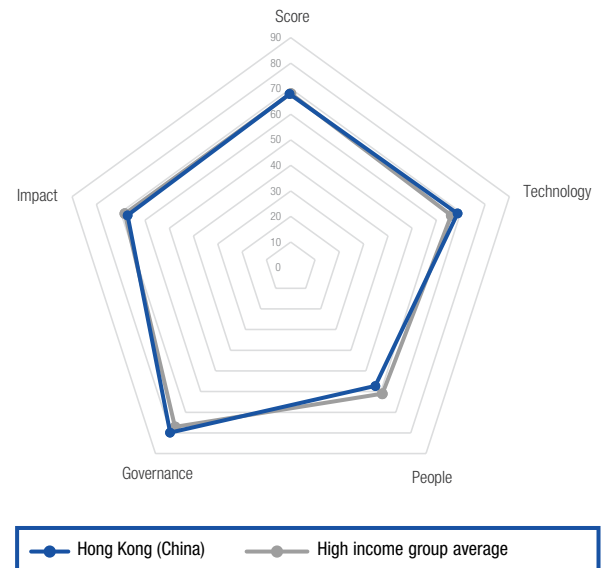
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	116	19.07
1.1.2 Handset prices.....	96	31.21
1.1.3 Households with internet access.....	95	21.56
1.1.4 4G mobile network coverage.....	91	67.46
1.1.5 Fixed-broadband subscriptions.....	101	3.60
1.1.6 International Internet bandwidth.....	71	67.64
1.1.7 Internet access in schools.....	55	15.80
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	96	40.58
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	79	43.24
1.3.2 Company investment in emerging technology.....	76	30.48
1.3.3 Government procurement of advanced technology products ..	98	27.33
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	103	24.37
2.1.2 Active mobile-broadband subscriptions.....	108	10.71
2.1.3 Use of virtual social networks.....	87	38.67
2.1.4 Tertiary enrolment.....	86	18.66
2.1.5 Adult literacy rate.....	68	80.20
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	77	32.32
2.2.2 Internet shopping.....	96	4.53
2.2.3 Professionals.....	102	9.15
2.2.4 Technicians and associate professionals.....	81	24.88
2.2.5 Extent of staff training.....	53	46.34
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	99	46.16
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	92	31.97
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	113	30.00
3.1.2 Software piracy rate.....	79	18.92
3.1.3 Secure Internet servers.....	101	36.76
3.1.4 Cybersecurity.....	119	2.74
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	97	41.09
3.2.2 Ease of doing business.....	106	46.05
3.2.3 Legal framework's adaptability to digital business models.....	79	37.49
3.2.4 E-commerce legislation.....	100	50.00
3.2.5 Social safety net protection.....	89	30.36
3.2.6 ICT regulatory environment.....	70	82.24
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	94	48.40
3.3.2 Socioeconomic gap in use of digital payments.....	91	47.39
3.3.3 Availability of local online content.....	85	37.49
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	105	39.05
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	104	8.86
4.1.2 High-tech exports.....	89	5.92
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	54	59.39
4.2.2 Freedom to make life choices.....	41	79.56
4.2.3 Income inequality.....	100	32.89
4.2.4 Healthy life expectancy at birth.....	53	65.57
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	88	84.22
4.3.2 Pollution.....	66	83.76
4.3.3 Road safety.....	73	56.25
4.3.4 Reading proficiency in schools.....	54	54.28
4.3.5 Maths proficiency in schools.....	45	44.07
4.3.6 Use of clean fuels and technology.....	92	54.44

# Hong Kong (China)

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>24</b>	<b>68.14</b>
<b>A. Technology pillar</b> .....	<b>21</b>	<b>69.12</b>
1st sub-pillar: Access.....	9	88.37
2nd sub-pillar: Content.....	40	54.90
3rd sub-pillar: Future Technologies.....	14	64.11
<b>B. People pillar</b> .....	<b>29</b>	<b>57.06</b>
1st sub-pillar: Individuals .....	15	69.16
2nd sub-pillar: Businesses .....	30	48.99
3rd sub-pillar: Governments .....	43	53.02
<b>C. Governance pillar</b> .....	<b>21</b>	<b>79.64</b>
1st sub-pillar: Trust .....	17	82.30
2nd sub-pillar: Regulation.....	21	82.68
3rd sub-pillar: Inclusion.....	35	73.93
<b>D. Impact pillar</b> .....	<b>26</b>	<b>66.74</b>
1st sub-pillar: Economy .....	22	42.23
2nd sub-pillar: Quality of Life .....	74	58.98
3rd sub-pillar: SDG Contribution.....	1	99.01



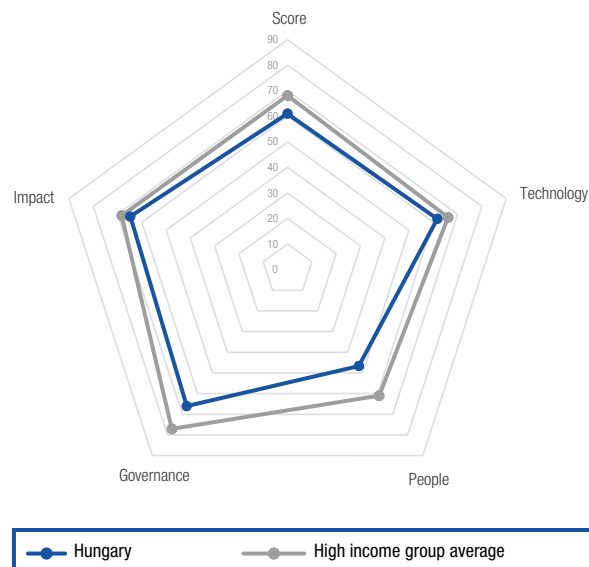
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	9	91.69
1.1.2 Handset prices.....	23	66.04
1.1.3 Households with internet access.....	46	78.86
1.1.4 4G mobile network coverage.....	24	99.00
1.1.5 Fixed-broadband subscriptions.....	43	83.86
1.1.6 International Internet bandwidth.....	2	99.90
1.1.7 Internet access in schools.....	25	99.21
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	3	96.00
1.2.3 Intellectual property receipts.....	56	0.63
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	29	74.85
1.3.2 Company investment in emerging technology.....	15	72.70
1.3.3 Government procurement of advanced technology products ..	15	65.26
1.3.4 ICT PCT patent applications.....	14	62.94
1.3.5 Computer software spending.....	21	36.36
1.3.6 Robot density.....	6	72.54
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	18	88.61
2.1.2 Active mobile-broadband subscriptions.....	8	53.82
2.1.3 Use of virtual social networks.....	10	78.17
2.1.4 Tertiary enrolment.....	23	56.05
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	n/a	n/a
2.2.2 Internet shopping.....	30	54.55
2.2.3 Professionals.....	79	18.19
2.2.4 Technicians and associate professionals.....	6	86.41
2.2.5 Extent of staff training.....	12	76.81
2.2.6 R&D expenditure by businesses.....	43	8.97
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	n/a	n/a
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	27	66.01
2.3.4 R&D expenditure by governments and higher education.....	41	40.03

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	11	93.73
3.1.2 Software piracy rate.....	27	68.92
3.1.3 Secure Internet servers.....	21	84.24
3.1.4 Cybersecurity.....	n/a	n/a
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	1	100.00
3.2.2 Ease of doing business.....	3	97.44
3.2.3 Legal framework's adaptability to digital business models.....	19	71.08
3.2.4 E-commerce legislation.....	n/a	n/a
3.2.5 Social safety net protection.....	37	60.55
3.2.6 ICT regulatory environment.....	64	84.36
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	n/a	n/a
3.3.2 Socioeconomic gap in use of digital payments.....	44	79.28
3.3.3 Availability of local online content.....	17	85.22
3.3.4 Gender gap in internet use.....	44	60.97
3.3.5 Rural gap in use of digital payments.....	51	70.25
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	37	47.67
4.1.2 High-tech exports.....	33	25.58
4.1.3 PCT patent applications.....	21	23.00
4.1.4 Labour productivity per employee.....	9	72.66
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	74	48.01
4.2.2 Freedom to make life choices.....	59	69.95
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	n/a	n/a
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	42	97.65
4.3.2 Pollution.....	n/a	n/a
4.3.3 Road safety.....	n/a	n/a
4.3.4 Reading proficiency in schools.....	4	99.39
4.3.5 Maths proficiency in schools.....	1	100.00
4.3.6 Use of clean fuels and technology.....	n/a	n/a

# Hungary

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>38</b>	<b>59.95</b>
<b>A. Technology pillar</b> .....	<b>32</b>	<b>61.42</b>
1st sub-pillar: Access.....	21	84.02
2nd sub-pillar: Content.....	29	65.73
3rd sub-pillar: Future Technologies.....	50	34.52
<b>B. People pillar</b> .....	<b>50</b>	<b>47.39</b>
1st sub-pillar: Individuals .....	48	58.48
2nd sub-pillar: Businesses .....	39	42.57
3rd sub-pillar: Governments .....	72	41.11
<b>C. Governance pillar</b> .....	<b>46</b>	<b>66.67</b>
1st sub-pillar: Trust .....	39	69.06
2nd sub-pillar: Regulation.....	56	66.40
3rd sub-pillar: Inclusion.....	57	64.56
<b>D. Impact pillar</b> .....	<b>32</b>	<b>64.32</b>
1st sub-pillar: Economy .....	26	38.90
2nd sub-pillar: Quality of Life .....	65	61.18
3rd sub-pillar: SDG Contribution.....	22	92.90



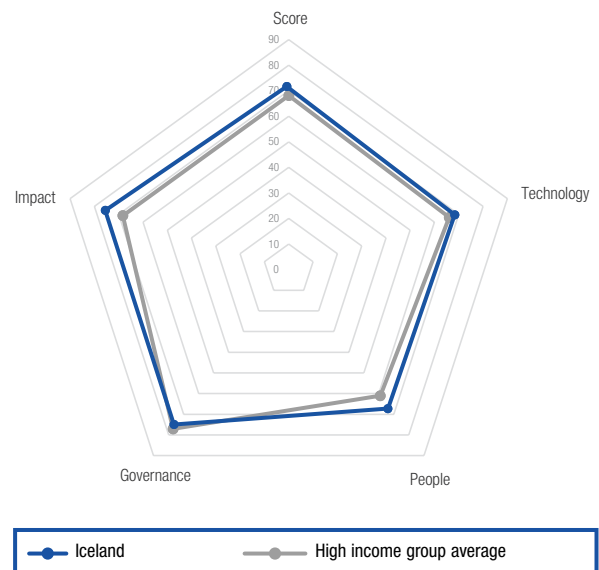
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	23	81.93
1.1.2 Handset prices.....	35	62.46
1.1.3 Households with internet access.....	38	82.19
1.1.4 4G mobile network coverage.....	22	99.20
1.1.5 Fixed-broadband subscriptions.....	24	93.29
1.1.6 International Internet bandwidth.....	58	69.04
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	38	74.00
1.2.3 Intellectual property receipts.....	16	8.35
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	42	64.54
1.3.2 Company investment in emerging technology.....	94	22.27
1.3.3 Government procurement of advanced technology products ..	95	28.13
1.3.4 ICT PCT patent applications.....	23	39.93
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	23	24.95
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	50	73.76
2.1.2 Active mobile-broadband subscriptions.....	76	25.33
2.1.3 Use of virtual social networks.....	45	61.54
2.1.4 Tertiary enrolment.....	61	35.11
2.1.5 Adult literacy rate.....	17	98.64
2.1.6 ICT skills.....	27	56.52
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	47	61.16
2.2.2 Internet shopping.....	39	36.86
2.2.3 Professionals.....	41	39.19
2.2.4 Technicians and associate professionals.....	21	63.78
2.2.5 Extent of staff training.....	91	29.28
2.2.6 R&D expenditure by businesses.....	22	25.14
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	57	70.77
2.3.2 Publication and use of open data.....	63	23.30
2.3.3 ICT use and government efficiency.....	75	39.24
2.3.4 R&D expenditure by governments and higher education.....	53	31.14

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	39	66.00
3.1.2 Software piracy rate.....	26	71.62
3.1.3 Secure Internet servers.....	22	84.17
3.1.4 Cybersecurity.....	33	86.95
3.1.5 Online trust and safety.....	82	36.53
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	41	64.68
3.2.2 Ease of doing business.....	50	76.39
3.2.3 Legal framework's adaptability to digital business models....	83	35.09
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	102	22.61
3.2.6 ICT regulatory environment.....	2	99.62
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	66	66.88
3.3.2 Socioeconomic gap in use of digital payments.....	41	79.36
3.3.3 Availability of local online content.....	48	60.28
3.3.4 Gender gap in internet use.....	45	60.87
3.3.5 Rural gap in use of digital payments.....	82	55.43
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	5	76.36
4.1.2 High-tech exports.....	26	32.02
4.1.3 PCT patent applications.....	29	7.81
4.1.4 Labour productivity per employee.....	42	39.43
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	48	62.65
4.2.2 Freedom to make life choices.....	106	30.69
4.2.3 Income inequality.....	19	85.79
4.2.4 Healthy life expectancy at birth.....	53	65.57
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	36	98.67
4.3.2 Pollution.....	43	88.84
4.3.3 Road safety.....	31	84.06
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Iceland

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>21</b>	<b>71.94</b>
<b>A. Technology pillar.....</b>	<b>20</b>	<b>69.49</b>
1st sub-pillar: Access.....	7	88.82
2nd sub-pillar: Content.....	7	80.04
3rd sub-pillar: Future Technologies.....	40	39.60
<b>B. People pillar.....</b>	<b>16</b>	<b>67.74</b>
1st sub-pillar: Individuals .....	2	76.78
2nd sub-pillar: Businesses .....	17	63.36
3rd sub-pillar: Governments .....	24	63.08
<b>C. Governance pillar .....</b>	<b>30</b>	<b>75.44</b>
1st sub-pillar: Trust .....	29	73.75
2nd sub-pillar: Regulation.....	22	81.75
3rd sub-pillar: Inclusion.....	43	70.83
<b>D. Impact pillar .....</b>	<b>12</b>	<b>75.08</b>
1st sub-pillar: Economy .....	30	36.56
2nd sub-pillar: Quality of Life .....	3	91.99
3rd sub-pillar: SDG Contribution.....	8	96.69



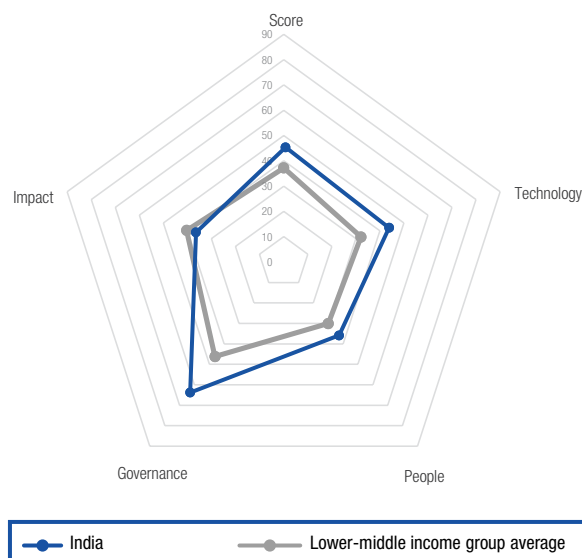
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	24	80.30
1.1.2 Handset prices.....	10	75.04
1.1.3 Households with internet access.....	5	97.72
1.1.4 4G mobile network coverage.....	36	98.20
1.1.5 Fixed-broadband subscriptions.....	3	99.46
1.1.6 International Internet bandwidth.....	4	82.23
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	11	88.63
1.2.3 Intellectual property receipts.....	10	13.93
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	8	91.98
1.3.2 Company investment in emerging technology.....	25	62.79
1.3.3 Government procurement of advanced technology products ..	37	49.50
1.3.4 ICT PCT patent applications.....	80	0.00
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	39	6.06
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	3	99.29
2.1.2 Active mobile-broadband subscriptions.....	15	48.95
2.1.3 Use of virtual social networks.....	7	83.37
2.1.4 Tertiary enrolment.....	25	52.31
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	1	100.00
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	15	81.28
2.2.2 Internet shopping.....	n/a	n/a
2.2.3 Professionals.....	6	67.28
2.2.4 Technicians and associate professionals.....	25	60.65
2.2.5 Extent of staff training.....	18	71.79
2.2.6 R&D expenditure by businesses.....	14	35.78
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	63	70.00
2.3.2 Publication and use of open data.....	37	38.87
2.3.3 ICT use and government efficiency.....	19	73.43
2.3.4 R&D expenditure by governments and higher education.....	13	70.00

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	13	92.55
3.1.2 Software piracy rate.....	34	60.81
3.1.3 Secure Internet servers.....	7	94.50
3.1.4 Cybersecurity.....	84	47.15
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	19	82.64
3.2.2 Ease of doing business.....	25	86.20
3.2.3 Legal framework's adaptability to digital business models.....	18	71.52
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	10	88.25
3.2.6 ICT regulatory environment.....	50	86.88
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	72	64.33
3.3.2 Socioeconomic gap in use of digital payments.....	n/a	n/a
3.3.3 Availability of local online content.....	25	80.03
3.3.4 Gender gap in internet use.....	12	68.13
3.3.5 Rural gap in use of digital payments.....	n/a	n/a
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	92	16.42
4.1.2 High-tech exports.....	11	44.48
4.1.3 PCT patent applications.....	17	28.71
4.1.4 Labour productivity per employee.....	20	56.62
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	4	92.04
4.2.2 Freedom to make life choices.....	10	94.99
4.2.3 Income inequality.....	13	92.63
4.2.4 Healthy life expectancy at birth.....	9	88.28
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	27	99.20
4.3.2 Pollution.....	4	99.77
4.3.3 Road safety.....	28	87.81
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# India

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>79</b>	<b>44.81</b>
<b>A. Technology pillar</b> .....	<b>72</b>	<b>42.76</b>
1st sub-pillar: Access.....	73	59.14
2nd sub-pillar: Content.....	84	32.97
3rd sub-pillar: Future Technologies.....	46	36.16
<b>B. People pillar</b> .....	<b>81</b>	<b>35.87</b>
1st sub-pillar: Individuals .....	103	28.35
2nd sub-pillar: Businesses .....	87	22.60
3rd sub-pillar: Governments .....	36	56.67
<b>C. Governance pillar</b> .....	<b>52</b>	<b>63.66</b>
1st sub-pillar: Trust .....	49	61.89
2nd sub-pillar: Regulation.....	59	64.61
3rd sub-pillar: Inclusion.....	58	64.49
<b>D. Impact pillar</b> .....	<b>100</b>	<b>36.96</b>
1st sub-pillar: Economy .....	66	19.37
2nd sub-pillar: Quality of Life .....	93	52.39
3rd sub-pillar: SDG Contribution.....	108	39.11



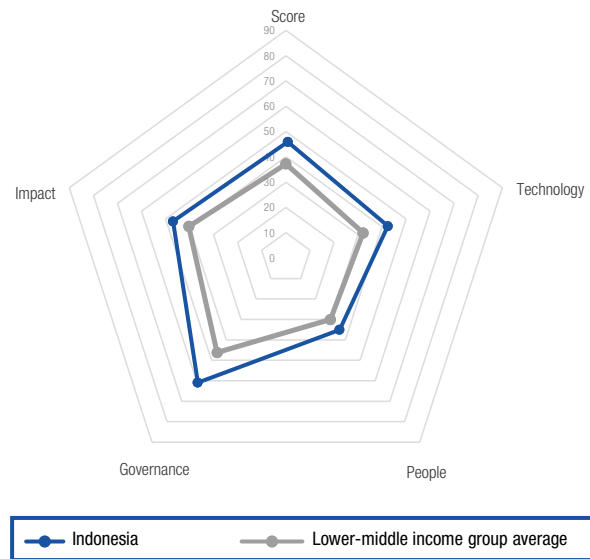
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	38	74.13
1.1.2 Handset prices.....	55	49.67
1.1.3 Households with internet access.....	96	20.39
1.1.4 4G mobile network coverage.....	54	94.00
1.1.5 Fixed-broadband subscriptions.....	68	53.11
1.1.6 International Internet bandwidth.....	84	63.55
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	81	51.10
1.2.3 Intellectual property receipts.....	48	0.79
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	70	50.48
1.3.2 Company investment in emerging technology.....	27	61.27
1.3.3 Government procurement of advanced technology products ..	8	78.31
1.3.4 ICT PCT patent applications.....	52	7.63
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	52	1.09
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	99	27.43
2.1.2 Active mobile-broadband subscriptions.....	106	12.93
2.1.3 Use of virtual social networks.....	101	21.00
2.1.4 Tertiary enrolment.....	83	20.06
2.1.5 Adult literacy rate.....	83	60.31
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	69	39.33
2.2.2 Internet shopping.....	99	3.63
2.2.3 Professionals.....	103	8.93
2.2.4 Technicians and associate professionals.....	93	16.96
2.2.5 Extent of staff training.....	31	59.90
2.2.6 R&D expenditure by businesses.....	49	6.85
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	9	94.62
2.3.2 Publication and use of open data.....	33	42.80
2.3.3 ICT use and government efficiency.....	36	58.16
2.3.4 R&D expenditure by governments and higher education.....	54	31.10

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	59	53.93
3.1.2 Software piracy rate.....	50	44.59
3.1.3 Secure Internet servers.....	84	44.65
3.1.4 Cybersecurity.....	49	76.75
3.1.5 Online trust and safety.....	5	89.50
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	82	47.37
3.2.2 Ease of doing business.....	59	72.19
3.2.3 Legal framework's adaptability to digital business models....	26	63.98
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	43	54.42
3.2.6 ICT regulatory environment.....	84	74.71
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	15	94.91
3.3.2 Socioeconomic gap in use of digital payments.....	85	50.15
3.3.3 Availability of local online content.....	60	55.11
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	77	57.80
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	33	49.44
4.1.2 High-tech exports.....	51	17.06
4.1.3 PCT patent applications.....	61	0.49
4.1.4 Labour productivity per employee.....	86	10.50
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	115	15.84
4.2.2 Freedom to make life choices.....	32	83.79
4.2.3 Income inequality.....	52	71.84
4.2.4 Healthy life expectancy at birth.....	99	38.10
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	98	68.49
4.3.2 Pollution.....	114	32.87
4.3.3 Road safety.....	92	37.81
4.3.4 Reading proficiency in schools.....	67	24.54
4.3.5 Maths proficiency in schools.....	60	26.47
4.3.6 Use of clean fuels and technology.....	94	44.44

# Indonesia

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>76</b>	<b>46.15</b>
<b>A. Technology pillar</b> .....	<b>75</b>	<b>41.56</b>
1st sub-pillar: Access.....	67	62.86
2nd sub-pillar: Content.....	93	26.65
3rd sub-pillar: Future Technologies.....	49	35.18
<b>B. People pillar</b> .....	<b>85</b>	<b>34.77</b>
1st sub-pillar: Individuals .....	85	43.58
2nd sub-pillar: Businesses .....	99	17.81
3rd sub-pillar: Governments .....	68	42.93
<b>C. Governance pillar</b> .....	<b>62</b>	<b>60.57</b>
1st sub-pillar: Trust .....	56	58.26
2nd sub-pillar: Regulation.....	48	68.17
3rd sub-pillar: Inclusion.....	84	55.29
<b>D. Impact pillar</b> .....	<b>81</b>	<b>47.70</b>
1st sub-pillar: Economy .....	67	18.88
2nd sub-pillar: Quality of Life .....	68	60.30
3rd sub-pillar: SDG Contribution.....	84	63.91



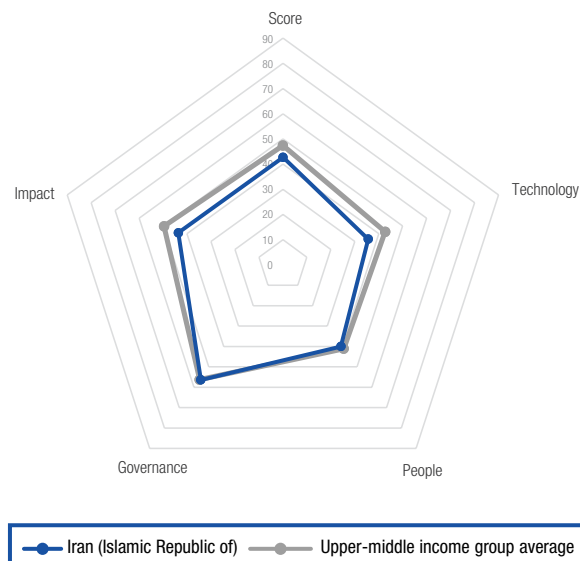
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	64	63.58
1.1.2 Handset prices.....	72	42.05
1.1.3 Households with internet access.....	68	63.96
1.1.4 4G mobile network coverage.....	61	92.70
1.1.5 Fixed-broadband subscriptions.....	71	48.04
1.1.6 International Internet bandwidth.....	75	66.84
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	83	49.79
1.2.3 Intellectual property receipts.....	75	0.16
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	65	52.56
1.3.2 Company investment in emerging technology.....	28	59.63
1.3.3 Government procurement of advanced technology products ..	12	69.87
1.3.4 ICT PCT patent applications.....	79	0.16
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	47	1.56
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	96	33.37
2.1.2 Active mobile-broadband subscriptions.....	50	33.30
2.1.3 Use of virtual social networks.....	58	55.30
2.1.4 Tertiary enrolment.....	73	26.14
2.1.5 Adult literacy rate.....	43	93.31
2.1.6 ICT skills.....	53	20.07
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	108	2.47
2.2.2 Internet shopping.....	68	12.64
2.2.3 Professionals.....	115	1.14
2.2.4 Technicians and associate professionals.....	77	25.70
2.2.5 Extent of staff training.....	28	64.35
2.2.6 R&D expenditure by businesses.....	77	0.54
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	90	52.30
2.3.2 Publication and use of open data.....	38	38.35
2.3.3 ICT use and government efficiency.....	28	63.27
2.3.4 R&D expenditure by governments and higher education.....	75	17.79

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	79	46.15
3.1.2 Software piracy rate.....	93	8.11
3.1.3 Secure Internet servers.....	61	61.06
3.1.4 Cybersecurity.....	43	83.00
3.1.5 Online trust and safety.....	3	93.00
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	75	49.84
3.2.2 Ease of doing business.....	66	69.60
3.2.3 Legal framework's adaptability to digital business models.....	27	62.20
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	41	56.11
3.2.6 ICT regulatory environment.....	90	71.24
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	86	56.69
3.3.2 Socioeconomic gap in use of digital payments.....	97	41.34
3.3.3 Availability of local online content.....	45	62.23
3.3.4 Gender gap in internet use.....	75	46.91
3.3.5 Rural gap in use of digital payments.....	57	69.30
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	40	44.72
4.1.2 High-tech exports.....	56	15.19
4.1.3 PCT patent applications.....	86	0.01
4.1.4 Labour productivity per employee.....	76	15.60
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	75	47.55
4.2.2 Freedom to make life choices.....	36	81.23
4.2.3 Income inequality.....	66	65.53
4.2.4 Healthy life expectancy at birth.....	93	46.89
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	95	75.25
4.3.2 Pollution.....	42	88.89
4.3.3 Road safety.....	48	70.31
4.3.4 Reading proficiency in schools.....	42	66.42
4.3.5 Maths proficiency in schools.....	62	15.93
4.3.6 Use of clean fuels and technology.....	87	66.67

# Iran (Islamic Republic of)

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>80</b>	<b>43.66</b>
<b>A. Technology pillar</b> .....	<b>84</b>	<b>35.71</b>
1st sub-pillar: Access.....	82	52.10
2nd sub-pillar: Content.....	85	32.85
3rd sub-pillar: Future Technologies.....	96	22.17
<b>B. People pillar</b> .....	<b>76</b>	<b>39.26</b>
1st sub-pillar: Individuals .....	83	48.86
2nd sub-pillar: Businesses .....	91	21.85
3rd sub-pillar: Governments .....	55	47.09
<b>C. Governance pillar</b> .....	<b>75</b>	<b>55.75</b>
1st sub-pillar: Trust .....	80	49.17
2nd sub-pillar: Regulation.....	82	57.32
3rd sub-pillar: Inclusion.....	69	60.75
<b>D. Impact pillar</b> .....	<b>89</b>	<b>43.93</b>
1st sub-pillar: Economy .....	50	24.45
2nd sub-pillar: Quality of Life .....	104	40.92
3rd sub-pillar: SDG Contribution.....	80	66.42



## The Network Readiness Index in detail

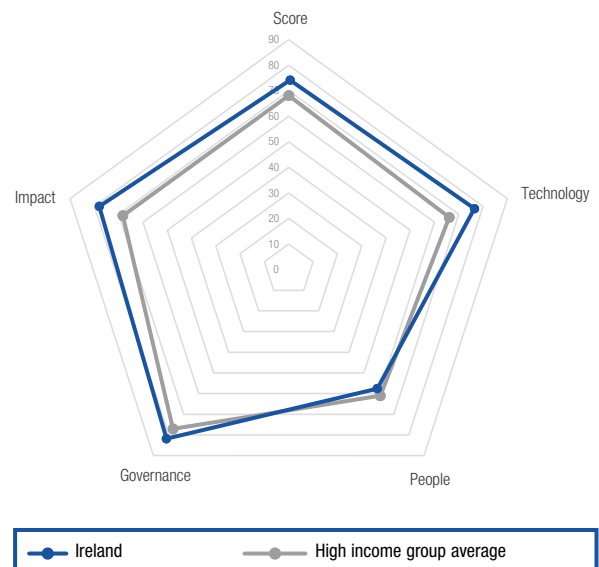
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	55	67.55
1.1.2 Handset prices.....	83	37.40
1.1.3 Households with internet access.....	47	78.19
1.1.4 4G mobile network coverage.....	70	88.02
1.1.5 Fixed-broadband subscriptions.....	89	20.27
1.1.6 International Internet bandwidth.....	87	63.12
1.1.7 Internet access in schools.....	59	10.18
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	100	38.06
1.2.3 Intellectual property receipts.....	82	0.08
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	97	36.16
1.3.2 Company investment in emerging technology.....	96	21.65
1.3.3 Government procurement of advanced technology products ..	44	46.10
1.3.4 ICT PCT patent applications.....	68	1.71
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	65	0.12
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	65	67.00
2.1.2 Active mobile-broadband subscriptions.....	75	25.49
2.1.3 Use of virtual social networks.....	56	56.34
2.1.4 Tertiary enrolment.....	29	50.68
2.1.5 Adult literacy rate.....	71	77.63
2.1.6 ICT skills.....	56	16.00
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	n/a	n/a
2.2.2 Internet shopping.....	41	32.95
2.2.3 Professionals.....	62	27.32
2.2.4 Technicians and associate professionals.....	83	23.90
2.2.5 Extent of staff training.....	110	23.33
2.2.6 R&D expenditure by businesses.....	65	1.74
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	85	59.23
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	49	49.77
2.3.4 R&D expenditure by governments and higher education.....	51	32.28

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	101	37.52
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	66	52.92
3.1.4 Cybersecurity.....	63	68.20
3.1.5 Online trust and safety.....	80	38.05
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	118	22.86
3.2.2 Ease of doing business.....	103	50.08
3.2.3 Legal framework's adaptability to digital business models....	59	44.43
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	61	44.31
3.2.6 ICT regulatory environment.....	70	82.24
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	97	46.50
3.3.2 Socioeconomic gap in use of digital payments.....	18	95.17
3.3.3 Availability of local online content.....	93	34.54
3.3.4 Gender gap in internet use.....	73	48.78
3.3.5 Rural gap in use of digital payments.....	11	78.75
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	19	57.67
4.1.2 High-tech exports.....	102	2.53
4.1.3 PCT patent applications.....	72	0.21
4.1.4 Labour productivity per employee.....	46	37.38
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	110	25.43
4.2.2 Freedom to make life choices.....	115	17.30
4.2.3 Income inequality.....	74	60.53
4.2.4 Healthy life expectancy at birth.....	77	60.44
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	78	89.23
4.3.2 Pollution.....	97	66.86
4.3.3 Road safety.....	87	44.38
4.3.4 Reading proficiency in schools.....	45	66.18
4.3.5 Maths proficiency in schools.....	56	31.85
4.3.6 Use of clean fuels and technology.....	1	100.00



# Ireland

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>19</b>	<b>73.29</b>
<b>A. Technology pillar.....</b>	<b>12</b>	<b>75.43</b>
1st sub-pillar: Access.....	11	87.49
2nd sub-pillar: Content.....	4	82.65
3rd sub-pillar: Future Technologies.....	20	56.14
<b>B. People pillar.....</b>	<b>28</b>	<b>57.76</b>
1st sub-pillar: Individuals .....	46	60.02
2nd sub-pillar: Businesses .....	21	59.58
3rd sub-pillar: Governments .....	41	53.69
<b>C. Governance pillar .....</b>	<b>17</b>	<b>81.88</b>
1st sub-pillar: Trust .....	16	82.37
2nd sub-pillar: Regulation.....	18	84.00
3rd sub-pillar: Inclusion.....	20	79.29
<b>D. Impact pillar .....</b>	<b>9</b>	<b>78.10</b>
1st sub-pillar: Economy .....	6	58.08
2nd sub-pillar: Quality of Life .....	17	81.38
3rd sub-pillar: SDG Contribution.....	17	94.86



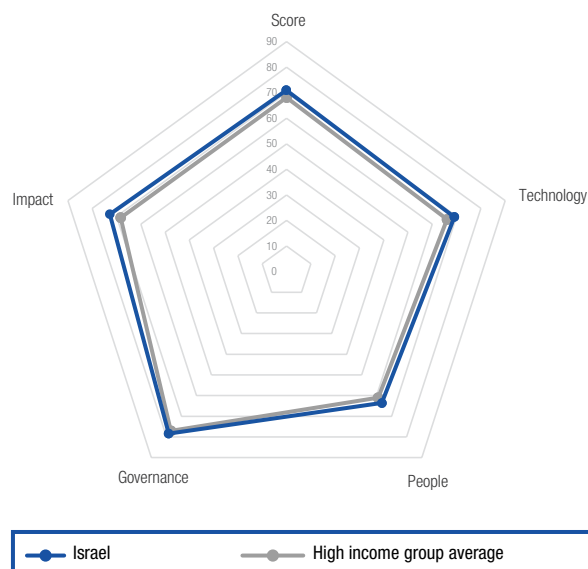
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	4	97.63
1.1.2 Handset prices.....	3	90.84
1.1.3 Households with internet access.....	19	88.36
1.1.4 4G mobile network coverage.....	66	90.00
1.1.5 Fixed-broadband subscriptions.....	38	87.40
1.1.6 International Internet bandwidth.....	44	70.68
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	4	95.04
1.2.3 Intellectual property receipts.....	5	29.39
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	32	73.58
1.3.2 Company investment in emerging technology.....	18	68.03
1.3.3 Government procurement of advanced technology products ..	54	43.45
1.3.4 ICT PCT patent applications.....	11	66.92
1.3.5 Computer software spending.....	2	72.73
1.3.6 Robot density.....	32	12.16
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	28	83.16
2.1.2 Active mobile-broadband subscriptions.....	26	40.06
2.1.3 Use of virtual social networks.....	35	65.70
2.1.4 Tertiary enrolment.....	22	56.68
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	32	54.49
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	17	78.21
2.2.2 Internet shopping.....	13	76.29
2.2.3 Professionals.....	14	60.87
2.2.4 Technicians and associate professionals.....	42	49.37
2.2.5 Extent of staff training.....	15	74.04
2.2.6 R&D expenditure by businesses.....	27	18.72
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	39	80.77
2.3.2 Publication and use of open data.....	26	47.44
2.3.3 ICT use and government efficiency.....	33	59.51
2.3.4 R&D expenditure by governments and higher education.....	59	27.06

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	18	86.73
3.1.2 Software piracy rate.....	19	81.08
3.1.3 Secure Internet servers.....	4	95.16
3.1.4 Cybersecurity.....	40	83.88
3.1.5 Online trust and safety.....	48	64.99
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	15	86.55
3.2.2 Ease of doing business.....	23	87.28
3.2.3 Legal framework's adaptability to digital business models.....	35	56.89
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	23	73.64
3.2.6 ICT regulatory environment.....	2	99.62
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	22	92.36
3.3.2 Socioeconomic gap in use of digital payments.....	24	90.83
3.3.3 Availability of local online content.....	35	67.03
3.3.4 Gender gap in internet use.....	5	71.73
3.3.5 Rural gap in use of digital payments.....	36	74.48
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	7	69.46
4.1.2 High-tech exports.....	10	46.77
4.1.3 PCT patent applications.....	18	27.03
4.1.4 Labour productivity per employee.....	3	89.06
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	17	81.34
4.2.2 Freedom to make life choices.....	46	77.08
4.2.3 Income inequality.....	24	82.11
4.2.4 Healthy life expectancy at birth.....	19	84.98
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	66	92.51
4.3.2 Pollution.....	11	97.15
4.3.3 Road safety.....	8	95.62
4.3.4 Reading proficiency in schools.....	9	98.46
4.3.5 Maths proficiency in schools.....	9	85.39
4.3.6 Use of clean fuels and technology.....	1	100.00

# Israel

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>22</b>	<b>70.86</b>
<b>A. Technology pillar</b> .....	<b>22</b>	<b>69.06</b>
1st sub-pillar: Access.....	53	71.86
2nd sub-pillar: Content.....	20	70.57
3rd sub-pillar: Future Technologies.....	13	64.75
<b>B. People pillar</b> .....	<b>22</b>	<b>63.55</b>
1st sub-pillar: Individuals .....	42	60.51
2nd sub-pillar: Businesses .....	12	67.51
3rd sub-pillar: Governments .....	26	62.61
<b>C. Governance pillar</b> .....	<b>23</b>	<b>78.29</b>
1st sub-pillar: Trust .....	23	78.24
2nd sub-pillar: Regulation.....	24	79.30
3rd sub-pillar: Inclusion.....	26	77.33
<b>D. Impact pillar</b> .....	<b>18</b>	<b>72.55</b>
1st sub-pillar: Economy .....	12	54.00
2nd sub-pillar: Quality of Life .....	39	69.34
3rd sub-pillar: SDG Contribution.....	18	94.30



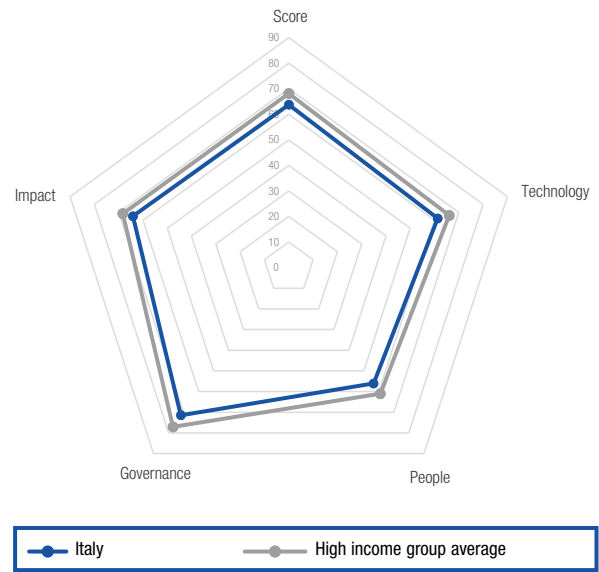
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	13	88.73
1.1.2 Handset prices.....	30	64.37
1.1.3 Households with internet access.....	56	72.33
1.1.4 4G mobile network coverage.....	76	82.00
1.1.5 Fixed-broadband subscriptions.....	76	42.00
1.1.6 International Internet bandwidth.....	60	68.65
1.1.7 Internet access in schools.....	33	84.94
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	8	90.94
1.2.3 Intellectual property receipts.....	14	11.11
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	4	96.93
1.3.2 Company investment in emerging technology.....	2	95.89
1.3.3 Government procurement of advanced technology products ..	11	71.91
1.3.4 ICT PCT patent applications.....	5	82.82
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	30	13.65
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	33	79.89
2.1.2 Active mobile-broadband subscriptions.....	24	41.04
2.1.3 Use of virtual social networks.....	15	75.05
2.1.4 Tertiary enrolment.....	41	46.05
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	41	63.09
2.2.2 Internet shopping.....	33	51.57
2.2.3 Professionals.....	7	67.04
2.2.4 Technicians and associate professionals.....	33	55.91
2.2.5 Extent of staff training.....	22	67.48
2.2.6 R&D expenditure by businesses.....	1	100.00
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	39	80.77
2.3.2 Publication and use of open data.....	28	46.26
2.3.3 ICT use and government efficiency.....	21	69.73
2.3.4 R&D expenditure by governments and higher education.....	25	53.69

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	29	76.00
3.1.2 Software piracy rate.....	17	83.78
3.1.3 Secure Internet servers.....	38	78.24
3.1.4 Cybersecurity.....	41	83.77
3.1.5 Online trust and safety.....	38	69.41
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	24	78.89
3.2.2 Ease of doing business.....	34	82.15
3.2.3 Legal framework's adaptability to digital business models.....	9	83.93
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	36	60.72
3.2.6 ICT regulatory environment.....	93	70.08
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	43	80.90
3.3.2 Socioeconomic gap in use of digital payments.....	38	81.31
3.3.3 Availability of local online content.....	2	98.05
3.3.4 Gender gap in internet use.....	46	60.84
3.3.5 Rural gap in use of digital payments.....	66	65.55
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	24	54.12
4.1.2 High-tech exports.....	13	43.26
4.1.3 PCT patent applications.....	5	72.34
4.1.4 Labour productivity per employee.....	32	46.30
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	18	80.61
4.2.2 Freedom to make life choices.....	97	45.40
4.2.3 Income inequality.....	69	63.42
4.2.4 Healthy life expectancy at birth.....	13	87.91
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	1	100.00
4.3.2 Pollution.....	64	84.50
4.3.3 Road safety.....	12	95.31
4.3.4 Reading proficiency in schools.....	20	91.68
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Italy

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>34</b>	<b>63.21</b>
<b>A. Technology pillar.....</b>	<b>33</b>	<b>61.06</b>
1st sub-pillar: Access.....	45	75.63
2nd sub-pillar: Content.....	35	61.17
3rd sub-pillar: Future Technologies.....	31	46.38
<b>B. People pillar.....</b>	<b>31</b>	<b>56.26</b>
1st sub-pillar: Individuals .....	45	60.11
2nd sub-pillar: Businesses .....	28	50.67
3rd sub-pillar: Governments .....	33	57.99
<b>C. Governance pillar .....</b>	<b>36</b>	<b>71.58</b>
1st sub-pillar: Trust .....	43	65.99
2nd sub-pillar: Regulation.....	43	71.05
3rd sub-pillar: Inclusion.....	25	77.70
<b>D. Impact pillar .....</b>	<b>34</b>	<b>63.93</b>
1st sub-pillar: Economy .....	31	35.16
2nd sub-pillar: Quality of Life .....	50	65.45
3rd sub-pillar: SDG Contribution.....	31	91.19



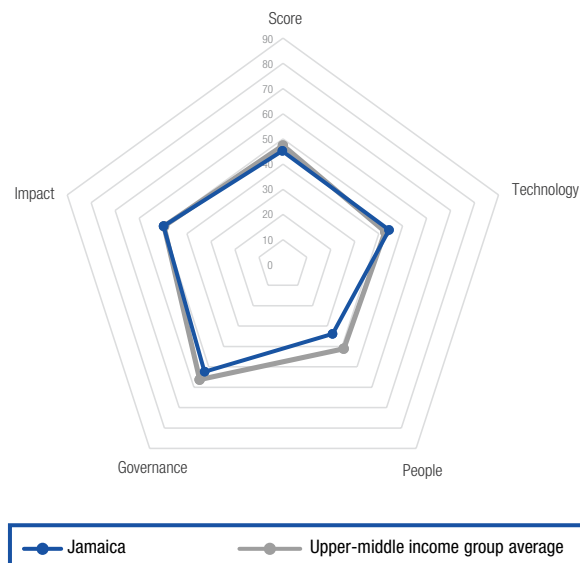
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	15	86.45
1.1.2 Handset prices.....	24	65.86
1.1.3 Households with internet access.....	61	69.81
1.1.4 4G mobile network coverage.....	24	99.00
1.1.5 Fixed-broadband subscriptions.....	54	73.12
1.1.6 International Internet bandwidth.....	79	65.30
1.1.7 Internet access in schools.....	37	69.88
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	30	79.04
1.2.3 Intellectual property receipts.....	21	4.15
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	46	62.26
1.3.2 Company investment in emerging technology.....	60	36.10
1.3.3 Government procurement of advanced technology products ..	82	32.38
1.3.4 ICT PCT patent applications.....	26	33.87
1.3.5 Computer software spending.....	8	54.55
1.3.6 Robot density.....	9	59.11
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	53	71.88
2.1.2 Active mobile-broadband subscriptions.....	36	36.28
2.1.3 Use of virtual social networks.....	49	58.42
2.1.4 Tertiary enrolment.....	43	45.01
2.1.5 Adult literacy rate.....	15	98.73
2.1.6 ICT skills.....	38	50.36
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	33	68.51
2.2.2 Internet shopping.....	17	70.45
2.2.3 Professionals.....	42	38.34
2.2.4 Technicians and associate professionals.....	11	76.96
2.2.5 Extent of staff training.....	95	28.53
2.2.6 R&D expenditure by businesses.....	23	21.21
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	9	94.62
2.3.2 Publication and use of open data.....	20	55.93
2.3.3 ICT use and government efficiency.....	83	36.24
2.3.4 R&D expenditure by governments and higher education.....	35	45.19

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	49	58.96
3.1.2 Software piracy rate.....	32	62.16
3.1.3 Secure Internet servers.....	34	80.32
3.1.4 Cybersecurity.....	27	89.69
3.1.5 Online trust and safety.....	78	38.81
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	40	66.20
3.2.2 Ease of doing business.....	54	75.39
3.2.3 Legal framework's adaptability to digital business models.....	87	33.18
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	47	51.53
3.2.6 ICT regulatory environment.....	1	100.00
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	15	94.91
3.3.2 Socioeconomic gap in use of digital payments.....	22	92.79
3.3.3 Availability of local online content.....	37	66.30
3.3.4 Gender gap in internet use.....	68	54.74
3.3.5 Rural gap in use of digital payments.....	7	79.77
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	22	54.80
4.1.2 High-tech exports.....	58	14.63
4.1.3 PCT patent applications.....	24	17.04
4.1.4 Labour productivity per employee.....	24	54.17
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	27	72.05
4.2.2 Freedom to make life choices.....	108	28.11
4.2.3 Income inequality.....	49	72.63
4.2.4 Healthy life expectancy at birth.....	7	89.01
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	34	98.82
4.3.2 Pollution.....	41	89.22
4.3.3 Road safety.....	17	90.94
4.3.4 Reading proficiency in schools.....	8	98.64
4.3.5 Maths proficiency in schools.....	25	69.50
4.3.6 Use of clean fuels and technology.....	1	100.00

# Jamaica

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>78</b>	<b>45.52</b>
<b>A. Technology pillar</b> .....	<b>64</b>	<b>44.93</b>
1st sub-pillar: Access.....	65	63.56
2nd sub-pillar: Content.....	73	37.52
3rd sub-pillar: Future Technologies.....	51	33.72
<b>B. People pillar</b> .....	<b>87</b>	<b>34.24</b>
1st sub-pillar: Individuals .....	94	36.07
2nd sub-pillar: Businesses .....	60	30.20
3rd sub-pillar: Governments .....	88	36.47
<b>C. Governance pillar</b> .....	<b>83</b>	<b>52.93</b>
1st sub-pillar: Trust .....	92	41.39
2nd sub-pillar: Regulation.....	85	56.58
3rd sub-pillar: Inclusion.....	68	60.82
<b>D. Impact pillar</b> .....	<b>72</b>	<b>49.99</b>
1st sub-pillar: Economy .....	95	9.53
2nd sub-pillar: Quality of Life .....	46	67.28
3rd sub-pillar: SDG Contribution.....	66	73.15



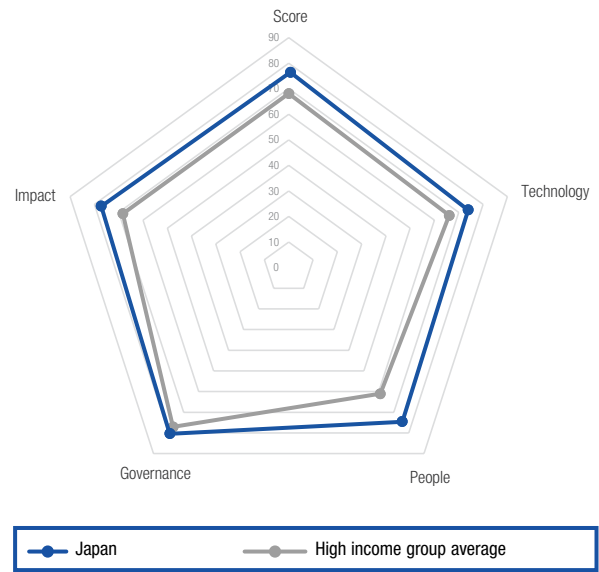
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	73	59.04
1.1.2 Handset prices.....	71	42.46
1.1.3 Households with internet access.....	76	49.74
1.1.4 4G mobile network coverage.....	84	73.00
1.1.5 Fixed-broadband subscriptions.....	60	68.63
1.1.6 International Internet bandwidth.....	67	67.83
1.1.7 Internet access in schools.....	34	84.24
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	89	48.12
1.2.3 Intellectual property receipts.....	57	0.58
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	41	66.30
1.3.2 Company investment in emerging technology.....	70	32.83
1.3.3 Government procurement of advanced technology products ..	80	33.08
1.3.4 ICT PCT patent applications.....	80	0.00
1.3.5 Computer software spending.....	21	36.36
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	86	50.38
2.1.2 Active mobile-broadband subscriptions.....	95	18.52
2.1.3 Use of virtual social networks.....	86	39.71
2.1.4 Tertiary enrolment.....	85	19.37
2.1.5 Adult literacy rate.....	66	81.59
2.1.6 ICT skills.....	58	6.82
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	89	23.11
2.2.2 Internet shopping.....	n/a	n/a
2.2.3 Professionals.....	72	21.78
2.2.4 Technicians and associate professionals.....	84	23.81
2.2.5 Extent of staff training.....	39	52.11
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	112	24.61
2.3.2 Publication and use of open data.....	42	36.95
2.3.3 ICT use and government efficiency.....	53	47.83
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	72	47.95
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	91	42.93
3.1.4 Cybersecurity.....	91	42.54
3.1.5 Online trust and safety.....	83	32.12
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	57	57.55
3.2.2 Ease of doing business.....	64	69.78
3.2.3 Legal framework's adaptability to digital business models....	96	30.68
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	95	28.30
3.2.6 ICT regulatory environment.....	82	78.19
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	112	22.29
3.3.2 Socioeconomic gap in use of digital payments.....	78	57.26
3.3.3 Availability of local online content.....	64	52.02
3.3.4 Gender gap in internet use.....	2	92.90
3.3.5 Rural gap in use of digital payments.....	8	79.63
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	80	23.77
4.1.2 High-tech exports.....	96	3.99
4.1.3 PCT patent applications.....	80	0.05
4.1.4 Labour productivity per employee.....	87	10.33
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	56	59.00
4.2.2 Freedom to make life choices.....	48	76.90
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	52	65.93
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	86	85.46
4.3.2 Pollution.....	32	91.51
4.3.3 Road safety.....	56	65.94
4.3.4 Reading proficiency in schools.....	23	87.07
4.3.5 Maths proficiency in schools.....	69	12.23
4.3.6 Use of clean fuels and technology.....	69	96.67

# Japan

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>12</b>	<b>76.17</b>
<b>A. Technology pillar.....</b>	<b>14</b>	<b>72.87</b>
1st sub-pillar: Access.....	35	79.58
2nd sub-pillar: Content.....	27	66.79
3rd sub-pillar: Future Technologies.....	5	72.23
<b>B. People pillar.....</b>	<b>7</b>	<b>74.24</b>
1st sub-pillar: Individuals .....	8	72.90
2nd sub-pillar: Businesses .....	4	78.69
3rd sub-pillar: Governments .....	18	71.14
<b>C. Governance pillar .....</b>	<b>20</b>	<b>80.05</b>
1st sub-pillar: Trust .....	15	82.76
2nd sub-pillar: Regulation.....	38	74.75
3rd sub-pillar: Inclusion.....	12	82.64
<b>D. Impact pillar .....</b>	<b>10</b>	<b>77.54</b>
1st sub-pillar: Economy .....	4	63.03
2nd sub-pillar: Quality of Life .....	31	72.47
3rd sub-pillar: SDG Contribution.....	5	97.12



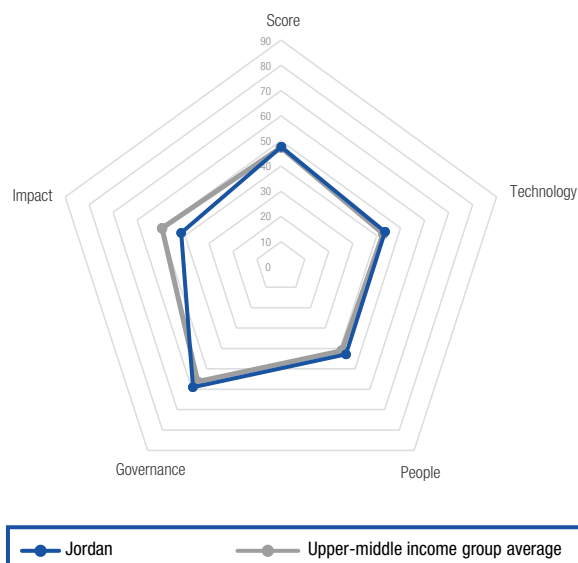
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	81	53.59
1.1.2 Handset prices.....	13	71.50
1.1.3 Households with internet access.....	3	98.43
1.1.4 4G mobile network coverage.....	24	99.00
1.1.5 Fixed-broadband subscriptions.....	32	91.19
1.1.6 International Internet bandwidth.....	82	63.79
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	31	78.28
1.2.3 Intellectual property receipts.....	4	53.61
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	11	91.13
1.3.2 Company investment in emerging technology.....	9	78.30
1.3.3 Government procurement of advanced technology products ..	22	59.11
1.3.4 ICT PCT patent applications.....	6	80.79
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	4	96.78
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	27	83.23
2.1.2 Active mobile-broadband subscriptions.....	2	74.96
2.1.3 Use of virtual social networks.....	47	60.50
2.1.4 Tertiary enrolment.....	n/a	n/a
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	6	92.28
2.2.2 Internet shopping.....	26	58.85
2.2.3 Professionals.....	n/a	n/a
2.2.4 Technicians and associate professionals.....	1	100.00
2.2.5 Extent of staff training.....	11	78.21
2.2.6 R&D expenditure by businesses.....	3	64.09
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	9	94.62
2.3.2 Publication and use of open data.....	8	75.16
2.3.3 ICT use and government efficiency.....	39	57.17
2.3.4 R&D expenditure by governments and higher education.....	21	57.60

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	17	88.32
3.1.2 Software piracy rate.....	2	98.65
3.1.3 Secure Internet servers.....	36	79.90
3.1.4 Cybersecurity.....	15	94.41
3.1.5 Online trust and safety.....	63	52.51
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	22	80.69
3.2.2 Ease of doing business.....	28	84.49
3.2.3 Legal framework's adaptability to digital business models.....	34	57.30
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	18	79.77
3.2.6 ICT regulatory environment.....	90	71.24
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	5	98.08
3.3.2 Socioeconomic gap in use of digital payments.....	14	95.69
3.3.3 Availability of local online content.....	10	88.78
3.3.4 Gender gap in internet use.....	56	58.93
3.3.5 Rural gap in use of digital payments.....	45	71.73
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	6	71.85
4.1.2 High-tech exports.....	24	32.72
4.1.3 PCT patent applications.....	1	100.00
4.1.4 Labour productivity per employee.....	28	47.55
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	62	56.99
4.2.2 Freedom to make life choices.....	80	56.70
4.2.3 Income inequality.....	28	81.32
4.2.4 Healthy life expectancy at birth.....	2	94.87
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	25	99.28
4.3.2 Pollution.....	21	93.55
4.3.3 Road safety.....	8	95.62
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	3	97.17
4.3.6 Use of clean fuels and technology.....	1	100.00

# Jordan

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>73</b>	<b>46.97</b>
<b>A. Technology pillar.....</b>	<b>69</b>	<b>43.14</b>
1st sub-pillar: Access.....	80	52.78
2nd sub-pillar: Content.....	70	39.23
3rd sub-pillar: Future Technologies.....	43	37.40
<b>B. People pillar.....</b>	<b>60</b>	<b>43.49</b>
1st sub-pillar: Individuals .....	33	62.71
2nd sub-pillar: Businesses .....	65	29.65
3rd sub-pillar: Governments .....	85	38.11
<b>C. Governance pillar .....</b>	<b>65</b>	<b>59.53</b>
1st sub-pillar: Trust .....	69	53.08
2nd sub-pillar: Regulation.....	77	59.68
3rd sub-pillar: Inclusion.....	54	65.84
<b>D. Impact pillar .....</b>	<b>94</b>	<b>41.70</b>
1st sub-pillar: Economy .....	78	15.31
2nd sub-pillar: Quality of Life .....	80	57.07
3rd sub-pillar: SDG Contribution.....	96	52.72



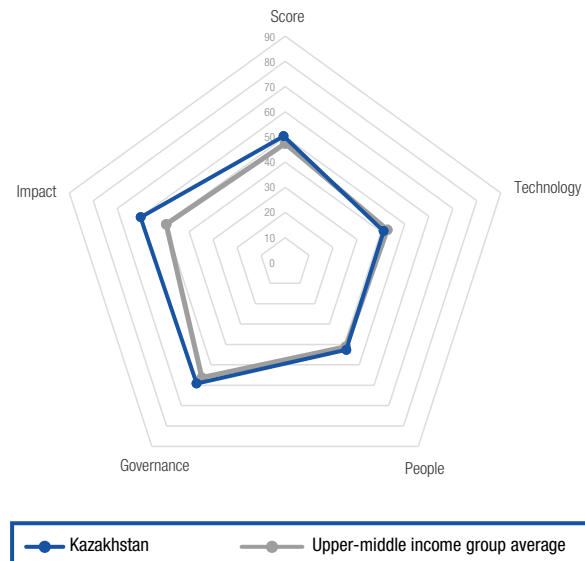
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	103	36.63
1.1.2 Handset prices.....	87	36.15
1.1.3 Households with internet access.....	39	81.73
1.1.4 4G mobile network coverage.....	66	90.00
1.1.5 Fixed-broadband subscriptions.....	75	44.83
1.1.6 International Internet bandwidth.....	69	67.72
1.1.7 Internet access in schools.....	57	12.39
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	65	59.51
1.2.3 Intellectual property receipts.....	39	1.06
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	37	68.30
1.3.2 Company investment in emerging technology.....	46	44.91
1.3.3 Government procurement of advanced technology products ..	47	45.90
1.3.4 ICT PCT patent applications.....	76	0.63
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	68	63.43
2.1.2 Active mobile-broadband subscriptions.....	48	33.45
2.1.3 Use of virtual social networks.....	54	57.38
2.1.4 Tertiary enrolment.....	78	24.74
2.1.5 Adult literacy rate.....	28	97.29
2.1.6 ICT skills.....	1	100.00
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	74	34.53
2.2.2 Internet shopping.....	77	9.08
2.2.3 Professionals.....	n/a	n/a
2.2.4 Technicians and associate professionals.....	n/a	n/a
2.2.5 Extent of staff training.....	55	45.34
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	100	43.85
2.3.2 Publication and use of open data.....	83	12.58
2.3.3 ICT use and government efficiency.....	37	57.90
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	51	58.67
3.1.2 Software piracy rate.....	48	45.95
3.1.3 Secure Internet servers.....	97	39.50
3.1.4 Cybersecurity.....	75	58.88
3.1.5 Online trust and safety.....	51	62.40
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	64	53.25
3.2.2 Ease of doing business.....	68	68.53
3.2.3 Legal framework's adaptability to digital business models....	41	53.03
3.2.4 E-commerce legislation.....	100	50.00
3.2.5 Social safety net protection.....	51	48.16
3.2.6 ICT regulatory environment.....	63	85.14
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	100	41.39
3.3.2 Socioeconomic gap in use of digital payments.....	81	54.62
3.3.3 Availability of local online content.....	34	67.34
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	1	100.00
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	57	33.44
4.1.2 High-tech exports.....	101	3.43
4.1.3 PCT patent applications.....	73	0.12
4.1.4 Labour productivity per employee.....	62	24.24
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	104	32.94
4.2.2 Freedom to make life choices.....	86	54.14
4.2.3 Income inequality.....	41	77.11
4.2.4 Healthy life expectancy at birth.....	60	64.10
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	43	97.54
4.3.2 Pollution.....	95	70.25
4.3.3 Road safety.....	100	32.19
4.3.4 Reading proficiency in schools.....	72	2.04
4.3.5 Maths proficiency in schools.....	65	14.32
4.3.6 Use of clean fuels and technology.....	1	100.00

# Kazakhstan

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>60</b>	<b>50.68</b>
<b>A. Technology pillar.....</b>	<b>74</b>	<b>41.77</b>
1st sub-pillar: Access.....	52	72.46
2nd sub-pillar: Content.....	87	31.03
3rd sub-pillar: Future Technologies.....	98	21.83
<b>B. People pillar.....</b>	<b>61</b>	<b>42.33</b>
1st sub-pillar: Individuals .....	81	50.64
2nd sub-pillar: Businesses .....	55	30.76
3rd sub-pillar: Governments .....	61	45.59
<b>C. Governance pillar .....</b>	<b>66</b>	<b>58.84</b>
1st sub-pillar: Trust .....	79	49.34
2nd sub-pillar: Regulation.....	76	60.01
3rd sub-pillar: Inclusion.....	51	67.17
<b>D. Impact pillar .....</b>	<b>39</b>	<b>59.79</b>
1st sub-pillar: Economy .....	55	23.63
2nd sub-pillar: Quality of Life .....	36	70.04
3rd sub-pillar: SDG Contribution.....	45	85.71



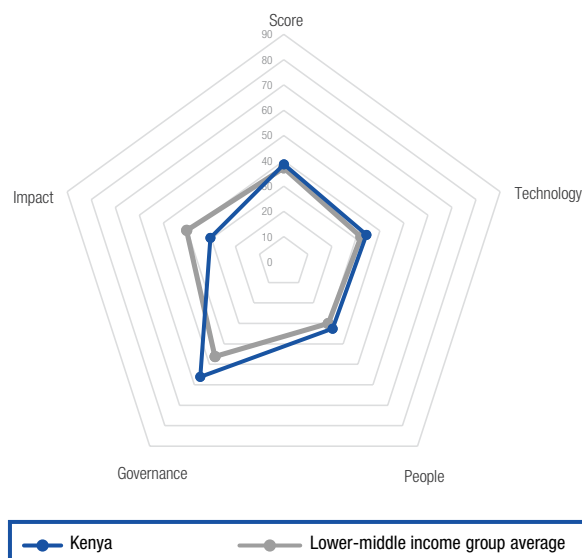
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	5	96.57
1.1.2 Handset prices.....	45	55.88
1.1.3 Households with internet access.....	25	86.76
1.1.4 4G mobile network coverage.....	82	75.30
1.1.5 Fixed-broadband subscriptions.....	70	51.83
1.1.6 International Internet bandwidth.....	61	68.40
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	73	54.20
1.2.3 Intellectual property receipts.....	91	0.01
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	96	36.37
1.3.2 Company investment in emerging technology.....	74	31.71
1.3.3 Government procurement of advanced technology products ..	65	40.08
1.3.4 ICT PCT patent applications.....	75	1.01
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	45	76.91
2.1.2 Active mobile-broadband subscriptions.....	62	29.33
2.1.3 Use of virtual social networks.....	92	37.63
2.1.4 Tertiary enrolment.....	54	39.16
2.1.5 Adult literacy rate.....	7	99.70
2.1.6 ICT skills.....	50	21.11
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	76	32.84
2.2.2 Internet shopping.....	60	18.79
2.2.3 Professionals.....	34	43.68
2.2.4 Technicians and associate professionals.....	39	52.10
2.2.5 Extent of staff training.....	69	35.73
2.2.6 R&D expenditure by businesses.....	70	1.40
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	32	85.39
2.3.2 Publication and use of open data.....	60	26.10
2.3.3 ICT use and government efficiency.....	26	66.13
2.3.4 R&D expenditure by governments and higher education.....	100	4.74

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	90	43.49
3.1.2 Software piracy rate.....	74	20.27
3.1.3 Secure Internet servers.....	60	61.65
3.1.4 Cybersecurity.....	42	83.22
3.1.5 Online trust and safety.....	80	38.05
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	61	54.51
3.2.2 Ease of doing business.....	24	87.25
3.2.3 Legal framework's adaptability to digital business models.....	43	52.42
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	67	41.09
3.2.6 ICT regulatory environment.....	112	49.81
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	42	81.53
3.3.2 Socioeconomic gap in use of digital payments.....	62	68.23
3.3.3 Availability of local online content.....	69	50.80
3.3.4 Gender gap in internet use.....	38	62.14
3.3.5 Rural gap in use of digital payments.....	42	73.16
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	89	17.90
4.1.2 High-tech exports.....	16	42.13
4.1.3 PCT patent applications.....	68	0.32
4.1.4 Labour productivity per employee.....	51	34.16
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	50	61.45
4.2.2 Freedom to make life choices.....	55	72.15
4.2.3 Income inequality.....	9	93.42
4.2.4 Healthy life expectancy at birth.....	89	53.11
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	51	95.71
4.3.2 Pollution.....	20	93.70
4.3.3 Road safety.....	76	53.44
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Kenya

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>93</b>	<b>38.19</b>
<b>A. Technology pillar</b> .....	<b>89</b>	<b>34.02</b>
1st sub-pillar: Access.....	99	37.90
2nd sub-pillar: Content.....	97	24.52
3rd sub-pillar: Future Technologies.....	39	39.64
<b>B. People pillar</b> .....	<b>91</b>	<b>32.50</b>
1st sub-pillar: Individuals .....	106	23.33
2nd sub-pillar: Businesses .....	79	25.47
3rd sub-pillar: Governments .....	48	48.72
<b>C. Governance pillar</b> .....	<b>74</b>	<b>55.89</b>
1st sub-pillar: Trust .....	86	43.64
2nd sub-pillar: Regulation.....	60	64.47
3rd sub-pillar: Inclusion.....	72	59.55
<b>D. Impact pillar</b> .....	<b>108</b>	<b>30.37</b>
1st sub-pillar: Economy .....	110	7.38
2nd sub-pillar: Quality of Life .....	98	49.04
3rd sub-pillar: SDG Contribution.....	112	34.69



## The Network Readiness Index in detail

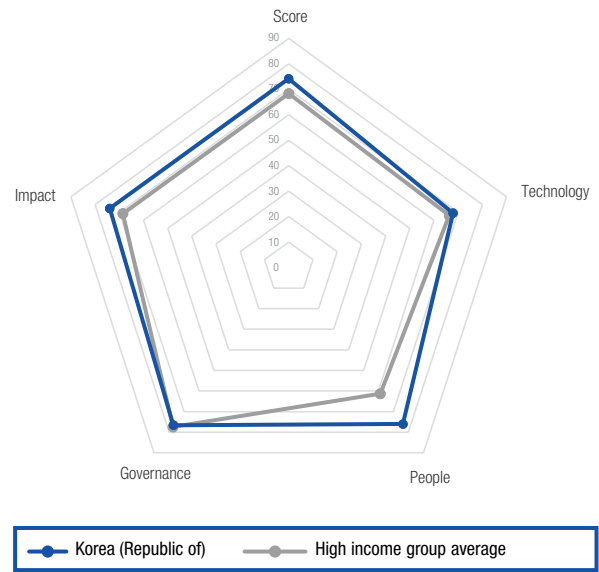
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	92	49.30
1.1.2 Handset prices.....	92	33.14
1.1.3 Households with internet access.....	89	29.21
1.1.4 4G mobile network coverage.....	106	35.00
1.1.5 Fixed-broadband subscriptions.....	113	0.00
1.1.6 International Internet bandwidth.....	6	80.72
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	99	38.55
1.2.3 Intellectual property receipts.....	22	4.02
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	47	61.27
1.3.2 Company investment in emerging technology.....	32	56.74
1.3.3 Government procurement of advanced technology products ..	20	60.93
1.3.4 ICT PCT patent applications.....	73	1.09
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	114	8.93
2.1.2 Active mobile-broadband subscriptions.....	102	14.72
2.1.3 Use of virtual social networks.....	106	13.72
2.1.4 Tertiary enrolment.....	101	7.84
2.1.5 Adult literacy rate.....	73	71.41
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	71	37.26
2.2.2 Internet shopping.....	69	11.83
2.2.3 Professionals.....	n/a	n/a
2.2.4 Technicians and associate professionals.....	n/a	n/a
2.2.5 Extent of staff training.....	42	51.06
2.2.6 R&D expenditure by businesses.....	66	1.72
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	87	58.46
2.3.2 Publication and use of open data.....	35	40.42
2.3.3 ICT use and government efficiency.....	23	67.71
2.3.4 R&D expenditure by governments and higher education.....	56	28.28

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	86	43.96
3.1.2 Software piracy rate.....	74	20.27
3.1.3 Secure Internet servers.....	83	45.89
3.1.4 Cybersecurity.....	45	79.93
3.1.5 Online trust and safety.....	85	28.16
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	86	46.42
3.2.2 Ease of doing business.....	53	76.03
3.2.3 Legal framework's adaptability to digital business models....	32	59.21
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	66	41.55
3.2.6 ICT regulatory environment.....	43	88.61
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	96	47.13
3.3.2 Socioeconomic gap in use of digital payments.....	55	71.74
3.3.3 Availability of local online content.....	76	43.78
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	26	75.56
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	88	18.97
4.1.2 High-tech exports.....	86	6.85
4.1.3 PCT patent applications.....	81	0.04
4.1.4 Labour productivity per employee.....	98	3.64
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	102	33.29
4.2.2 Freedom to make life choices.....	64	67.81
4.2.3 Income inequality.....	76	58.42
4.2.4 Healthy life expectancy at birth.....	100	36.63
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	115	26.11
4.3.2 Pollution.....	85	77.29
4.3.3 Road safety.....	107	21.56
4.3.4 Reading proficiency in schools.....	60	37.78
4.3.5 Maths proficiency in schools.....	52	35.38
4.3.6 Use of clean fuels and technology.....	109	10.00



# Korea (Republic of)

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>17</b>	<b>73.84</b>
<b>A. Technology pillar.....</b>	<b>23</b>	<b>67.93</b>
1st sub-pillar: Access.....	20	84.47
2nd sub-pillar: Content.....	43	53.89
3rd sub-pillar: Future Technologies.....	12	65.44
<b>B. People pillar.....</b>	<b>3</b>	<b>76.43</b>
1st sub-pillar: Individuals .....	10	71.90
2nd sub-pillar: Businesses .....	10	71.20
3rd sub-pillar: Governments .....	1	86.18
<b>C. Governance pillar .....</b>	<b>25</b>	<b>77.07</b>
1st sub-pillar: Trust .....	30	73.75
2nd sub-pillar: Regulation.....	27	77.92
3rd sub-pillar: Inclusion.....	19	79.55
<b>D. Impact pillar .....</b>	<b>14</b>	<b>73.94</b>
1st sub-pillar: Economy .....	2	69.37
2nd sub-pillar: Quality of Life .....	64	61.36
3rd sub-pillar: SDG Contribution.....	32	91.08



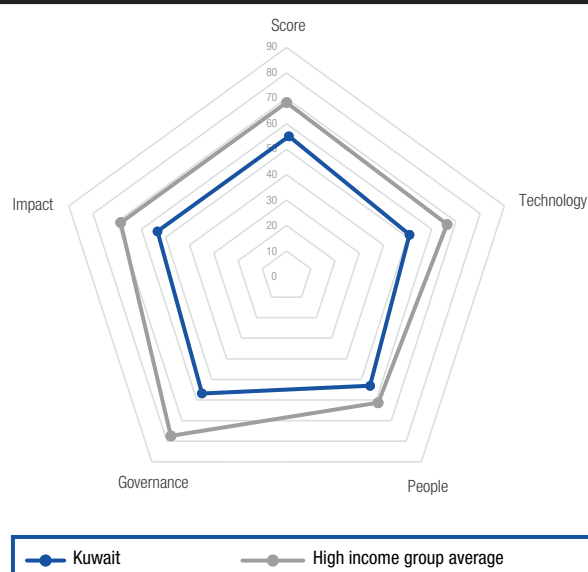
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	71	60.65
1.1.2 Handset prices.....	32	63.16
1.1.3 Households with internet access.....	2	99.44
1.1.4 4G mobile network coverage.....	9	99.90
1.1.5 Fixed-broadband subscriptions.....	1	100.00
1.1.6 International Internet bandwidth.....	64	68.17
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	26	81.69
1.2.3 Intellectual property receipts.....	18	6.90
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	23	79.32
1.3.2 Company investment in emerging technology.....	34	56.05
1.3.3 Government procurement of advanced technology products ..	29	54.28
1.3.4 ICT PCT patent applications.....	3	84.81
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	1	100.00
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	9	95.82
2.1.2 Active mobile-broadband subscriptions.....	20	44.10
2.1.3 Use of virtual social networks.....	5	85.45
2.1.4 Tertiary enrolment.....	3	68.88
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	17	65.25
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	55	55.97
2.2.2 Internet shopping.....	5	92.94
2.2.3 Professionals.....	20	53.08
2.2.4 Technicians and associate professionals.....	13	75.96
2.2.5 Extent of staff training.....	34	57.47
2.2.6 R&D expenditure by businesses.....	2	91.77
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	4	97.70
2.3.2 Publication and use of open data.....	5	81.16
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	9	79.68

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	23	81.53
3.1.2 Software piracy rate.....	20	77.03
3.1.3 Secure Internet servers.....	52	65.12
3.1.4 Cybersecurity.....	17	93.64
3.1.5 Online trust and safety.....	64	51.45
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	30	75.53
3.2.2 Ease of doing business.....	5	95.11
3.2.3 Legal framework's adaptability to digital business models.....	29	61.03
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	44	54.00
3.2.6 ICT regulatory environment.....	72	81.86
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	1	100.00
3.3.2 Socioeconomic gap in use of digital payments.....	21	93.01
3.3.3 Availability of local online content.....	28	75.84
3.3.4 Gender gap in internet use.....	37	62.23
3.3.5 Rural gap in use of digital payments.....	64	66.67
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	3	81.42
4.1.2 High-tech exports.....	5	68.87
4.1.3 PCT patent applications.....	4	80.71
4.1.4 Labour productivity per employee.....	30	46.47
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	60	57.97
4.2.2 Freedom to make life choices.....	116	16.57
4.2.3 Income inequality.....	22	82.63
4.2.4 Healthy life expectancy at birth.....	9	88.28
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	13	99.86
4.3.2 Pollution.....	82	78.73
4.3.3 Road safety.....	44	77.81
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	2	99.01
4.3.6 Use of clean fuels and technology.....	1	100.00

# Kuwait

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>54</b>	<b>53.39</b>
<b>A. Technology pillar</b> .....	<b>55</b>	<b>49.19</b>
1st sub-pillar: Access.....	34	79.82
2nd sub-pillar: Content.....	68	39.85
3rd sub-pillar: Future Technologies.....	74	27.89
<b>B. People pillar</b> .....	<b>38</b>	<b>53.58</b>
1st sub-pillar: Individuals .....	3	75.44
2nd sub-pillar: Businesses .....	59	30.41
3rd sub-pillar: Governments .....	38	54.89
<b>C. Governance pillar</b> .....	<b>71</b>	<b>57.26</b>
1st sub-pillar: Trust .....	57	58.12
2nd sub-pillar: Regulation.....	80	58.27
3rd sub-pillar: Inclusion.....	82	55.39
<b>D. Impact pillar</b> .....	<b>62</b>	<b>53.54</b>
1st sub-pillar: Economy .....	37	30.25
2nd sub-pillar: Quality of Life .....	37	69.78
3rd sub-pillar: SDG Contribution.....	89	60.61



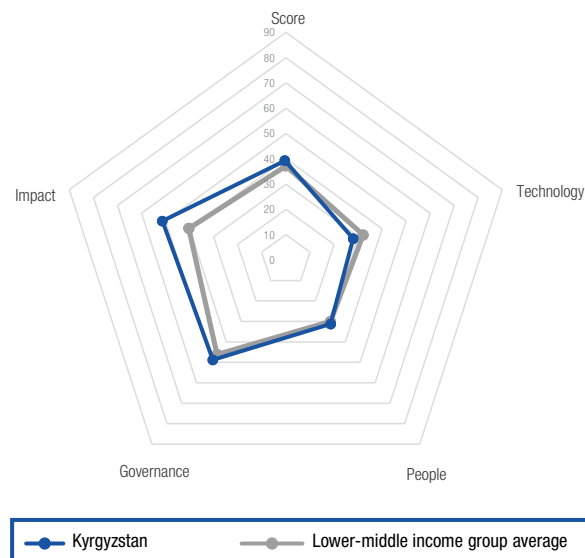
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	45	70.35
1.1.2 Handset prices.....	18	69.57
1.1.3 Households with internet access.....	1	100.00
1.1.4 4G mobile network coverage.....	1	100.00
1.1.5 Fixed-broadband subscriptions.....	62	67.67
1.1.6 International Internet bandwidth.....	39	71.33
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	52	65.90
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	53	56.83
1.3.2 Company investment in emerging technology.....	56	37.71
1.3.3 Government procurement of advanced technology products ..	73	36.41
1.3.4 ICT PCT patent applications.....	80	0.00
1.3.5 Computer software spending.....	21	36.36
1.3.6 Robot density.....	68	0.04
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	2	99.94
2.1.2 Active mobile-broadband subscriptions.....	11	51.17
2.1.3 Use of virtual social networks.....	3	92.72
2.1.4 Tertiary enrolment.....	53	39.43
2.1.5 Adult literacy rate.....	42	93.93
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	n/a	n/a
2.2.2 Internet shopping.....	51	25.89
2.2.3 Professionals.....	64	25.94
2.2.4 Technicians and associate professionals.....	67	32.13
2.2.5 Extent of staff training.....	63	37.69
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	48	76.93
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	49	32.85

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	52	58.14
3.1.2 Software piracy rate.....	52	43.24
3.1.3 Secure Internet servers.....	70	51.36
3.1.4 Cybersecurity.....	68	63.71
3.1.5 Online trust and safety.....	27	74.12
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	69	50.63
3.2.2 Ease of doing business.....	76	65.75
3.2.3 Legal framework's adaptability to digital business models....	91	31.84
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	31	66.17
3.2.6 ICT regulatory environment.....	106	60.23
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	69	64.97
3.3.2 Socioeconomic gap in use of digital payments.....	46	78.29
3.3.3 Availability of local online content.....	50	58.94
3.3.4 Gender gap in internet use.....	17	67.24
3.3.5 Rural gap in use of digital payments.....	116	7.53
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	51	37.25
4.1.2 High-tech exports.....	81	7.80
4.1.3 PCT patent applications.....	63	0.45
4.1.4 Labour productivity per employee.....	8	75.49
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	46	63.25
4.2.2 Freedom to make life choices.....	34	82.34
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	62	63.74
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	1	100.00
4.3.2 Pollution.....	112	41.94
4.3.3 Road safety.....	76	53.44
4.3.4 Reading proficiency in schools.....	50	58.42
4.3.5 Maths proficiency in schools.....	70	9.86
4.3.6 Use of clean fuels and technology.....	1	100.00

# Kyrgyzstan

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>91</b>	<b>39.72</b>
<b>A. Technology pillar.....</b>	<b>101</b>	<b>28.52</b>
1st sub-pillar: Access.....	90	44.24
2nd sub-pillar: Content.....	99	23.70
3rd sub-pillar: Future Technologies.....	111	17.62
<b>B. People pillar.....</b>	<b>94</b>	<b>30.90</b>
1st sub-pillar: Individuals .....	84	44.78
2nd sub-pillar: Businesses .....	92	21.84
3rd sub-pillar: Governments .....	104	26.09
<b>C. Governance pillar .....</b>	<b>93</b>	<b>48.46</b>
1st sub-pillar: Trust .....	109	34.07
2nd sub-pillar: Regulation.....	94	52.91
3rd sub-pillar: Inclusion.....	74	58.42
<b>D. Impact pillar .....</b>	<b>69</b>	<b>50.99</b>
1st sub-pillar: Economy .....	101	8.41
2nd sub-pillar: Quality of Life .....	30	72.63
3rd sub-pillar: SDG Contribution.....	70	71.94



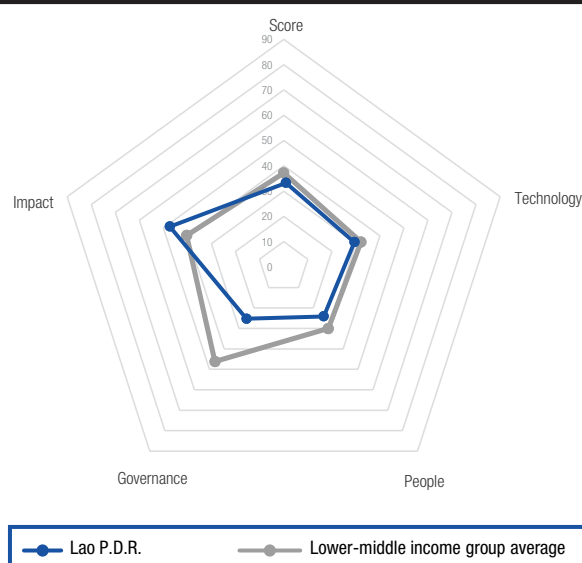
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	109	34.52
1.1.2 Handset prices.....	114	16.43
1.1.3 Households with internet access.....	106	15.83
1.1.4 4G mobile network coverage.....	87	70.00
1.1.5 Fixed-broadband subscriptions.....	63	64.27
1.1.6 International Internet bandwidth.....	73	67.50
1.1.7 Internet access in schools.....	45	41.13
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	93	45.19
1.2.3 Intellectual property receipts.....	64	0.41
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	116	19.19
1.3.2 Company investment in emerging technology.....	110	12.49
1.3.3 Government procurement of advanced technology products ..	89	29.72
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	98	31.38
2.1.2 Active mobile-broadband subscriptions.....	37	36.07
2.1.3 Use of virtual social networks.....	99	27.23
2.1.4 Tertiary enrolment.....	67	29.79
2.1.5 Adult literacy rate.....	12	99.40
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	60	50.11
2.2.2 Internet shopping.....	100	3.62
2.2.3 Professionals.....	70	23.05
2.2.4 Technicians and associate professionals.....	61	33.68
2.2.5 Extent of staff training.....	114	19.79
2.2.6 R&D expenditure by businesses.....	76	0.80
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	81	60.77
2.3.2 Publication and use of open data.....	82	13.24
2.3.3 ICT use and government efficiency.....	99	24.54
2.3.4 R&D expenditure by governments and higher education.....	96	5.80

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	112	32.63
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	88	43.81
3.1.4 Cybersecurity.....	104	25.77
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	92	43.71
3.2.2 Ease of doing business.....	73	66.49
3.2.3 Legal framework's adaptability to digital business models.....	101	27.97
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	87	30.72
3.2.6 ICT regulatory environment.....	87	73.55
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	72	64.33
3.3.2 Socioeconomic gap in use of digital payments.....	59	70.09
3.3.3 Availability of local online content.....	99	29.24
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	54	70.01
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	113	3.47
4.1.2 High-tech exports.....	50	17.07
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	97	4.71
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	77	46.66
4.2.2 Freedom to make life choices.....	5	96.41
4.2.3 Income inequality.....	8	93.95
4.2.4 Healthy life expectancy at birth.....	86	53.48
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	76	89.42
4.3.2 Pollution.....	56	86.01
4.3.3 Road safety.....	66	60.31
4.3.4 Reading proficiency in schools.....	51	57.94
4.3.5 Maths proficiency in schools.....	41	51.30
4.3.6 Use of clean fuels and technology.....	77	86.67

# Lao P.D.R.

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>108</b>	<b>31.88</b>
<b>A. Technology pillar</b> .....	<b>103</b>	<b>28.19</b>
1st sub-pillar: Access.....	107	33.50
2nd sub-pillar: Content.....	110	12.61
3rd sub-pillar: Future Technologies.....	42	38.44
<b>B. People pillar</b> .....	<b>103</b>	<b>25.21</b>
1st sub-pillar: Individuals .....	100	31.31
2nd sub-pillar: Businesses .....	100	17.41
3rd sub-pillar: Governments .....	103	26.91
<b>C. Governance pillar</b> .....	<b>120</b>	<b>26.32</b>
1st sub-pillar: Trust .....	115	26.32
2nd sub-pillar: Regulation.....	114	33.50
3rd sub-pillar: Inclusion.....	119	19.15
<b>D. Impact pillar</b> .....	<b>80</b>	<b>47.82</b>
1st sub-pillar: Economy .....	25	40.40
2nd sub-pillar: Quality of Life .....	81	57.01
3rd sub-pillar: SDG Contribution.....	101	46.05



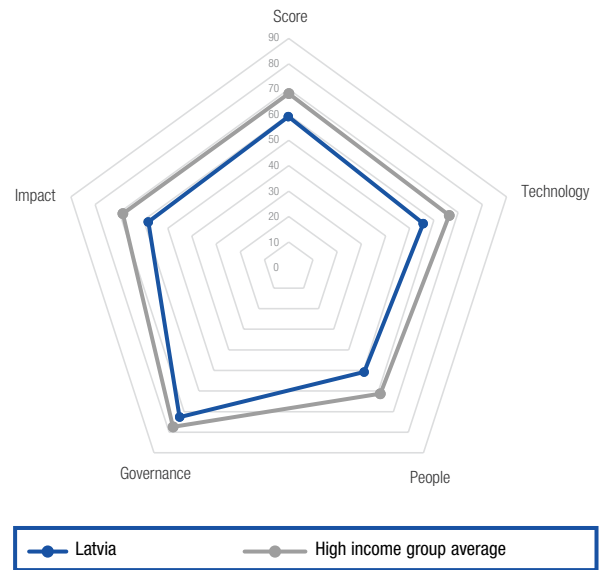
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	85	51.35
1.1.2 Handset prices.....	105	23.15
1.1.3 Households with internet access.....	97	19.40
1.1.4 4G mobile network coverage.....	103	43.00
1.1.5 Fixed-broadband subscriptions.....	103	2.93
1.1.6 International Internet bandwidth.....	98	61.20
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	102	35.36
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	105	29.70
1.3.2 Company investment in emerging technology.....	51	41.87
1.3.3 Government procurement of advanced technology products ..	52	43.75
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	n/a	n/a
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	106	17.48
2.1.2 Active mobile-broadband subscriptions.....	101	14.76
2.1.3 Use of virtual social networks.....	92	37.63
2.1.4 Tertiary enrolment.....	96	10.42
2.1.5 Adult literacy rate.....	72	76.26
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	98	15.97
2.2.2 Internet shopping.....	82	7.11
2.2.3 Professionals.....	74	18.97
2.2.4 Technicians and associate professionals.....	103	10.60
2.2.5 Extent of staff training.....	74	34.42
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	119	7.70
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	55	46.12
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	110	34.12
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	112	25.53
3.1.4 Cybersecurity.....	109	19.30
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	109	33.97
3.2.2 Ease of doing business.....	113	36.42
3.2.3 Legal framework's adaptability to digital business models....	57	44.88
3.2.4 E-commerce legislation.....	110	25.00
3.2.5 Social safety net protection.....	86	30.98
3.2.6 ICT regulatory environment.....	117	29.73
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	118	6.37
3.3.2 Socioeconomic gap in use of digital payments.....	114	21.08
3.3.3 Availability of local online content.....	87	37.20
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	115	11.95
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	91	17.11
4.1.2 High-tech exports.....	6	63.69
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	96	37.53
4.2.2 Freedom to make life choices.....	24	87.55
4.2.3 Income inequality.....	57	70.00
4.2.4 Healthy life expectancy at birth.....	103	32.97
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	97	71.32
4.3.2 Pollution.....	81	78.83
4.3.3 Road safety.....	71	56.56
4.3.4 Reading proficiency in schools.....	68	23.45
4.3.5 Maths proficiency in schools.....	44	46.13
4.3.6 Use of clean fuels and technology.....	111	0.00

# Latvia

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>39</b>	<b>59.31</b>
<b>A. Technology pillar</b> .....	<b>43</b>	<b>55.82</b>
1st sub-pillar: Access.....	40	78.12
2nd sub-pillar: Content.....	32	64.44
3rd sub-pillar: Future Technologies.....	86	24.92
<b>B. People pillar</b> .....	<b>43</b>	<b>50.80</b>
1st sub-pillar: Individuals.....	20	68.41
2nd sub-pillar: Businesses.....	38	42.91
3rd sub-pillar: Governments.....	74	41.09
<b>C. Governance pillar</b> .....	<b>34</b>	<b>72.75</b>
1st sub-pillar: Trust.....	31	73.06
2nd sub-pillar: Regulation.....	40	72.28
3rd sub-pillar: Inclusion.....	39	72.90
<b>D. Impact pillar</b> .....	<b>44</b>	<b>57.86</b>
1st sub-pillar: Economy.....	47	26.30
2nd sub-pillar: Quality of Life.....	88	54.21
3rd sub-pillar: SDG Contribution.....	21	93.08



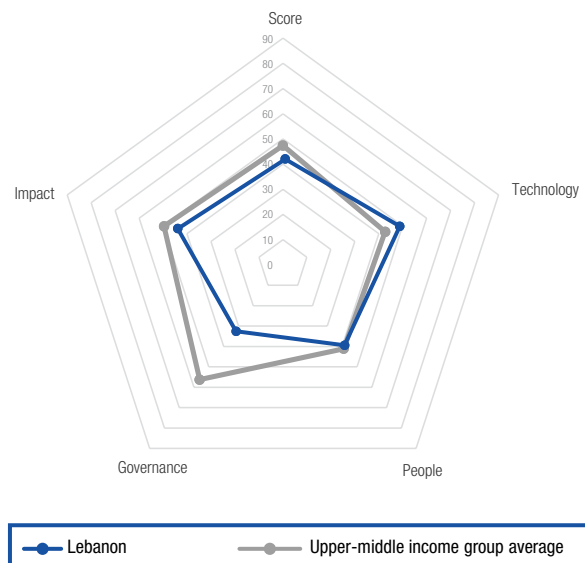
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs.....	57	67.24
1.1.2 Handset prices.....	54	50.09
1.1.3 Households with internet access.....	41	80.34
1.1.4 4G mobile network coverage.....	53	95.00
1.1.5 Fixed-broadband subscriptions.....	47	80.11
1.1.6 International Internet bandwidth.....	24	74.06
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	35	75.77
1.2.3 Intellectual property receipts.....	67	0.25
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	40	67.62
1.3.2 Company investment in emerging technology.....	53	40.19
1.3.3 Government procurement of advanced technology products.....	105	23.56
1.3.4 ICT PCT patent applications.....	53	7.61
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	48	1.45
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	30	82.11
2.1.2 Active mobile-broadband subscriptions.....	12	50.91
2.1.3 Use of virtual social networks.....	69	50.10
2.1.4 Tertiary enrolment.....	9	64.25
2.1.5 Adult literacy rate.....	2	99.88
2.1.6 ICT skills.....	20	63.21
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	52	57.64
2.2.2 Internet shopping.....	34	44.25
2.2.3 Professionals.....	35	43.60
2.2.4 Technicians and associate professionals.....	27	59.66
2.2.5 Extent of staff training.....	49	48.79
2.2.6 R&D expenditure by businesses.....	56	3.54
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	74	63.08
2.3.2 Publication and use of open data.....	55	27.89
2.3.3 ICT use and government efficiency.....	72	40.05
2.3.4 R&D expenditure by governments and higher education.....	48	33.33

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	32	75.16
3.1.2 Software piracy rate.....	40	55.41
3.1.3 Secure Internet servers.....	30	81.76
3.1.4 Cybersecurity.....	45	79.93
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	26	77.62
3.2.2 Ease of doing business.....	18	88.53
3.2.3 Legal framework's adaptability to digital business models.....	100	29.23
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	56	46.20
3.2.6 ICT regulatory environment.....	28	92.09
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	72	64.33
3.3.2 Socioeconomic gap in use of digital payments.....	27	87.48
3.3.3 Availability of local online content.....	31	72.78
3.3.4 Gender gap in internet use.....	9	68.60
3.3.5 Rural gap in use of digital payments.....	49	71.31
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	73	27.30
4.1.2 High-tech exports.....	21	36.63
4.1.3 PCT patent applications.....	33	3.91
4.1.4 Labour productivity per employee.....	47	37.37
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	55	59.24
4.2.2 Freedom to make life choices.....	113	18.43
4.2.3 Income inequality.....	46	75.79
4.2.4 Healthy life expectancy at birth.....	65	63.37
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	60	93.92
4.3.2 Pollution.....	29	92.11
4.3.3 Road safety.....	39	79.38
4.3.4 Reading proficiency in schools.....	1	100.00
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Lebanon

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>86</b>	<b>41.44</b>
<b>A. Technology pillar</b> .....	<b>59</b>	<b>47.76</b>
1st sub-pillar: Access.....	57	70.49
2nd sub-pillar: Content.....	51	50.14
3rd sub-pillar: Future Technologies.....	92	22.66
<b>B. People pillar</b> .....	<b>73</b>	<b>40.01</b>
1st sub-pillar: Individuals .....	34	62.57
2nd sub-pillar: Businesses .....	46	36.78
3rd sub-pillar: Governments .....	112	20.69
<b>C. Governance pillar</b> .....	<b>115</b>	<b>33.18</b>
1st sub-pillar: Trust .....	111	31.31
2nd sub-pillar: Regulation.....	120	25.70
3rd sub-pillar: Inclusion.....	105	42.52
<b>D. Impact pillar</b> .....	<b>85</b>	<b>44.82</b>
1st sub-pillar: Economy .....	91	10.03
2nd sub-pillar: Quality of Life .....	95	51.80
3rd sub-pillar: SDG Contribution.....	67	72.61



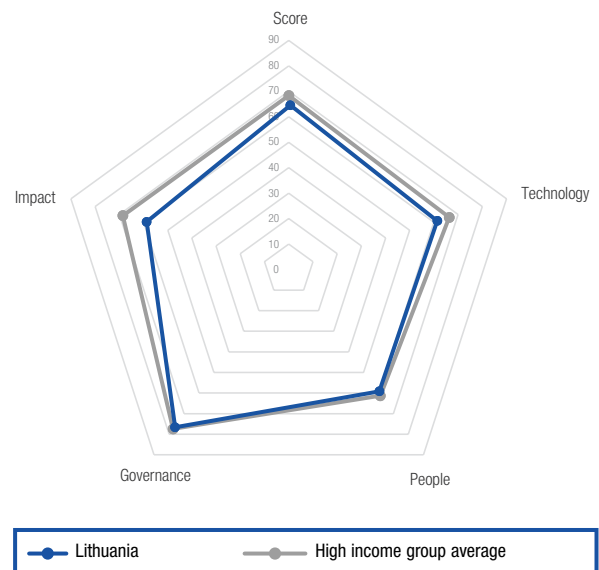
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	94	47.41
1.1.2 Handset prices.....	77	41.05
1.1.3 Households with internet access.....	34	83.32
1.1.4 4G mobile network coverage.....	36	98.20
1.1.5 Fixed-broadband subscriptions.....	n/a	n/a
1.1.6 International Internet bandwidth.....	86	63.15
1.1.7 Internet access in schools.....	31	89.84
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	46	68.16
1.2.3 Intellectual property receipts.....	59	0.53
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	100	35.18
1.3.2 Company investment in emerging technology.....	61	35.91
1.3.3 Government procurement of advanced technology products .....	100	27.11
1.3.4 ICT PCT patent applications.....	55	6.01
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	46	76.10
2.1.2 Active mobile-broadband subscriptions.....	100	16.09
2.1.3 Use of virtual social networks.....	35	65.70
2.1.4 Tertiary enrolment.....	n/a	n/a
2.1.5 Adult literacy rate.....	49	92.40
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	50	58.93
2.2.2 Internet shopping.....	64	17.64
2.2.3 Professionals.....	n/a	n/a
2.2.4 Technicians and associate professionals.....	n/a	n/a
2.2.5 Extent of staff training.....	76	33.78
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	103	41.54
2.3.2 Publication and use of open data.....	94	5.82
2.3.3 ICT use and government efficiency.....	106	14.71
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	103	35.90
3.1.2 Software piracy rate.....	71	27.03
3.1.3 Secure Internet servers.....	87	44.02
3.1.4 Cybersecurity.....	111	18.31
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	91	43.89
3.2.2 Ease of doing business.....	110	42.63
3.2.3 Legal framework's adaptability to digital business models.....	102	27.14
3.2.4 E-commerce legislation.....	117	0.00
3.2.5 Social safety net protection.....	111	16.63
3.2.6 ICT regulatory environment.....	118	23.94
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	102	36.94
3.3.2 Socioeconomic gap in use of digital payments.....	112	30.08
3.3.3 Availability of local online content.....	98	31.68
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	48	71.37
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	78	25.29
4.1.2 High-tech exports.....	93	4.45
4.1.3 PCT patent applications.....	65	0.35
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	85	43.95
4.2.2 Freedom to make life choices.....	114	18.16
4.2.3 Income inequality.....	24	82.11
4.2.4 Healthy life expectancy at birth.....	66	63.00
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	58	94.11
4.3.2 Pollution.....	91	71.85
4.3.3 Road safety.....	80	51.88
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	n/a	n/a

# Lithuania

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>31</b>	<b>64.13</b>
<b>A. Technology pillar.....</b>	<b>34</b>	<b>60.67</b>
1st sub-pillar: Access.....	30	81.30
2nd sub-pillar: Content.....	22	68.49
3rd sub-pillar: Future Technologies.....	57	32.23
<b>B. People pillar.....</b>	<b>25</b>	<b>59.54</b>
1st sub-pillar: Individuals .....	28	64.68
2nd sub-pillar: Businesses .....	29	50.34
3rd sub-pillar: Governments .....	23	63.60
<b>C. Governance pillar .....</b>	<b>26</b>	<b>77.03</b>
1st sub-pillar: Trust .....	24	77.28
2nd sub-pillar: Regulation.....	34	75.87
3rd sub-pillar: Inclusion.....	24	77.93
<b>D. Impact pillar .....</b>	<b>41</b>	<b>59.29</b>
1st sub-pillar: Economy .....	48	25.76
2nd sub-pillar: Quality of Life .....	70	59.39
3rd sub-pillar: SDG Contribution.....	24	92.73



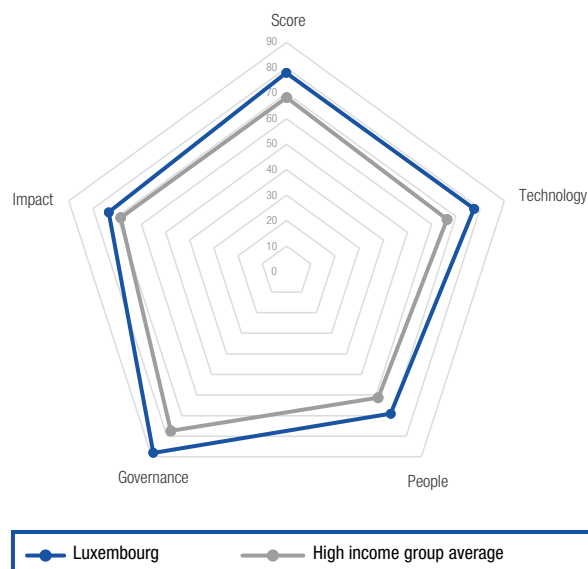
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	19	84.23
1.1.2 Handset prices.....	49	53.94
1.1.3 Households with internet access.....	49	76.93
1.1.4 4G mobile network coverage.....	38	98.00
1.1.5 Fixed-broadband subscriptions.....	21	94.58
1.1.6 International Internet bandwidth.....	9	80.10
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	24	83.19
1.2.3 Intellectual property receipts.....	63	0.45
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	30	74.54
1.3.2 Company investment in emerging technology.....	29	58.52
1.3.3 Government procurement of advanced technology products ..	88	30.56
1.3.4 ICT PCT patent applications.....	42	16.79
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	44	3.88
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	42	77.82
2.1.2 Active mobile-broadband subscriptions.....	28	38.77
2.1.3 Use of virtual social networks.....	49	58.42
2.1.4 Tertiary enrolment.....	24	52.73
2.1.5 Adult literacy rate.....	4	99.75
2.1.6 ICT skills.....	22	60.59
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	22	77.30
2.2.2 Internet shopping.....	32	52.88
2.2.3 Professionals.....	13	60.92
2.2.4 Technicians and associate professionals.....	52	41.41
2.2.5 Extent of staff training.....	29	61.41
2.2.6 R&D expenditure by businesses.....	47	8.13
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	45	77.69
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	31	61.39
2.3.4 R&D expenditure by governments and higher education.....	30	51.73

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	31	75.17
3.1.2 Software piracy rate.....	43	52.70
3.1.3 Secure Internet servers.....	24	83.76
3.1.4 Cybersecurity.....	4	97.48
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	29	75.93
3.2.2 Ease of doing business.....	11	90.90
3.2.3 Legal framework's adaptability to digital business models.....	28	61.16
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	90	29.94
3.2.6 ICT regulatory environment.....	5	97.30
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	51	77.71
3.3.2 Socioeconomic gap in use of digital payments.....	35	82.71
3.3.3 Availability of local online content.....	20	82.46
3.3.4 Gender gap in internet use.....	14	67.59
3.3.5 Rural gap in use of digital payments.....	10	79.18
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	52	35.50
4.1.2 High-tech exports.....	38	22.94
4.1.3 PCT patent applications.....	39	3.03
4.1.4 Labour productivity per employee.....	40	41.57
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	34	67.73
4.2.2 Freedom to make life choices.....	101	39.44
4.2.3 Income inequality.....	60	67.37
4.2.4 Healthy life expectancy at birth.....	66	63.00
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	59	94.00
4.3.2 Pollution.....	22	93.50
4.3.3 Road safety.....	33	83.44
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Luxembourg

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>11</b>	<b>77.46</b>
<b>A. Technology pillar.....</b>	<b>9</b>	<b>77.66</b>
1st sub-pillar: Access.....	1	92.27
2nd sub-pillar: Content.....	14	73.41
3rd sub-pillar: Future Technologies.....	9	67.30
<b>B. People pillar.....</b>	<b>13</b>	<b>69.86</b>
1st sub-pillar: Individuals .....	39	61.60
2nd sub-pillar: Businesses .....	8	72.35
3rd sub-pillar: Governments .....	15	75.61
<b>C. Governance pillar .....</b>	<b>3</b>	<b>88.92</b>
1st sub-pillar: Trust .....	1	94.51
2nd sub-pillar: Regulation.....	8	89.72
3rd sub-pillar: Inclusion.....	14	82.53
<b>D. Impact pillar .....</b>	<b>16</b>	<b>73.39</b>
1st sub-pillar: Economy .....	23	41.37
2nd sub-pillar: Quality of Life .....	15	83.28
3rd sub-pillar: SDG Contribution.....	13	95.51



## The Network Readiness Index in detail

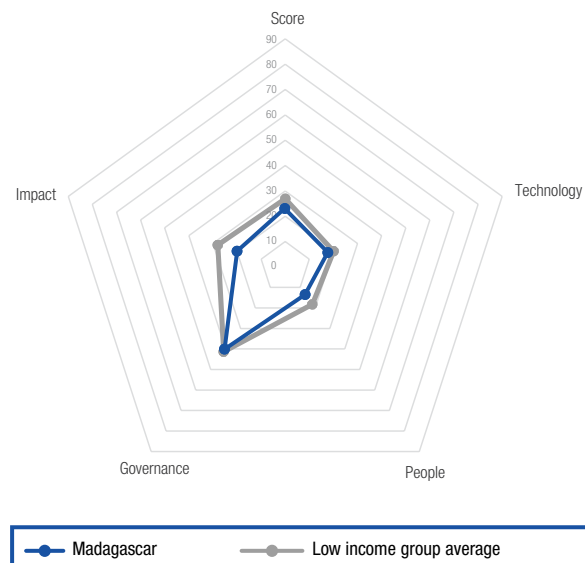
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	3	97.81
1.1.2 Handset prices.....	6	82.46
1.1.3 Households with internet access.....	15	92.52
1.1.4 4G mobile network coverage.....	45	97.00
1.1.5 Fixed-broadband subscriptions.....	44	83.86
1.1.6 International Internet bandwidth.....	1	100.00
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	10	89.20
1.2.3 Intellectual property receipts.....	13	12.24
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	10	91.76
1.3.2 Company investment in emerging technology.....	10	77.85
1.3.3 Government procurement of advanced technology products ..	9	78.29
1.3.4 ICT PCT patent applications.....	8	70.42
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	7	97.12
2.1.2 Active mobile-broadband subscriptions.....	38	36.06
2.1.3 Use of virtual social networks.....	45	61.54
2.1.4 Tertiary enrolment.....	93	13.50
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	3	99.80
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	11	84.09
2.2.2 Internet shopping.....	20	65.55
2.2.3 Professionals.....	1	100.00
2.2.4 Technicians and associate professionals.....	10	77.19
2.2.5 Extent of staff training.....	3	90.11
2.2.6 R&D expenditure by businesses.....	28	17.18
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	22	91.54
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	8	83.08
2.3.4 R&D expenditure by governments and higher education.....	27	52.21

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	10	94.63
3.1.2 Software piracy rate.....	4	97.30
3.1.3 Secure Internet servers.....	10	91.06
3.1.4 Cybersecurity.....	12	95.07
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	11	90.12
3.2.2 Ease of doing business.....	65	69.64
3.2.3 Legal framework's adaptability to digital business models....	3	96.06
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	3	99.11
3.2.6 ICT regulatory environment.....	65	83.40
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	19	92.99
3.3.2 Socioeconomic gap in use of digital payments.....	8	97.26
3.3.3 Availability of local online content.....	18	83.16
3.3.4 Gender gap in internet use.....	35	62.99
3.3.5 Rural gap in use of digital payments.....	20	76.25
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	68	27.92
4.1.2 High-tech exports.....	64	13.20
4.1.3 PCT patent applications.....	12	41.91
4.1.4 Labour productivity per employee.....	4	82.46
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	10	87.18
4.2.2 Freedom to make life choices.....	35	82.28
4.2.3 Income inequality.....	42	76.84
4.2.4 Healthy life expectancy at birth.....	15	86.81
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	40	98.34
4.3.2 Pollution.....	15	94.94
4.3.3 Road safety.....	25	88.75
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00



# Madagascar

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>118</b>	<b>22.73</b>
<b>A. Technology pillar.....</b>	<b>116</b>	<b>17.77</b>
1st sub-pillar: Access.....	117	19.87
2nd sub-pillar: Content.....	112	12.09
3rd sub-pillar: Future Technologies.....	99	21.35
<b>B. People pillar.....</b>	<b>117</b>	<b>13.62</b>
1st sub-pillar: Individuals .....	115	14.93
2nd sub-pillar: Businesses .....	119	9.70
3rd sub-pillar: Governments .....	118	16.22
<b>C. Governance pillar .....</b>	<b>107</b>	<b>40.01</b>
1st sub-pillar: Trust .....	107	34.93
2nd sub-pillar: Regulation.....	103	46.12
3rd sub-pillar: Inclusion.....	109	38.98
<b>D. Impact pillar .....</b>	<b>121</b>	<b>19.54</b>
1st sub-pillar: Economy .....	120	1.92
2nd sub-pillar: Quality of Life .....	119	28.63
3rd sub-pillar: SDG Contribution.....	117	28.06



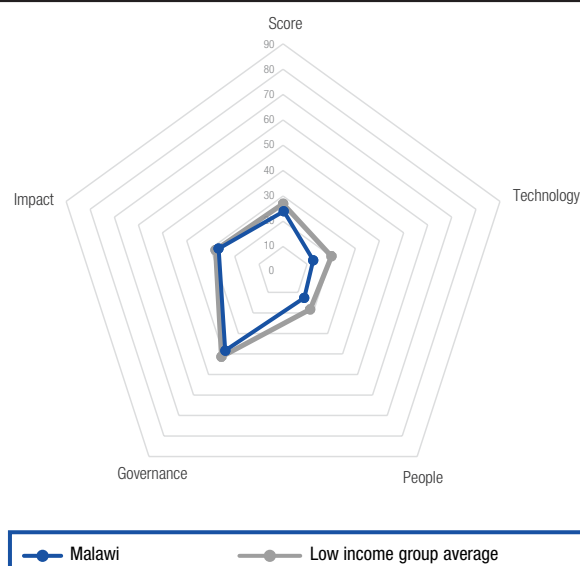
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	119	7.62
1.1.2 Handset prices.....	103	23.56
1.1.3 Households with internet access.....	118	2.06
1.1.4 4G mobile network coverage.....	114	25.00
1.1.5 Fixed-broadband subscriptions.....	84	27.87
1.1.6 International Internet bandwidth.....	110	53.01
1.1.7 Internet access in schools.....	65	0.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	108	29.14
1.2.3 Intellectual property receipts.....	60	0.51
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	107	28.84
1.3.2 Company investment in emerging technology.....	82	28.28
1.3.3 Government procurement of advanced technology products ..	92	28.29
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	121	0.00
2.1.2 Active mobile-broadband subscriptions.....	118	3.94
2.1.3 Use of virtual social networks.....	111	6.44
2.1.4 Tertiary enrolment.....	111	3.28
2.1.5 Adult literacy rate.....	82	60.98
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	100	14.15
2.2.2 Internet shopping.....	112	1.24
2.2.3 Professionals.....	112	3.26
2.2.4 Technicians and associate professionals.....	115	2.77
2.2.5 Extent of staff training.....	98	27.09
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	113	23.08
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	98	25.57
2.3.4 R&D expenditure by governments and higher education.....	105	0.00

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	106	34.77
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	118	13.70
3.1.4 Cybersecurity.....	108	19.41
3.1.5 Online trust and safety.....	30	71.84
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	107	35.26
3.2.2 Ease of doing business.....	116	30.94
3.2.3 Legal framework's adaptability to digital business models.....	99	29.52
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	113	13.24
3.2.6 ICT regulatory environment.....	99	67.76
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	110	23.56
3.3.2 Socioeconomic gap in use of digital payments.....	75	58.79
3.3.3 Availability of local online content.....	92	34.85
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	106	38.73
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	112	4.24
4.1.2 High-tech exports.....	112	1.06
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	107	0.46
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	112	21.10
4.2.2 Freedom to make life choices.....	120	5.29
4.2.3 Income inequality.....	81	53.68
4.2.4 Healthy life expectancy at birth.....	102	34.43
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	120	10.90
4.3.2 Pollution.....	71	82.27
4.3.3 Road safety.....	108	19.06
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	111	0.00

# Malawi

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>117</b>	<b>22.90</b>
<b>A. Technology pillar</b> .....	<b>120</b>	<b>12.09</b>
1st sub-pillar: Access.....	119	16.37
2nd sub-pillar: Content.....	118	5.40
3rd sub-pillar: Future Technologies.....	116	14.51
<b>B. People pillar</b> .....	<b>118</b>	<b>13.57</b>
1st sub-pillar: Individuals.....	117	10.89
2nd sub-pillar: Businesses.....	107	14.67
3rd sub-pillar: Governments.....	119	15.14
<b>C. Governance pillar</b> .....	<b>109</b>	<b>39.08</b>
1st sub-pillar: Trust.....	94	40.69
2nd sub-pillar: Regulation.....	90	54.10
3rd sub-pillar: Inclusion.....	118	22.44
<b>D. Impact pillar</b> .....	<b>111</b>	<b>26.86</b>
1st sub-pillar: Economy.....	85	12.01
2nd sub-pillar: Quality of Life.....	113	35.82
3rd sub-pillar: SDG Contribution.....	113	32.75



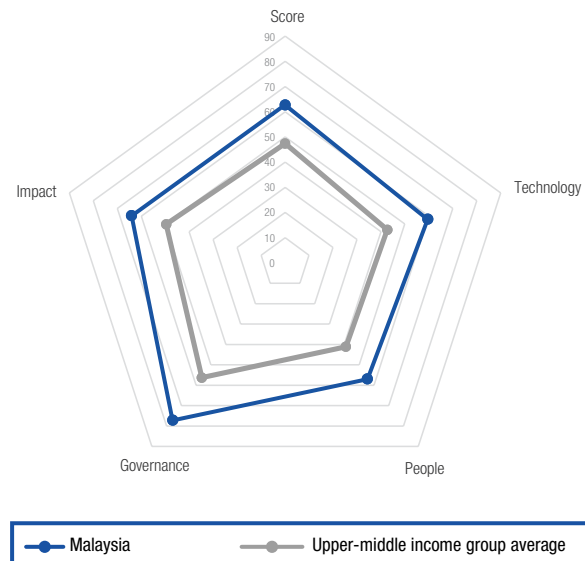
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs.....	118	8.23
1.1.2 Handset prices.....	117	4.10
1.1.3 Households with internet access.....	114	5.12
1.1.4 4G mobile network coverage.....	113	30.00
1.1.5 Fixed-broadband subscriptions.....	107	0.77
1.1.6 International Internet bandwidth.....	115	50.01
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	121	0.00
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	115	20.21
1.3.2 Company investment in emerging technology.....	108	13.00
1.3.3 Government procurement of advanced technology products.....	103	24.81
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	118	4.43
2.1.2 Active mobile-broadband subscriptions.....	112	8.69
2.1.3 Use of virtual social networks.....	121	0.00
2.1.4 Tertiary enrolment.....	115	0.00
2.1.5 Adult literacy rate.....	89	41.35
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	75	34.14
2.2.2 Internet shopping.....	108	2.93
2.2.3 Professionals.....	108	5.71
2.2.4 Technicians and associate professionals.....	116	0.00
2.2.5 Extent of staff training.....	89	30.57
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	115	17.69
2.3.2 Publication and use of open data.....	88	10.51
2.3.3 ICT use and government efficiency.....	104	17.21
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	82	44.66
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	115	23.06
3.1.4 Cybersecurity.....	100	28.07
3.1.5 Online trust and safety.....	43	66.97
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	105	36.64
3.2.2 Ease of doing business.....	93	54.31
3.2.3 Legal framework's adaptability to digital business models.....	104	24.43
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	105	21.21
3.2.6 ICT regulatory environment.....	45	88.03
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	115	9.55
3.3.2 Socioeconomic gap in use of digital payments.....	104	39.05
3.3.3 Availability of local online content.....	115	0.00
3.3.4 Gender gap in internet use.....	85	0.00
3.3.5 Rural gap in use of digital payments.....	71	63.63
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	95	14.23
4.1.2 High-tech exports.....	40	21.80
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	108	0.00
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	120	5.77
4.2.2 Freedom to make life choices.....	72	62.60
4.2.3 Income inequality.....	89	48.16
4.2.4 Healthy life expectancy at birth.....	109	26.74
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	114	31.06
4.3.2 Pollution.....	73	81.48
4.3.3 Road safety.....	116	11.56
4.3.4 Reading proficiency in schools.....	69	21.39
4.3.5 Maths proficiency in schools.....	42	50.98
4.3.6 Use of clean fuels and technology.....	111	0.00

# Malaysia

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>32</b>	<b>63.76</b>
<b>A. Technology pillar.....</b>	<b>36</b>	<b>59.49</b>
1st sub-pillar: Access.....	48	74.63
2nd sub-pillar: Content.....	47	51.83
3rd sub-pillar: Future Technologies.....	24	52.03
<b>B. People pillar.....</b>	<b>32</b>	<b>55.62</b>
1st sub-pillar: Individuals .....	32	62.85
2nd sub-pillar: Businesses .....	42	40.15
3rd sub-pillar: Governments .....	22	63.86
<b>C. Governance pillar .....</b>	<b>29</b>	<b>75.92</b>
1st sub-pillar: Trust .....	33	72.08
2nd sub-pillar: Regulation.....	17	84.18
3rd sub-pillar: Inclusion.....	41	71.49
<b>D. Impact pillar .....</b>	<b>33</b>	<b>64.01</b>
1st sub-pillar: Economy .....	15	49.54
2nd sub-pillar: Quality of Life .....	57	62.59
3rd sub-pillar: SDG Contribution.....	57	79.91



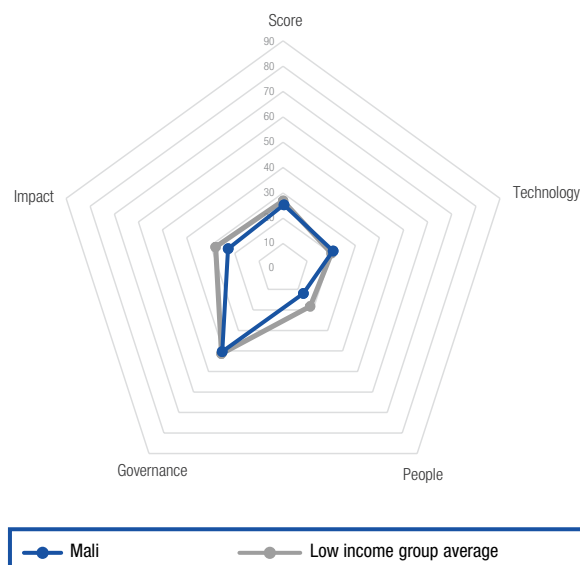
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	53	68.41
1.1.2 Handset prices.....	70	43.54
1.1.3 Households with internet access.....	28	86.11
1.1.4 4G mobile network coverage.....	60	93.00
1.1.5 Fixed-broadband subscriptions.....	64	64.04
1.1.6 International Internet bandwidth.....	50	70.11
1.1.7 Internet access in schools.....	28	97.17
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	47	67.93
1.2.3 Intellectual property receipts.....	61	0.49
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	34	70.39
1.3.2 Company investment in emerging technology.....	12	77.10
1.3.3 Government procurement of advanced technology products ..	4	86.00
1.3.4 ICT PCT patent applications.....	31	27.00
1.3.5 Computer software spending.....	21	36.36
1.3.6 Robot density.....	27	15.32
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	35	79.47
2.1.2 Active mobile-broadband subscriptions.....	18	45.37
2.1.3 Use of virtual social networks.....	10	78.17
2.1.4 Tertiary enrolment.....	65	32.63
2.1.5 Adult literacy rate.....	55	90.33
2.1.6 ICT skills.....	37	51.15
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	97	16.75
2.2.2 Internet shopping.....	35	43.46
2.2.3 Professionals.....	53	31.18
2.2.4 Technicians and associate professionals.....	47	44.40
2.2.5 Extent of staff training.....	4	84.46
2.2.6 R&D expenditure by businesses.....	25	20.64
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	27	87.69
2.3.2 Publication and use of open data.....	54	28.06
2.3.3 ICT use and government efficiency.....	6	83.22
2.3.4 R&D expenditure by governments and higher education.....	22	56.49

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	37	67.55
3.1.2 Software piracy rate.....	45	51.35
3.1.3 Secure Internet servers.....	44	73.81
3.1.4 Cybersecurity.....	8	95.83
3.1.5 Online trust and safety.....	30	71.84
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	39	66.44
3.2.2 Ease of doing business.....	12	90.64
3.2.3 Legal framework's adaptability to digital business models.....	7	85.02
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	21	74.93
3.2.6 ICT regulatory environment.....	45	88.03
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	32	87.26
3.3.2 Socioeconomic gap in use of digital payments.....	49	76.98
3.3.3 Availability of local online content.....	26	79.42
3.3.4 Gender gap in internet use.....	63	56.70
3.3.5 Rural gap in use of digital payments.....	79	57.10
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	21	56.32
4.1.2 High-tech exports.....	1	100.00
4.1.3 PCT patent applications.....	44	2.57
4.1.4 Labour productivity per employee.....	43	39.27
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	76	47.52
4.2.2 Freedom to make life choices.....	40	80.11
4.2.3 Income inequality.....	77	57.89
4.2.4 Healthy life expectancy at birth.....	58	64.84
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	44	97.54
4.3.2 Pollution.....	49	88.37
4.3.3 Road safety.....	97	34.69
4.3.4 Reading proficiency in schools.....	25	86.98
4.3.5 Maths proficiency in schools.....	21	71.90
4.3.6 Use of clean fuels and technology.....	1	100.00

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	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>115</b>	<b>24.29</b>
<b>A. Technology pillar</b> .....	<b>112</b>	<b>20.24</b>
1st sub-pillar: Access.....	116	21.39
2nd sub-pillar: Content.....	113	11.62
3rd sub-pillar: Future Technologies.....	77	27.70
<b>B. People pillar</b> .....	<b>120</b>	<b>12.94</b>
1st sub-pillar: Individuals .....	121	4.51
2nd sub-pillar: Businesses .....	104	15.40
3rd sub-pillar: Governments .....	115	18.91
<b>C. Governance pillar</b> .....	<b>105</b>	<b>41.04</b>
1st sub-pillar: Trust .....	108	34.74
2nd sub-pillar: Regulation.....	99	47.98
3rd sub-pillar: Inclusion.....	107	40.39
<b>D. Impact pillar</b> .....	<b>118</b>	<b>22.94</b>
1st sub-pillar: Economy .....	118	2.49
2nd sub-pillar: Quality of Life .....	108	40.53
3rd sub-pillar: SDG Contribution.....	118	25.78



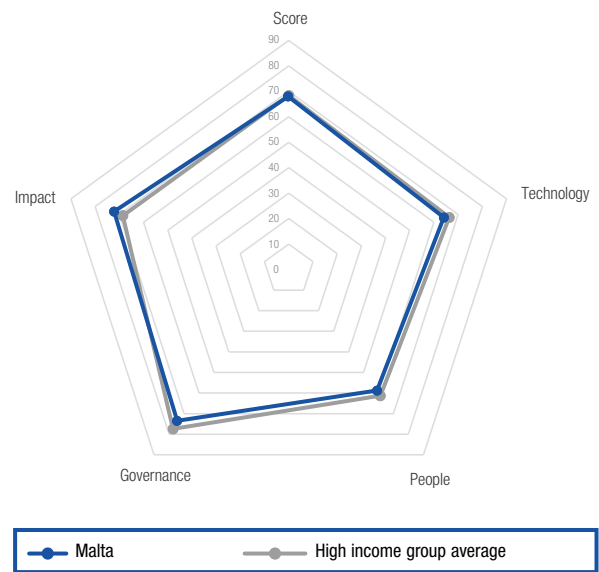
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	117	18.92
1.1.2 Handset prices.....	116	7.48
1.1.3 Households with internet access.....	110	11.84
1.1.4 4G mobile network coverage.....	111	31.00
1.1.5 Fixed-broadband subscriptions.....	98	6.25
1.1.6 International Internet bandwidth.....	111	52.87
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	105	32.88
1.2.3 Intellectual property receipts.....	94	0.01
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	94	36.53
1.3.2 Company investment in emerging technology.....	84	27.52
1.3.3 Government procurement of advanced technology products ..	41	46.74
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	119	3.56
2.1.2 Active mobile-broadband subscriptions.....	110	9.95
2.1.3 Use of virtual social networks.....	112	5.61
2.1.4 Tertiary enrolment.....	110	3.45
2.1.5 Adult literacy rate.....	95	0.00
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	79	30.64
2.2.2 Internet shopping.....	104	3.32
2.2.3 Professionals.....	107	6.14
2.2.4 Technicians and associate professionals.....	113	4.15
2.2.5 Extent of staff training.....	80	32.75
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	114	18.46
2.3.2 Publication and use of open data.....	99	2.46
2.3.3 ICT use and government efficiency.....	69	41.38
2.3.4 R&D expenditure by governments and higher education.....	84	13.35

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	105	35.14
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	117	19.71
3.1.4 Cybersecurity.....	118	7.24
3.1.5 Online trust and safety.....	21	76.86
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	100	39.31
3.2.2 Ease of doing business.....	112	40.17
3.2.3 Legal framework's adaptability to digital business models....	71	39.42
3.2.4 E-commerce legislation.....	100	50.00
3.2.5 Social safety net protection.....	71	38.69
3.2.6 ICT regulatory environment.....	78	80.31
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	114	14.01
3.3.2 Socioeconomic gap in use of digital payments.....	47	78.28
3.3.3 Availability of local online content.....	104	24.43
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	101	44.85
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	n/a	n/a
4.1.2 High-tech exports.....	103	2.35
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	102	2.63
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	106	28.29
4.2.2 Freedom to make life choices.....	94	48.30
4.2.3 Income inequality.....	36	78.95
4.2.4 Healthy life expectancy at birth.....	118	6.59
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	108	45.96
4.3.2 Pollution.....	93	71.28
4.3.3 Road safety.....	95	36.25
4.3.4 Reading proficiency in schools.....	73	0.92
4.3.5 Maths proficiency in schools.....	73	0.29
4.3.6 Use of clean fuels and technology.....	111	0.00

# Malta

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>26</b>	<b>66.94</b>
<b>A. Technology pillar.....</b>	<b>30</b>	<b>63.86</b>
1st sub-pillar: Access.....	31	80.50
2nd sub-pillar: Content.....	24	67.55
3rd sub-pillar: Future Technologies.....	33	43.52
<b>B. People pillar.....</b>	<b>26</b>	<b>58.98</b>
1st sub-pillar: Individuals .....	23	66.86
2nd sub-pillar: Businesses .....	27	52.76
3rd sub-pillar: Governments .....	34	57.33
<b>C. Governance pillar .....</b>	<b>31</b>	<b>73.58</b>
1st sub-pillar: Trust .....	41	67.92
2nd sub-pillar: Regulation.....	26	78.95
3rd sub-pillar: Inclusion.....	36	73.86
<b>D. Impact pillar .....</b>	<b>21</b>	<b>71.32</b>
1st sub-pillar: Economy .....	24	41.18
2nd sub-pillar: Quality of Life .....	11	86.59
3rd sub-pillar: SDG Contribution.....	44	86.20



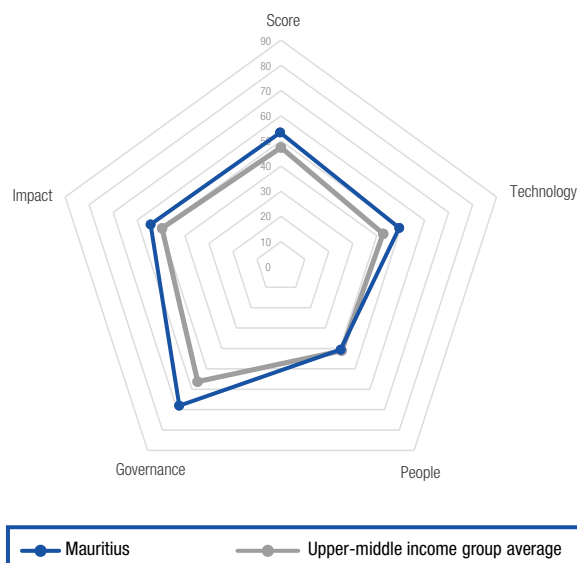
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	66	61.50
1.1.2 Handset prices.....	40	58.24
1.1.3 Households with internet access.....	33	83.34
1.1.4 4G mobile network coverage.....	1	100.00
1.1.5 Fixed-broadband subscriptions.....	2	99.73
1.1.6 International Internet bandwidth.....	8	80.19
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	15	86.35
1.2.3 Intellectual property receipts.....	9	14.03
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	24	77.65
1.3.2 Company investment in emerging technology.....	38	49.75
1.3.3 Government procurement of advanced technology products ..	26	54.64
1.3.4 ICT PCT patent applications.....	28	31.15
1.3.5 Computer software spending.....	21	36.36
1.3.6 Robot density.....	34	11.58
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	34	79.69
2.1.2 Active mobile-broadband subscriptions.....	23	42.84
2.1.3 Use of virtual social networks.....	4	88.57
2.1.4 Tertiary enrolment.....	60	35.19
2.1.5 Adult literacy rate.....	51	91.52
2.1.6 ICT skills.....	19	63.34
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	12	83.99
2.2.2 Internet shopping.....	25	59.74
2.2.3 Professionals.....	30	46.85
2.2.4 Technicians and associate professionals.....	20	65.94
2.2.5 Extent of staff training.....	41	51.36
2.2.6 R&D expenditure by businesses.....	44	8.70
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	36	82.31
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	20	71.88
2.3.4 R&D expenditure by governments and higher education.....	74	17.80

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	27	77.37
3.1.2 Software piracy rate.....	32	62.16
3.1.3 Secure Internet servers.....	31	81.72
3.1.4 Cybersecurity.....	80	50.44
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	21	80.86
3.2.2 Ease of doing business.....	81	63.51
3.2.3 Legal framework's adaptability to digital business models.....	31	60.40
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	24	71.61
3.2.6 ICT regulatory environment.....	5	97.30
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	39	82.80
3.3.2 Socioeconomic gap in use of digital payments.....	34	83.08
3.3.3 Availability of local online content.....	47	61.31
3.3.4 Gender gap in internet use.....	19	67.14
3.3.5 Rural gap in use of digital payments.....	33	74.97
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	44	41.44
4.1.2 High-tech exports.....	7	61.04
4.1.3 PCT patent applications.....	27	9.80
4.1.4 Labour productivity per employee.....	27	52.44
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	19	80.24
4.2.2 Freedom to make life choices.....	13	92.34
4.2.3 Income inequality.....	18	88.42
4.2.4 Healthy life expectancy at birth.....	18	85.35
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	9	99.97
4.3.2 Pollution.....	35	90.70
4.3.3 Road safety.....	22	89.38
4.3.4 Reading proficiency in schools.....	33	73.49
4.3.5 Maths proficiency in schools.....	30	63.69
4.3.6 Use of clean fuels and technology.....	1	100.00

# Mauritius

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>53</b>	<b>53.40</b>
<b>A. Technology pillar</b> .....	<b>52</b>	<b>49.88</b>
1st sub-pillar: Access.....	63	65.29
2nd sub-pillar: Content.....	60	47.78
3rd sub-pillar: Future Technologies.....	44	36.56
<b>B. People pillar</b> .....	<b>70</b>	<b>40.92</b>
1st sub-pillar: Individuals .....	73	51.83
2nd sub-pillar: Businesses .....	68	28.05
3rd sub-pillar: Governments .....	69	42.88
<b>C. Governance pillar</b> .....	<b>41</b>	<b>68.49</b>
1st sub-pillar: Trust .....	32	73.01
2nd sub-pillar: Regulation.....	45	69.53
3rd sub-pillar: Inclusion.....	60	62.93
<b>D. Impact pillar</b> .....	<b>58</b>	<b>54.30</b>
1st sub-pillar: Economy .....	100	8.57
2nd sub-pillar: Quality of Life .....	49	65.89
3rd sub-pillar: SDG Contribution.....	40	88.44



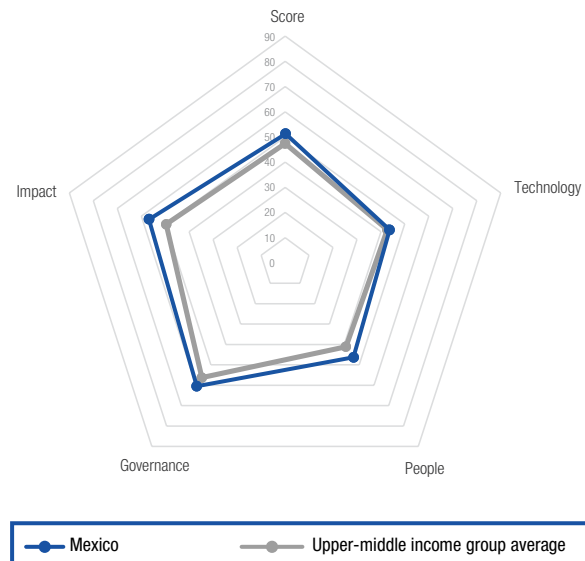
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	68	60.96
1.1.2 Handset prices.....	58	47.59
1.1.3 Households with internet access.....	63	67.71
1.1.4 4G mobile network coverage.....	24	99.00
1.1.5 Fixed-broadband subscriptions.....	45	80.82
1.1.6 International Internet bandwidth.....	21	74.20
1.1.7 Internet access in schools.....	53	26.74
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	63	61.94
1.2.3 Intellectual property receipts.....	76	0.15
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	58	55.07
1.3.2 Company investment in emerging technology.....	78	29.46
1.3.3 Government procurement of advanced technology products ..	53	43.54
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	81	54.31
2.1.2 Active mobile-broadband subscriptions.....	80	24.30
2.1.3 Use of virtual social networks.....	38	64.66
2.1.4 Tertiary enrolment.....	69	29.29
2.1.5 Adult literacy rate.....	62	86.59
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	91	22.46
2.2.2 Internet shopping.....	62	18.46
2.2.3 Professionals.....	68	24.11
2.2.4 Technicians and associate professionals.....	46	48.15
2.2.5 Extent of staff training.....	38	54.68
2.2.6 R&D expenditure by businesses.....	80	0.43
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	63	70.00
2.3.2 Publication and use of open data.....	58	26.30
2.3.3 ICT use and government efficiency.....	48	49.98
2.3.4 R&D expenditure by governments and higher education.....	62	25.26

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	34	71.11
3.1.2 Software piracy rate.....	46	50.00
3.1.3 Secure Internet servers.....	40	76.51
3.1.4 Cybersecurity.....	15	94.41
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	31	74.04
3.2.2 Ease of doing business.....	13	90.63
3.2.3 Legal framework's adaptability to digital business models....	54	45.50
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	48	51.14
3.2.6 ICT regulatory environment.....	75	80.89
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	69	64.97
3.3.2 Socioeconomic gap in use of digital payments.....	53	73.97
3.3.3 Availability of local online content.....	70	50.43
3.3.4 Gender gap in internet use.....	69	53.85
3.3.5 Rural gap in use of digital payments.....	47	71.42
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	98	12.23
4.1.2 High-tech exports.....	91	4.92
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	58	58.83
4.2.2 Freedom to make life choices.....	43	78.35
4.2.3 Income inequality.....	67	64.47
4.2.4 Healthy life expectancy at birth.....	71	61.90
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	48	96.95
4.3.2 Pollution.....	33	91.19
4.3.3 Road safety.....	58	65.62
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Mexico

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>57</b>	<b>51.44</b>
<b>A. Technology pillar</b> .....	<b>68</b>	<b>43.29</b>
1st sub-pillar: Access.....	70	61.22
2nd sub-pillar: Content.....	67	41.37
3rd sub-pillar: Future Technologies.....	80	27.28
<b>B. People pillar</b> .....	<b>55</b>	<b>45.73</b>
1st sub-pillar: Individuals .....	62	55.43
2nd sub-pillar: Businesses .....	89	21.99
3rd sub-pillar: Governments .....	28	59.77
<b>C. Governance pillar</b> .....	<b>63</b>	<b>59.87</b>
1st sub-pillar: Trust .....	59	57.19
2nd sub-pillar: Regulation.....	50	67.60
3rd sub-pillar: Inclusion.....	85	54.83
<b>D. Impact pillar</b> .....	<b>48</b>	<b>56.86</b>
1st sub-pillar: Economy .....	38	30.07
2nd sub-pillar: Quality of Life .....	62	61.72
3rd sub-pillar: SDG Contribution.....	59	78.80



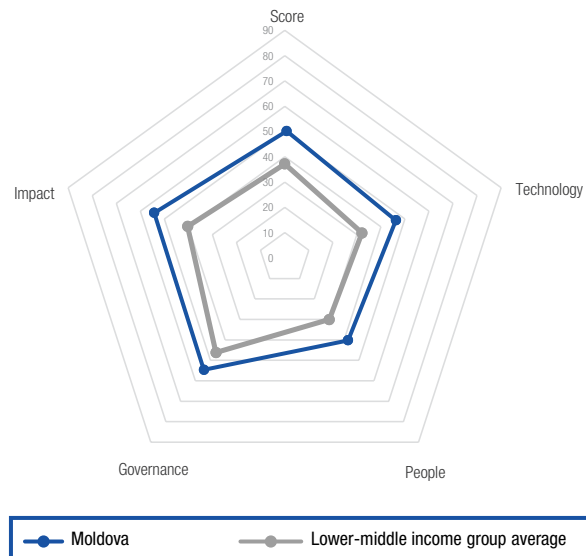
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	79	56.51
1.1.2 Handset prices.....	36	60.23
1.1.3 Households with internet access.....	77	49.71
1.1.4 4G mobile network coverage.....	85	70.91
1.1.5 Fixed-broadband subscriptions.....	40	86.62
1.1.6 International Internet bandwidth.....	77	65.96
1.1.7 Internet access in schools.....	49	38.63
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	71	54.76
1.2.3 Intellectual property receipts.....	92	0.01
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	51	58.81
1.3.2 Company investment in emerging technology.....	64	34.63
1.3.3 Government procurement of advanced technology products ..	77	34.46
1.3.4 ICT PCT patent applications.....	57	5.56
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	33	12.04
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	69	62.29
2.1.2 Active mobile-broadband subscriptions.....	73	26.21
2.1.3 Use of virtual social networks.....	32	66.74
2.1.4 Tertiary enrolment.....	70	29.02
2.1.5 Adult literacy rate.....	46	92.88
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	81	29.66
2.2.2 Internet shopping.....	78	8.94
2.2.3 Professionals.....	69	23.57
2.2.4 Technicians and associate professionals.....	72	30.46
2.2.5 Extent of staff training.....	71	35.57
2.2.6 R&D expenditure by businesses.....	55	3.77
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	22	91.54
2.3.2 Publication and use of open data.....	11	73.45
2.3.3 ICT use and government efficiency.....	54	46.90
2.3.4 R&D expenditure by governments and higher education.....	57	27.18

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	100	37.97
3.1.2 Software piracy rate.....	42	54.05
3.1.3 Secure Internet servers.....	82	46.22
3.1.4 Cybersecurity.....	65	66.89
3.1.5 Online trust and safety.....	15	80.82
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	60	54.74
3.2.2 Ease of doing business.....	56	74.51
3.2.3 Legal framework's adaptability to digital business models.....	50	47.01
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	73	37.82
3.2.6 ICT regulatory environment.....	30	91.51
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	17	93.63
3.3.2 Socioeconomic gap in use of digital payments.....	94	44.00
3.3.3 Availability of local online content.....	62	53.30
3.3.4 Gender gap in internet use.....	51	59.21
3.3.5 Rural gap in use of digital payments.....	111	24.03
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	25	53.10
4.1.2 High-tech exports.....	18	39.87
4.1.3 PCT patent applications.....	58	0.73
4.1.4 Labour productivity per employee.....	57	26.57
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	26	72.74
4.2.2 Freedom to make life choices.....	68	66.60
4.2.3 Income inequality.....	94	38.68
4.2.4 Healthy life expectancy at birth.....	45	68.86
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	61	93.74
4.3.2 Pollution.....	65	83.81
4.3.3 Road safety.....	53	67.50
4.3.4 Reading proficiency in schools.....	40	67.21
4.3.5 Maths proficiency in schools.....	23	70.57
4.3.6 Use of clean fuels and technology.....	75	90.00

# Moldova

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>66</b>	<b>48.93</b>
<b>A. Technology pillar.....</b>	<b>62</b>	<b>45.02</b>
1st sub-pillar: Access.....	56	70.93
2nd sub-pillar: Content.....	58	48.21
3rd sub-pillar: Future Technologies.....	113	15.94
<b>B. People pillar.....</b>	<b>69</b>	<b>40.93</b>
1st sub-pillar: Individuals .....	77	51.44
2nd sub-pillar: Businesses .....	71	27.11
3rd sub-pillar: Governments .....	65	44.24
<b>C. Governance pillar .....</b>	<b>77</b>	<b>55.19</b>
1st sub-pillar: Trust .....	81	47.70
2nd sub-pillar: Regulation.....	81	58.18
3rd sub-pillar: Inclusion.....	71	59.71
<b>D. Impact pillar .....</b>	<b>56</b>	<b>54.58</b>
1st sub-pillar: Economy .....	96	9.44
2nd sub-pillar: Quality of Life .....	42	68.63
3rd sub-pillar: SDG Contribution.....	46	85.65



## The Network Readiness Index in detail

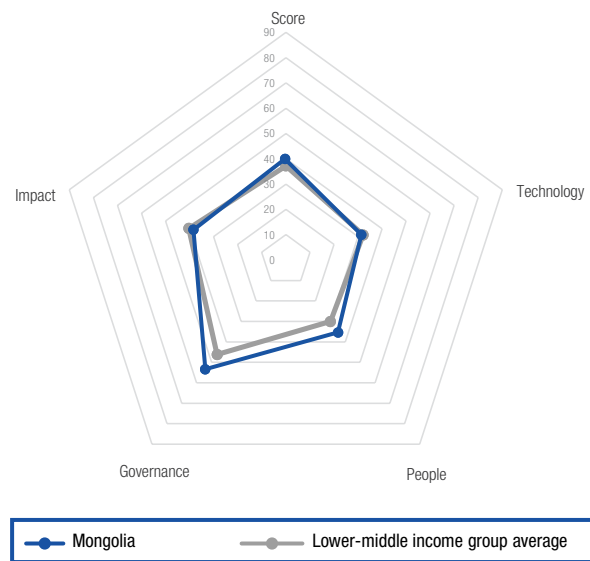
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	74	58.54
1.1.2 Handset prices.....	90	34.50
1.1.3 Households with internet access.....	79	47.23
1.1.4 4G mobile network coverage.....	45	97.00
1.1.5 Fixed-broadband subscriptions.....	18	95.63
1.1.6 International Internet bandwidth.....	29	73.09
1.1.7 Internet access in schools.....	30	90.52
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	70	56.67
1.2.3 Intellectual property receipts.....	45	0.85
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	81	42.28
1.3.2 Company investment in emerging technology.....	109	12.70
1.3.3 Government procurement of advanced technology products .....	113	18.77
1.3.4 ICT PCT patent applications.....	45	12.66
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	66	0.10
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	49	73.81
2.1.2 Active mobile-broadband subscriptions.....	70	27.36
2.1.3 Use of virtual social networks.....	97	28.27
2.1.4 Tertiary enrolment.....	71	28.72
2.1.5 Adult literacy rate.....	14	99.05
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	58	51.92
2.2.2 Internet shopping.....	54	23.53
2.2.3 Professionals.....	46	36.14
2.2.4 Technicians and associate professionals.....	79	25.53
2.2.5 Extent of staff training.....	106	24.07
2.2.6 R&D expenditure by businesses.....	69	1.45
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	53	74.61
2.3.2 Publication and use of open data.....	32	43.68
2.3.3 ICT use and government efficiency.....	80	37.30
2.3.4 R&D expenditure by governments and higher education.....	67	21.35

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	88	43.90
3.1.2 Software piracy rate.....	93	8.11
3.1.3 Secure Internet servers.....	49	68.29
3.1.4 Cybersecurity.....	54	70.50
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	73	50.33
3.2.2 Ease of doing business.....	47	78.11
3.2.3 Legal framework's adaptability to digital business models.....	81	35.83
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	107	20.02
3.2.6 ICT regulatory environment.....	34	89.77
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	37	84.08
3.3.2 Socioeconomic gap in use of digital payments.....	89	49.27
3.3.3 Availability of local online content.....	58	55.30
3.3.4 Gender gap in internet use.....	76	45.86
3.3.5 Rural gap in use of digital payments.....	68	64.02
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	84	20.70
4.1.2 High-tech exports.....	92	4.79
4.1.3 PCT patent applications.....	53	0.95
4.1.4 Labour productivity per employee.....	84	11.34
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	65	54.68
4.2.2 Freedom to make life choices.....	63	68.36
4.2.3 Income inequality.....	4	97.63
4.2.4 Healthy life expectancy at birth.....	85	53.85
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	94	77.16
4.3.2 Pollution.....	48	88.45
4.3.3 Road safety.....	41	78.12
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	66	98.89



# Mongolia

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>90</b>	<b>39.91</b>
<b>A. Technology pillar</b> .....	<b>95</b>	<b>31.90</b>
1st sub-pillar: Access.....	96	39.67
2nd sub-pillar: Content.....	79	34.86
3rd sub-pillar: Future Technologies.....	100	21.16
<b>B. People pillar</b> .....	<b>82</b>	<b>35.79</b>
1st sub-pillar: Individuals .....	71	52.50
2nd sub-pillar: Businesses .....	98	19.49
3rd sub-pillar: Governments .....	91	35.38
<b>C. Governance pillar</b> .....	<b>80</b>	<b>53.78</b>
1st sub-pillar: Trust .....	89	42.63
2nd sub-pillar: Regulation.....	105	44.67
3rd sub-pillar: Inclusion.....	33	74.05
<b>D. Impact pillar</b> .....	<b>97</b>	<b>38.18</b>
1st sub-pillar: Economy .....	114	5.41
2nd sub-pillar: Quality of Life .....	86	54.30
3rd sub-pillar: SDG Contribution.....	94	54.83



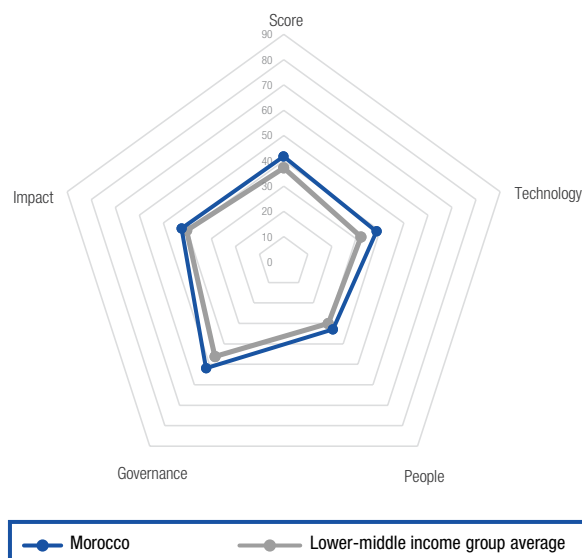
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	86	50.51
1.1.2 Handset prices.....	97	30.61
1.1.3 Households with internet access.....	103	17.84
1.1.4 4G mobile network coverage.....	101	45.00
1.1.5 Fixed-broadband subscriptions.....	110	0.58
1.1.6 International Internet bandwidth.....	92	62.59
1.1.7 Internet access in schools.....	36	70.54
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	62	62.55
1.2.3 Intellectual property receipts.....	78	0.12
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	89	40.66
1.3.2 Company investment in emerging technology.....	85	27.26
1.3.3 Government procurement of advanced technology products ..	97	27.35
1.3.4 ICT PCT patent applications.....	70	1.45
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	108	15.49
2.1.2 Active mobile-broadband subscriptions.....	54	31.85
2.1.3 Use of virtual social networks.....	27	69.85
2.1.4 Tertiary enrolment.....	38	47.70
2.1.5 Adult literacy rate.....	25	97.60
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	86	24.53
2.2.2 Internet shopping.....	76	9.46
2.2.3 Professionals.....	38	41.92
2.2.4 Technicians and associate professionals.....	105	10.10
2.2.5 Extent of staff training.....	86	30.82
2.2.6 R&D expenditure by businesses.....	86	0.10
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	89	55.38
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	73	40.04
2.3.4 R&D expenditure by governments and higher education.....	88	10.71

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	75	47.26
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	57	63.41
3.1.4 Cybersecurity.....	83	48.90
3.1.5 Online trust and safety.....	87	10.96
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	68	50.76
3.2.2 Ease of doing business.....	74	66.40
3.2.3 Legal framework's adaptability to digital business models.....	103	26.15
3.2.4 E-commerce legislation.....	110	25.00
3.2.5 Social safety net protection.....	83	31.77
3.2.6 ICT regulatory environment.....	97	67.96
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	62	70.07
3.3.2 Socioeconomic gap in use of digital payments.....	26	89.54
3.3.3 Availability of local online content.....	96	32.41
3.3.4 Gender gap in internet use.....	1	100.00
3.3.5 Rural gap in use of digital payments.....	12	78.22
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	110	6.79
4.1.2 High-tech exports.....	78	9.40
4.1.3 PCT patent applications.....	83	0.03
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	71	50.14
4.2.2 Freedom to make life choices.....	102	38.66
4.2.3 Income inequality.....	29	80.79
4.2.4 Healthy life expectancy at birth.....	92	47.62
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	102	61.61
4.3.2 Pollution.....	104	60.85
4.3.3 Road safety.....	70	56.88
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	99	40.00

# Morocco

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>87</b>	<b>41.38</b>
<b>A. Technology pillar</b> .....	<b>81</b>	<b>38.45</b>
1st sub-pillar: Access.....	68	61.42
2nd sub-pillar: Content.....	92	26.75
3rd sub-pillar: Future Technologies.....	81	27.19
<b>B. People pillar</b> .....	<b>89</b>	<b>33.01</b>
1st sub-pillar: Individuals .....	87	42.29
2nd sub-pillar: Businesses .....	95	20.92
3rd sub-pillar: Governments .....	90	35.82
<b>C. Governance pillar</b> .....	<b>87</b>	<b>51.84</b>
1st sub-pillar: Trust .....	74	50.98
2nd sub-pillar: Regulation.....	65	63.68
3rd sub-pillar: Inclusion.....	106	40.87
<b>D. Impact pillar</b> .....	<b>93</b>	<b>42.20</b>
1st sub-pillar: Economy .....	80	14.22
2nd sub-pillar: Quality of Life .....	87	54.22
3rd sub-pillar: SDG Contribution.....	91	58.18



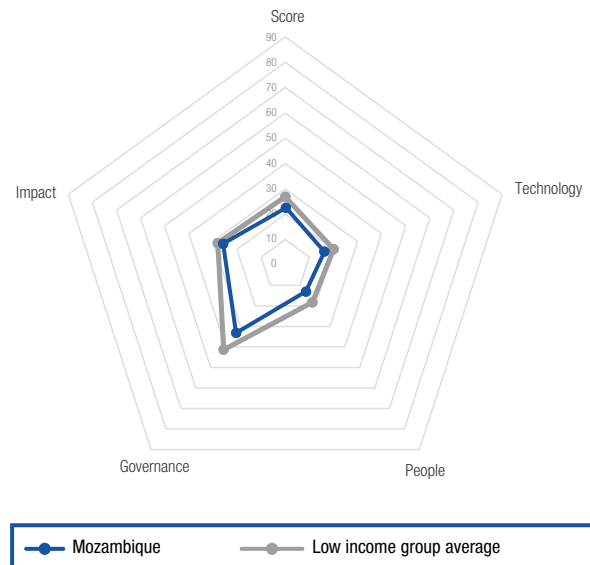
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	97	45.77
1.1.2 Handset prices.....	85	36.55
1.1.3 Households with internet access.....	55	72.44
1.1.4 4G mobile network coverage.....	51	96.00
1.1.5 Fixed-broadband subscriptions.....	81	30.87
1.1.6 International Internet bandwidth.....	56	69.42
1.1.7 Internet access in schools.....	35	78.88
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	86	48.65
1.2.3 Intellectual property receipts.....	80	0.10
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	49	60.43
1.3.2 Company investment in emerging technology.....	79	29.43
1.3.3 Government procurement of advanced technology products ..	66	39.45
1.3.4 ICT PCT patent applications.....	58	5.17
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	50	1.40
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	72	61.22
2.1.2 Active mobile-broadband subscriptions.....	84	21.76
2.1.3 Use of virtual social networks.....	80	45.95
2.1.4 Tertiary enrolment.....	74	25.86
2.1.5 Adult literacy rate.....	85	59.34
2.1.6 ICT skills.....	43	39.61
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	36	65.94
2.2.2 Internet shopping.....	110	2.04
2.2.3 Professionals.....	114	2.58
2.2.4 Technicians and associate professionals.....	91	18.45
2.2.5 Extent of staff training.....	85	31.10
2.2.6 R&D expenditure by businesses.....	51	5.43
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	74	63.08
2.3.2 Publication and use of open data.....	76	16.86
2.3.3 ICT use and government efficiency.....	50	49.41
2.3.4 R&D expenditure by governments and higher education.....	82	13.94

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	66	50.18
3.1.2 Software piracy rate.....	63	33.78
3.1.3 Secure Internet servers.....	76	48.53
3.1.4 Cybersecurity.....	90	44.96
3.1.5 Online trust and safety.....	18	77.47
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	87	46.06
3.2.2 Ease of doing business.....	51	76.32
3.2.3 Legal framework's adaptability to digital business models....	61	43.51
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	97	26.38
3.2.6 ICT regulatory environment.....	34	89.77
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	56	74.52
3.3.2 Socioeconomic gap in use of digital payments.....	111	30.50
3.3.3 Availability of local online content.....	66	51.41
3.3.4 Gender gap in internet use.....	74	47.90
3.3.5 Rural gap in use of digital payments.....	117	0.00
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	54	35.30
4.1.2 High-tech exports.....	85	7.27
4.1.3 PCT patent applications.....	67	0.32
4.1.4 Labour productivity per employee.....	78	13.98
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	94	38.31
4.2.2 Freedom to make life choices.....	81	56.64
4.2.3 Income inequality.....	70	61.84
4.2.4 Healthy life expectancy at birth.....	78	60.07
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	89	83.70
4.3.2 Pollution.....	92	71.49
4.3.3 Road safety.....	85	47.19
4.3.4 Reading proficiency in schools.....	63	32.71
4.3.5 Maths proficiency in schools.....	66	14.00
4.3.6 Use of clean fuels and technology.....	1	100.00

# Mozambique

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>120</b>	<b>22.07</b>
<b>A. Technology pillar</b> .....	<b>118</b>	<b>15.82</b>
1st sub-pillar: Access.....	114	24.25
2nd sub-pillar: Content.....	119	4.14
3rd sub-pillar: Future Technologies.....	106	19.07
<b>B. People pillar</b> .....	<b>119</b>	<b>13.26</b>
1st sub-pillar: Individuals .....	118	10.66
2nd sub-pillar: Businesses .....	121	8.43
3rd sub-pillar: Governments .....	111	20.69
<b>C. Governance pillar</b> .....	<b>114</b>	<b>33.29</b>
1st sub-pillar: Trust .....	104	37.19
2nd sub-pillar: Regulation.....	118	29.74
3rd sub-pillar: Inclusion.....	115	32.95
<b>D. Impact pillar</b> .....	<b>115</b>	<b>25.90</b>
1st sub-pillar: Economy .....	102	8.38
2nd sub-pillar: Quality of Life .....	111	38.56
3rd sub-pillar: SDG Contribution.....	116	30.77



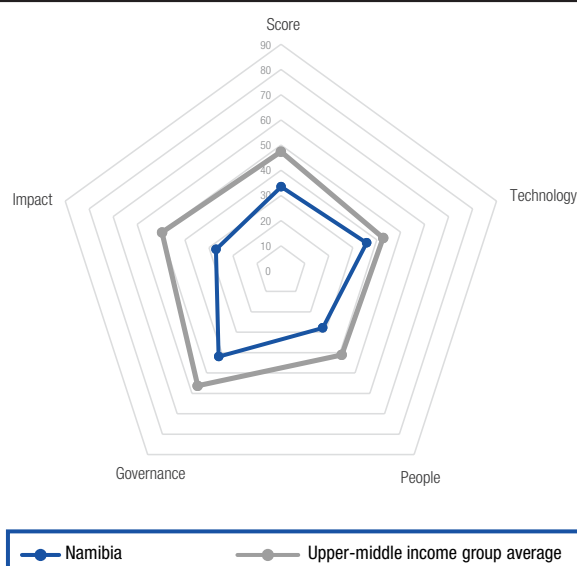
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	108	34.78
1.1.2 Handset prices.....	115	11.68
1.1.3 Households with internet access.....	115	4.83
1.1.4 4G mobile network coverage.....	109	33.00
1.1.5 Fixed-broadband subscriptions.....	108	0.67
1.1.6 International Internet bandwidth.....	101	60.56
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	118	14.19
1.2.3 Intellectual property receipts.....	98	0.00
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	113	25.69
1.3.2 Company investment in emerging technology.....	100	19.74
1.3.3 Government procurement of advanced technology products ..	86	30.86
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	120	0.22
2.1.2 Active mobile-broadband subscriptions.....	119	3.73
2.1.3 Use of virtual social networks.....	114	5.51
2.1.4 Tertiary enrolment.....	107	4.78
2.1.5 Adult literacy rate.....	91	39.04
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	83	28.17
2.2.2 Internet shopping.....	90	5.48
2.2.3 Professionals.....	113	3.23
2.2.4 Technicians and associate professionals.....	111	5.47
2.2.5 Extent of staff training.....	118	8.20
2.2.6 R&D expenditure by businesses.....	89	0.04
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	107	36.15
2.3.2 Publication and use of open data.....	98	3.46
2.3.3 ICT use and government efficiency.....	102	19.31
2.3.4 R&D expenditure by governments and higher education.....	64	23.84

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	114	29.53
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	116	20.74
3.1.4 Cybersecurity.....	114	15.24
3.1.5 Online trust and safety.....	9	83.26
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	106	35.42
3.2.2 Ease of doing business.....	107	43.80
3.2.3 Legal framework's adaptability to digital business models.....	109	20.98
3.2.4 E-commerce legislation.....	117	0.00
3.2.5 Social safety net protection.....	100	24.17
3.2.6 ICT regulatory environment.....	111	54.06
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	102	36.94
3.3.2 Socioeconomic gap in use of digital payments.....	107	35.96
3.3.3 Availability of local online content.....	113	5.10
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	87	53.79
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	97	13.65
4.1.2 High-tech exports.....	70	10.69
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	105	0.80
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	103	33.25
4.2.2 Freedom to make life choices.....	29	85.22
4.2.3 Income inequality.....	104	23.68
4.2.4 Healthy life expectancy at birth.....	116	12.09
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	118	24.19
4.3.2 Pollution.....	63	84.53
4.3.3 Road safety.....	113	14.38
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	111	0.00

# Namibia

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>105</b>	<b>33.34</b>
<b>A. Technology pillar</b> .....	<b>83</b>	<b>35.73</b>
1st sub-pillar: Access.....	101	37.39
2nd sub-pillar: Content.....	82	34.15
3rd sub-pillar: Future Technologies.....	48	35.64
<b>B. People pillar</b> .....	<b>100</b>	<b>28.11</b>
1st sub-pillar: Individuals .....	90	41.64
2nd sub-pillar: Businesses .....	101	17.00
3rd sub-pillar: Governments .....	105	25.70
<b>C. Governance pillar</b> .....	<b>102</b>	<b>42.26</b>
1st sub-pillar: Trust .....	101	38.03
2nd sub-pillar: Regulation.....	108	43.08
3rd sub-pillar: Inclusion.....	98	45.66
<b>D. Impact pillar</b> .....	<b>110</b>	<b>27.26</b>
1st sub-pillar: Economy .....	115	4.76
2nd sub-pillar: Quality of Life .....	116	31.27
3rd sub-pillar: SDG Contribution.....	103	45.76



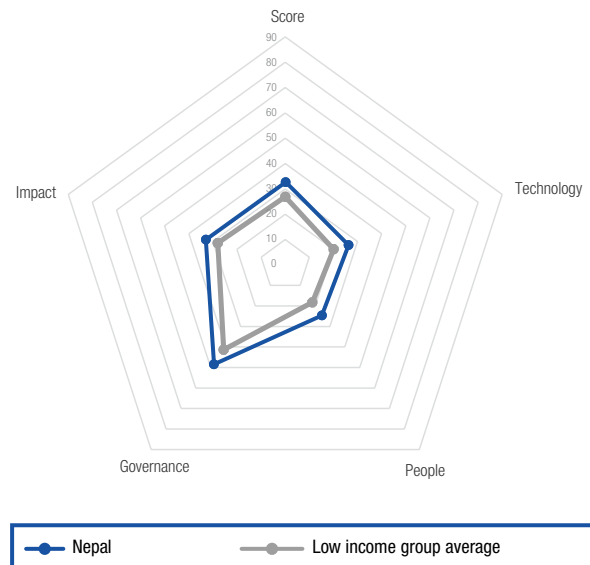
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	90	49.43
1.1.2 Handset prices.....	60	46.93
1.1.3 Households with internet access.....	88	30.19
1.1.4 4G mobile network coverage.....	105	39.00
1.1.5 Fixed-broadband subscriptions.....	104	1.80
1.1.6 International Internet bandwidth.....	107	57.01
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	87	48.53
1.2.3 Intellectual property receipts.....	84	0.07
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	56	55.76
1.3.2 Company investment in emerging technology.....	n/a	n/a
1.3.3 Government procurement of advanced technology products ..	58	42.08
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	89	45.85
2.1.2 Active mobile-broadband subscriptions.....	42	35.06
2.1.3 Use of virtual social networks.....	100	24.12
2.1.4 Tertiary enrolment.....	88	16.25
2.1.5 Adult literacy rate.....	61	86.90
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	84	27.00
2.2.2 Internet shopping.....	66	15.54
2.2.3 Professionals.....	77	18.34
2.2.4 Technicians and associate professionals.....	85	23.13
2.2.5 Extent of staff training.....	n/a	n/a
2.2.6 R&D expenditure by businesses.....	72	0.98
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	105	39.23
2.3.2 Publication and use of open data.....	90	9.08
2.3.3 ICT use and government efficiency.....	94	30.30
2.3.4 R&D expenditure by governments and higher education.....	63	24.17

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	50	58.92
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	92	42.70
3.1.4 Cybersecurity.....	116	11.84
3.1.5 Online trust and safety.....	79	38.66
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	74	50.26
3.2.2 Ease of doing business.....	89	55.04
3.2.3 Legal framework's adaptability to digital business models....	68	40.99
3.2.4 E-commerce legislation.....	117	0.00
3.2.5 Social safety net protection.....	n/a	n/a
3.2.6 ICT regulatory environment.....	95	69.12
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	107	31.21
3.3.2 Socioeconomic gap in use of digital payments.....	71	61.49
3.3.3 Availability of local online content.....	106	22.91
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	62	67.03
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	103	9.10
4.1.2 High-tech exports.....	115	0.41
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	97	37.01
4.2.2 Freedom to make life choices.....	88	52.17
4.2.3 Income inequality.....	106	10.26
4.2.4 Healthy life expectancy at birth.....	110	25.64
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	109	45.29
4.3.2 Pollution.....	74	80.97
4.3.3 Road safety.....	115	13.44
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	95	43.33

# Nepal

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>106</b>	<b>32.96</b>
<b>A. Technology pillar</b> .....	<b>107</b>	<b>26.14</b>
1st sub-pillar: Access.....	109	31.53
2nd sub-pillar: Content.....	89	28.05
3rd sub-pillar: Future Technologies.....	108	18.85
<b>B. People pillar</b> .....	<b>107</b>	<b>24.37</b>
1st sub-pillar: Individuals .....	104	26.83
2nd sub-pillar: Businesses .....	109	14.57
3rd sub-pillar: Governments .....	96	31.72
<b>C. Governance pillar</b> .....	<b>95</b>	<b>48.20</b>
1st sub-pillar: Trust .....	76	49.85
2nd sub-pillar: Regulation.....	101	47.05
3rd sub-pillar: Inclusion.....	96	47.68
<b>D. Impact pillar</b> .....	<b>103</b>	<b>33.15</b>
1st sub-pillar: Economy .....	112	6.33
2nd sub-pillar: Quality of Life .....	83	54.85
3rd sub-pillar: SDG Contribution.....	109	38.25



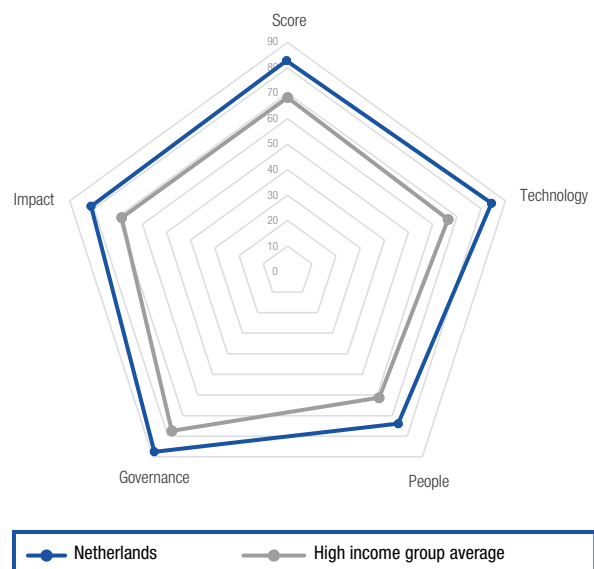
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	89	49.45
1.1.2 Handset prices.....	109	21.21
1.1.3 Households with internet access.....	108	12.44
1.1.4 4G mobile network coverage.....	116	15.47
1.1.5 Fixed-broadband subscriptions.....	n/a	n/a
1.1.6 International Internet bandwidth.....	103	59.08
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	90	46.89
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	112	27.20
1.3.2 Company investment in emerging technology.....	99	20.06
1.3.3 Government procurement of advanced technology products ..	94	28.14
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	101	26.93
2.1.2 Active mobile-broadband subscriptions.....	96	17.02
2.1.3 Use of virtual social networks.....	95	31.39
2.1.4 Tertiary enrolment.....	100	8.53
2.1.5 Adult literacy rate.....	88	50.29
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	102	9.74
2.2.2 Internet shopping.....	109	2.20
2.2.3 Professionals.....	73	19.81
2.2.4 Technicians and associate professionals.....	90	18.63
2.2.5 Extent of staff training.....	111	22.45
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	71	65.39
2.3.2 Publication and use of open data.....	79	15.49
2.3.3 ICT use and government efficiency.....	101	19.32
2.3.4 R&D expenditure by governments and higher education.....	60	26.69

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	92	42.43
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	86	44.40
3.1.4 Cybersecurity.....	103	26.43
3.1.5 Online trust and safety.....	6	86.15
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	108	34.99
3.2.2 Ease of doing business.....	84	58.29
3.2.3 Legal framework's adaptability to digital business models.....	98	29.72
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	109	18.29
3.2.6 ICT regulatory environment.....	100	66.03
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	55	75.16
3.3.2 Socioeconomic gap in use of digital payments.....	90	47.57
3.3.3 Availability of local online content.....	105	23.27
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	102	44.73
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	100	10.43
4.1.2 High-tech exports.....	104	2.24
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	93	38.59
4.2.2 Freedom to make life choices.....	84	55.92
4.2.3 Income inequality.....	34	79.47
4.2.4 Healthy life expectancy at birth.....	95	45.42
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	100	67.59
4.3.2 Pollution.....	120	0.00
4.3.3 Road safety.....	68	58.75
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	101	26.67

# Netherlands

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>3</b>	<b>81.78</b>
<b>A. Technology pillar</b> .....	<b>2</b>	<b>84.34</b>
1st sub-pillar: Access.....	12	86.82
2nd sub-pillar: Content.....	1	96.59
3rd sub-pillar: Future Technologies.....	8	69.59
<b>B. People pillar</b> .....	<b>6</b>	<b>74.40</b>
1st sub-pillar: Individuals .....	19	68.44
2nd sub-pillar: Businesses .....	7	74.65
3rd sub-pillar: Governments .....	7	80.12
<b>C. Governance pillar</b> .....	<b>8</b>	<b>88.01</b>
1st sub-pillar: Trust .....	10	86.51
2nd sub-pillar: Regulation.....	4	90.88
3rd sub-pillar: Inclusion.....	6	86.65
<b>D. Impact pillar</b> .....	<b>5</b>	<b>80.37</b>
1st sub-pillar: Economy .....	9	56.06
2nd sub-pillar: Quality of Life .....	7	89.74
3rd sub-pillar: SDG Contribution.....	15	95.31



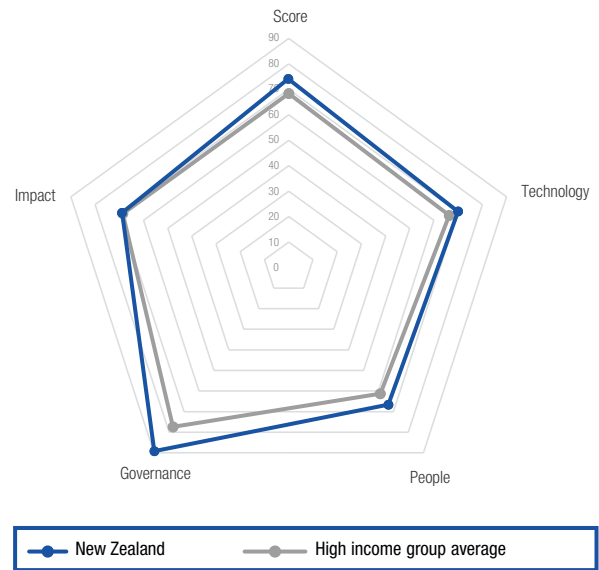
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	30	77.99
1.1.2 Handset prices.....	34	62.71
1.1.3 Households with internet access.....	9	95.90
1.1.4 4G mobile network coverage.....	24	99.00
1.1.5 Fixed-broadband subscriptions.....	6	98.81
1.1.6 International Internet bandwidth.....	28	73.33
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	5	94.57
1.2.3 Intellectual property receipts.....	1	100.00
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	7	94.73
1.3.2 Company investment in emerging technology.....	5	86.93
1.3.3 Government procurement of advanced technology products ..	18	62.55
1.3.4 ICT PCT patent applications.....	12	65.10
1.3.5 Computer software spending.....	8	54.55
1.3.6 Robot density.....	11	53.69
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	11	94.50
2.1.2 Active mobile-broadband subscriptions.....	43	34.77
2.1.3 Use of virtual social networks.....	41	63.62
2.1.4 Tertiary enrolment.....	12	61.98
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	8	87.34
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	3	97.40
2.2.2 Internet shopping.....	2	97.11
2.2.3 Professionals.....	5	69.31
2.2.4 Technicians and associate professionals.....	18	69.74
2.2.5 Extent of staff training.....	5	84.45
2.2.6 R&D expenditure by businesses.....	17	29.86
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	17	92.31
2.3.2 Publication and use of open data.....	9	74.95
2.3.3 ICT use and government efficiency.....	15	78.01
2.3.4 R&D expenditure by governments and higher education.....	12	75.21

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	9	94.76
3.1.2 Software piracy rate.....	13	90.54
3.1.3 Secure Internet servers.....	2	98.28
3.1.4 Cybersecurity.....	13	94.96
3.1.5 Online trust and safety.....	62	54.03
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	3	95.86
3.2.2 Ease of doing business.....	41	81.14
3.2.3 Legal framework's adaptability to digital business models....	10	82.79
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	9	90.50
3.2.6 ICT regulatory environment.....	18	94.98
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	4	98.73
3.3.2 Socioeconomic gap in use of digital payments.....	11	96.62
3.3.3 Availability of local online content.....	4	95.87
3.3.4 Gender gap in internet use.....	25	66.16
3.3.5 Rural gap in use of digital payments.....	24	75.85
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	15	62.41
4.1.2 High-tech exports.....	15	42.13
4.1.3 PCT patent applications.....	9	59.62
4.1.4 Labour productivity per employee.....	15	60.06
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	5	91.77
4.2.2 Freedom to make life choices.....	17	90.63
4.2.3 Income inequality.....	14	91.58
4.2.4 Healthy life expectancy at birth.....	19	84.98
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	38	98.49
4.3.2 Pollution.....	27	92.84
4.3.3 Road safety.....	6	96.56
4.3.4 Reading proficiency in schools.....	2	99.48
4.3.5 Maths proficiency in schools.....	10	84.48
4.3.6 Use of clean fuels and technology.....	1	100.00

# New Zealand

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>16</b>	<b>73.97</b>
<b>A. Technology pillar.....</b>	<b>17</b>	<b>70.30</b>
1st sub-pillar: Access.....	16	86.11
2nd sub-pillar: Content.....	10	77.32
3rd sub-pillar: Future Technologies.....	28	47.46
<b>B. People pillar.....</b>	<b>18</b>	<b>67.13</b>
1st sub-pillar: Individuals .....	26	66.33
2nd sub-pillar: Businesses .....	23	58.71
3rd sub-pillar: Governments .....	14	76.34
<b>C. Governance pillar .....</b>	<b>2</b>	<b>89.72</b>
1st sub-pillar: Trust .....	3	90.66
2nd sub-pillar: Regulation.....	7	90.12
3rd sub-pillar: Inclusion.....	1	88.36
<b>D. Impact pillar .....</b>	<b>24</b>	<b>68.75</b>
1st sub-pillar: Economy .....	49	25.71
2nd sub-pillar: Quality of Life .....	4	91.60
3rd sub-pillar: SDG Contribution.....	39	88.94



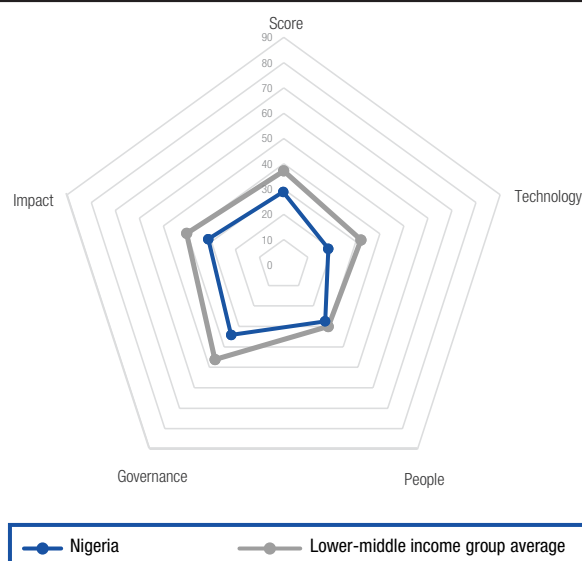
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	18	84.30
1.1.2 Handset prices.....	11	73.96
1.1.3 Households with internet access.....	24	86.99
1.1.4 4G mobile network coverage.....	45	97.00
1.1.5 Fixed-broadband subscriptions.....	5	99.03
1.1.6 International Internet bandwidth.....	15	75.40
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	18	85.05
1.2.3 Intellectual property receipts.....	23	4.01
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	17	85.53
1.3.2 Company investment in emerging technology.....	19	65.84
1.3.3 Government procurement of advanced technology products ..	28	54.36
1.3.4 ICT PCT patent applications.....	25	37.37
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	29	14.42
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	15	90.16
2.1.2 Active mobile-broadband subscriptions.....	19	44.45
2.1.3 Use of virtual social networks.....	21	70.89
2.1.4 Tertiary enrolment.....	15	59.81
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	16	81.06
2.2.2 Internet shopping.....	8	88.63
2.2.3 Professionals.....	36	43.11
2.2.4 Technicians and associate professionals.....	37	54.05
2.2.5 Extent of staff training.....	21	69.43
2.2.6 R&D expenditure by businesses.....	33	15.96
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	9	94.62
2.3.2 Publication and use of open data.....	7	79.38
2.3.3 ICT use and government efficiency.....	16	76.96
2.3.4 R&D expenditure by governments and higher education.....	23	54.42

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	5	96.12
3.1.2 Software piracy rate.....	2	98.65
3.1.3 Secure Internet servers.....	25	83.44
3.1.4 Cybersecurity.....	38	84.43
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	4	95.00
3.2.2 Ease of doing business.....	1	100.00
3.2.3 Legal framework's adaptability to digital business models.....	14	81.05
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	17	84.19
3.2.6 ICT regulatory environment.....	77	80.51
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	5	98.08
3.3.2 Socioeconomic gap in use of digital payments.....	4	99.29
3.3.3 Availability of local online content.....	22	82.13
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	38	73.94
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	81	23.46
4.1.2 High-tech exports.....	47	18.43
4.1.3 PCT patent applications.....	23	17.42
4.1.4 Labour productivity per employee.....	35	43.52
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	9	89.84
4.2.2 Freedom to make life choices.....	3	97.42
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	14	87.55
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	1	100.00
4.3.2 Pollution.....	1	100.00
4.3.3 Road safety.....	31	84.06
4.3.4 Reading proficiency in schools.....	22	90.61
4.3.5 Maths proficiency in schools.....	34	58.99
4.3.6 Use of clean fuels and technology.....	1	100.00

# Nigeria

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>111</b>	<b>28.22</b>
<b>A. Technology pillar</b> .....	<b>114</b>	<b>18.77</b>
1st sub-pillar: Access.....	113	24.82
2nd sub-pillar: Content.....	111	12.30
3rd sub-pillar: Future Technologies.....	105	19.18
<b>B. People pillar</b> .....	<b>99</b>	<b>28.23</b>
1st sub-pillar: Individuals .....	111	20.71
2nd sub-pillar: Businesses .....	64	29.65
3rd sub-pillar: Governments .....	93	34.33
<b>C. Governance pillar</b> .....	<b>113</b>	<b>34.83</b>
1st sub-pillar: Trust .....	98	39.94
2nd sub-pillar: Regulation.....	115	33.47
3rd sub-pillar: Inclusion.....	116	31.09
<b>D. Impact pillar</b> .....	<b>107</b>	<b>31.03</b>
1st sub-pillar: Economy .....	81	13.64
2nd sub-pillar: Quality of Life .....	109	39.71
3rd sub-pillar: SDG Contribution.....	107	39.74



## The Network Readiness Index in detail

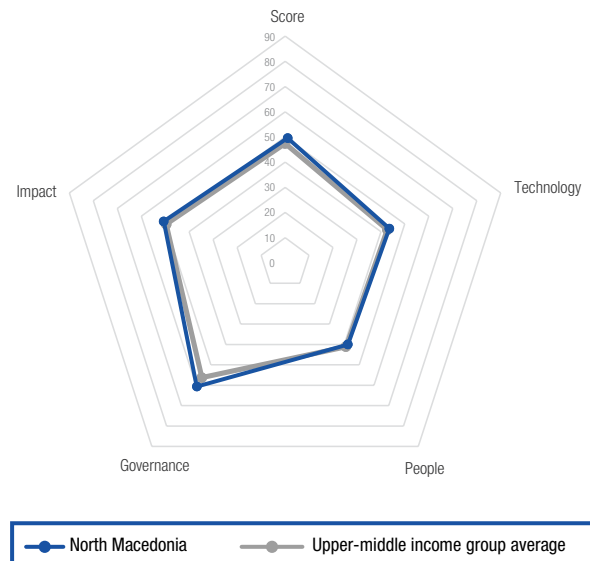
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	84	51.96
1.1.2 Handset prices.....	110	20.01
1.1.3 Households with internet access.....	119	1.34
1.1.4 4G mobile network coverage.....	115	22.34
1.1.5 Fixed-broadband subscriptions.....	96	8.16
1.1.6 International Internet bandwidth.....	119	45.12
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	110	28.01
1.2.3 Intellectual property receipts.....	98	0.00
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	91	39.57
1.3.2 Company investment in emerging technology.....	105	16.34
1.3.3 Government procurement of advanced technology products ..	87	30.63
1.3.4 ICT PCT patent applications.....	77	0.30
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	94	35.84
2.1.2 Active mobile-broadband subscriptions.....	109	10.12
2.1.3 Use of virtual social networks.....	109	9.56
2.1.4 Tertiary enrolment.....	102	6.89
2.1.5 Adult literacy rate.....	90	41.15
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	106	4.80
2.2.2 Internet shopping.....	92	5.21
2.2.3 Professionals.....	91	14.30
2.2.4 Technicians and associate professionals.....	3	92.32
2.2.5 Extent of staff training.....	82	31.63
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	98	47.70
2.3.2 Publication and use of open data.....	67	20.97
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	111	33.24
3.1.2 Software piracy rate.....	83	12.16
3.1.3 Secure Internet servers.....	85	44.48
3.1.4 Cybersecurity.....	59	69.19
3.1.5 Online trust and safety.....	77	40.64
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	113	31.98
3.2.2 Ease of doing business.....	105	47.13
3.2.3 Legal framework's adaptability to digital business models.....	112	16.95
3.2.4 E-commerce legislation.....	110	25.00
3.2.5 Social safety net protection.....	118	1.76
3.2.6 ICT regulatory environment.....	83	77.99
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	100	41.39
3.3.2 Socioeconomic gap in use of digital payments.....	102	40.81
3.3.3 Availability of local online content.....	107	22.47
3.3.4 Gender gap in internet use.....	82	22.17
3.3.5 Rural gap in use of digital payments.....	109	28.59
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	43	42.61
4.1.2 High-tech exports.....	100	3.51
4.1.3 PCT patent applications.....	88	0.00
4.1.4 Labour productivity per employee.....	89	8.44
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	79	45.72
4.2.2 Freedom to make life choices.....	76	60.50
4.2.3 Income inequality.....	83	52.63
4.2.4 Healthy life expectancy at birth.....	120	0.00
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	110	41.00
4.3.2 Pollution.....	109	51.47
4.3.3 Road safety.....	89	41.56
4.3.4 Reading proficiency in schools.....	32	74.97
4.3.5 Maths proficiency in schools.....	59	27.21
4.3.6 Use of clean fuels and technology.....	110	2.22



# North Macedonia

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>65</b>	<b>48.97</b>
<b>A. Technology pillar.....</b>	<b>73</b>	<b>42.41</b>
1st sub-pillar: Access.....	61	67.38
2nd sub-pillar: Content.....	46	52.18
3rd sub-pillar: Future Technologies.....	118	7.67
<b>B. People pillar.....</b>	<b>72</b>	<b>40.62</b>
1st sub-pillar: Individuals .....	70	52.83
2nd sub-pillar: Businesses .....	69	27.92
3rd sub-pillar: Governments .....	71	41.12
<b>C. Governance pillar .....</b>	<b>61</b>	<b>61.24</b>
1st sub-pillar: Trust .....	64	55.01
2nd sub-pillar: Regulation.....	54	66.77
3rd sub-pillar: Inclusion.....	63	61.93
<b>D. Impact pillar .....</b>	<b>67</b>	<b>51.60</b>
1st sub-pillar: Economy .....	79	14.84
2nd sub-pillar: Quality of Life .....	76	58.57
3rd sub-pillar: SDG Contribution.....	55	81.40



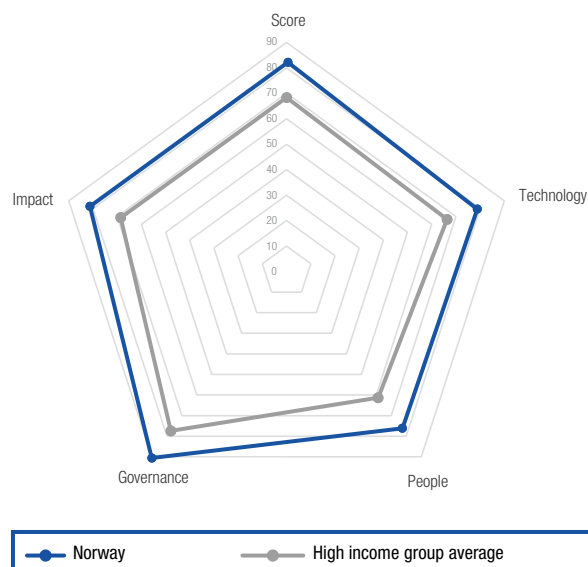
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	77	57.19
1.1.2 Handset prices.....	78	39.32
1.1.3 Households with internet access.....	66	67.10
1.1.4 4G mobile network coverage.....	18	99.53
1.1.5 Fixed-broadband subscriptions.....	48	78.06
1.1.6 International Internet bandwidth.....	88	63.12
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	54	65.14
1.2.3 Intellectual property receipts.....	50	0.75
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	n/a	n/a
1.3.2 Company investment in emerging technology.....	113	10.46
1.3.3 Government procurement of advanced technology products ..	n/a	n/a
1.3.4 ICT PCT patent applications.....	60	3.46
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	43	77.20
2.1.2 Active mobile-broadband subscriptions.....	77	25.17
2.1.3 Use of virtual social networks.....	65	52.18
2.1.4 Tertiary enrolment.....	68	29.69
2.1.5 Adult literacy rate.....	32	96.63
2.1.6 ICT skills.....	46	36.13
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	57	52.05
2.2.2 Internet shopping.....	56	21.59
2.2.3 Professionals.....	44	37.98
2.2.4 Technicians and associate professionals.....	50	42.65
2.2.5 Extent of staff training.....	117	10.88
2.2.6 R&D expenditure by businesses.....	62	2.36
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	68	68.46
2.3.2 Publication and use of open data.....	49	32.58
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	65	22.32

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	77	46.86
3.1.2 Software piracy rate.....	62	35.14
3.1.3 Secure Internet servers.....	67	52.39
3.1.4 Cybersecurity.....	36	85.64
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	43	62.98
3.2.2 Ease of doing business.....	16	89.36
3.2.3 Legal framework's adaptability to digital business models.....	n/a	n/a
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	108	18.48
3.2.6 ICT regulatory environment.....	45	88.03
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	68	66.24
3.3.2 Socioeconomic gap in use of digital payments.....	68	62.80
3.3.3 Availability of local online content.....	n/a	n/a
3.3.4 Gender gap in internet use.....	52	59.18
3.3.5 Rural gap in use of digital payments.....	75	59.52
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	64	29.24
4.1.2 High-tech exports.....	82	7.66
4.1.3 PCT patent applications.....	75	0.08
4.1.4 Labour productivity per employee.....	66	22.36
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	81	45.46
4.2.2 Freedom to make life choices.....	91	50.06
4.2.3 Income inequality.....	51	72.11
4.2.4 Healthy life expectancy at birth.....	50	66.67
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	54	94.90
4.3.2 Pollution.....	88	74.48
4.3.3 Road safety.....	26	88.44
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	85	67.78

# Norway

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>4</b>	<b>81.30</b>
<b>A. Technology pillar</b> .....	<b>8</b>	<b>77.69</b>
1st sub-pillar: Access.....	6	89.35
2nd sub-pillar: Content.....	12	76.45
3rd sub-pillar: Future Technologies.....	10	67.29
<b>B. People pillar</b> .....	<b>4</b>	<b>76.00</b>
1st sub-pillar: Individuals .....	9	72.68
2nd sub-pillar: Businesses .....	11	70.06
3rd sub-pillar: Governments .....	2	85.27
<b>C. Governance pillar</b> .....	<b>1</b>	<b>90.30</b>
1st sub-pillar: Trust .....	2	92.66
2nd sub-pillar: Regulation.....	3	92.19
3rd sub-pillar: Inclusion.....	8	86.04
<b>D. Impact pillar</b> .....	<b>4</b>	<b>81.20</b>
1st sub-pillar: Economy .....	13	52.98
2nd sub-pillar: Quality of Life .....	1	93.27
3rd sub-pillar: SDG Contribution.....	4	97.34



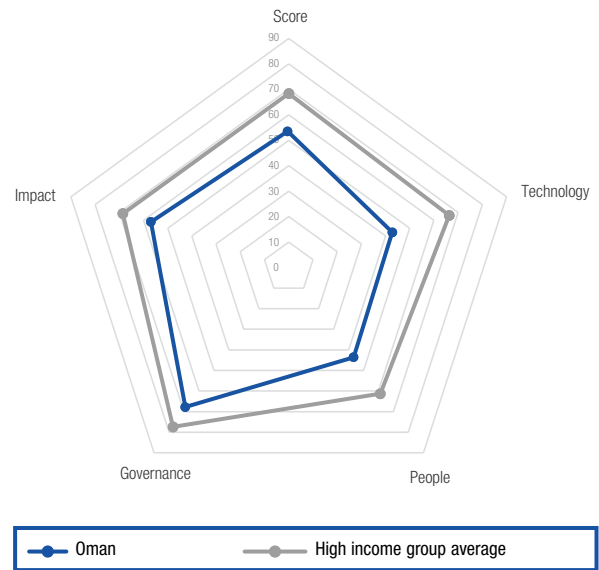
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	2	98.00
1.1.2 Handset prices.....	21	67.37
1.1.3 Households with internet access.....	10	95.73
1.1.4 4G mobile network coverage.....	9	99.90
1.1.5 Fixed-broadband subscriptions.....	29	92.53
1.1.6 International Internet bandwidth.....	37	71.91
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	17	85.89
1.2.3 Intellectual property receipts.....	28	1.93
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	2	98.38
1.3.2 Company investment in emerging technology.....	16	71.31
1.3.3 Government procurement of advanced technology products ..	17	63.02
1.3.4 ICT PCT patent applications.....	1	100.00
1.3.5 Computer software spending.....	8	54.55
1.3.6 Robot density.....	26	16.47
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	8	96.48
2.1.2 Active mobile-broadband subscriptions.....	29	38.42
2.1.3 Use of virtual social networks.....	21	70.89
2.1.4 Tertiary enrolment.....	16	59.78
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	4	97.84
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	23	76.94
2.2.2 Internet shopping.....	3	96.99
2.2.3 Professionals.....	3	71.36
2.2.4 Technicians and associate professionals.....	17	70.26
2.2.5 Extent of staff training.....	13	76.33
2.2.6 R&D expenditure by businesses.....	20	28.46
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	9	94.62
2.3.2 Publication and use of open data.....	10	73.81
2.3.3 ICT use and government efficiency.....	10	81.97
2.3.4 R&D expenditure by governments and higher education.....	2	90.68

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	2	98.16
3.1.2 Software piracy rate.....	10	91.89
3.1.3 Secure Internet servers.....	18	84.86
3.1.4 Cybersecurity.....	9	95.72
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	10	90.14
3.2.2 Ease of doing business.....	9	92.68
3.2.3 Legal framework's adaptability to digital business models....	17	72.44
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	1	100.00
3.2.6 ICT regulatory environment.....	4	97.88
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	11	97.45
3.3.2 Socioeconomic gap in use of digital payments.....	1	100.00
3.3.3 Availability of local online content.....	11	87.74
3.3.4 Gender gap in internet use.....	10	68.53
3.3.5 Rural gap in use of digital payments.....	19	76.50
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	31	50.80
4.1.2 High-tech exports.....	17	40.22
4.1.3 PCT patent applications.....	14	39.09
4.1.4 Labour productivity per employee.....	5	81.81
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	6	91.38
4.2.2 Freedom to make life choices.....	1	100.00
4.2.3 Income inequality.....	9	93.42
4.2.4 Healthy life expectancy at birth.....	9	88.28
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	35	98.72
4.3.2 Pollution.....	7	98.54
4.3.3 Road safety.....	1	100.00
4.3.4 Reading proficiency in schools.....	3	99.40
4.3.5 Maths proficiency in schools.....	5	87.36
4.3.6 Use of clean fuels and technology.....	1	100.00

# Oman

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>55</b>	<b>52.87</b>
<b>A. Technology pillar</b> .....	<b>70</b>	<b>43.13</b>
1st sub-pillar: Access.....	55	71.31
2nd sub-pillar: Content.....	96	25.81
3rd sub-pillar: Future Technologies.....	56	32.27
<b>B. People pillar</b> .....	<b>58</b>	<b>44.00</b>
1st sub-pillar: Individuals .....	59	56.32
2nd sub-pillar: Businesses .....	72	26.98
3rd sub-pillar: Governments .....	49	48.69
<b>C. Governance pillar</b> .....	<b>43</b>	<b>68.11</b>
1st sub-pillar: Trust .....	53	60.47
2nd sub-pillar: Regulation.....	33	75.98
3rd sub-pillar: Inclusion.....	49	67.88
<b>D. Impact pillar</b> .....	<b>53</b>	<b>56.25</b>
1st sub-pillar: Economy .....	51	24.35
2nd sub-pillar: Quality of Life .....	24	76.67
3rd sub-pillar: SDG Contribution.....	79	67.74



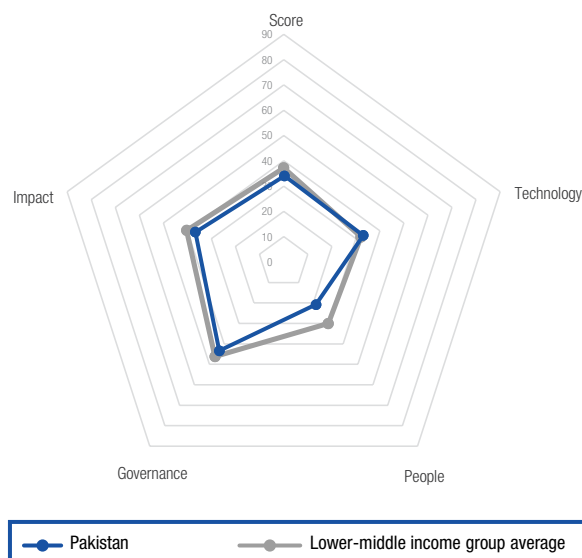
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	41	72.29
1.1.2 Handset prices.....	53	51.70
1.1.3 Households with internet access.....	23	87.79
1.1.4 4G mobile network coverage.....	50	96.05
1.1.5 Fixed-broadband subscriptions.....	88	21.04
1.1.6 International Internet bandwidth.....	47	70.29
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	72	54.43
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	59	55.03
1.3.2 Company investment in emerging technology.....	43	45.78
1.3.3 Government procurement of advanced technology products ..	33	51.32
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	64	0.14
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	39	78.33
2.1.2 Active mobile-broadband subscriptions.....	53	32.45
2.1.3 Use of virtual social networks.....	69	50.10
2.1.4 Tertiary enrolment.....	72	27.41
2.1.5 Adult literacy rate.....	44	93.30
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	n/a	n/a
2.2.2 Internet shopping.....	n/a	n/a
2.2.3 Professionals.....	83	17.62
2.2.4 Technicians and associate professionals.....	69	31.87
2.2.5 Extent of staff training.....	35	56.31
2.2.6 R&D expenditure by businesses.....	64	2.13
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	43	79.23
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	41	55.47
2.3.4 R&D expenditure by governments and higher education.....	86	11.38

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	43	63.93
3.1.2 Software piracy rate.....	57	39.19
3.1.3 Secure Internet servers.....	90	43.10
3.1.4 Cybersecurity.....	18	93.09
3.1.5 Online trust and safety.....	50	63.01
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	54	58.24
3.2.2 Ease of doing business.....	62	70.32
3.2.3 Legal framework's adaptability to digital business models.....	n/a	n/a
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	16	84.46
3.2.6 ICT regulatory environment.....	29	91.89
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	43	80.90
3.3.2 Socioeconomic gap in use of digital payments.....	n/a	n/a
3.3.3 Availability of local online content.....	n/a	n/a
3.3.4 Gender gap in internet use.....	66	54.87
3.3.5 Rural gap in use of digital payments.....	n/a	n/a
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	69	27.84
4.1.2 High-tech exports.....	105	2.11
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	36	43.09
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	22	79.06
4.2.2 Freedom to make life choices.....	19	89.78
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	73	61.17
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	55	94.68
4.3.2 Pollution.....	101	63.30
4.3.3 Road safety.....	69	58.12
4.3.4 Reading proficiency in schools.....	49	59.13
4.3.5 Maths proficiency in schools.....	57	31.20
4.3.6 Use of clean fuels and technology.....	1	100.00

# Pakistan

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>104</b>	<b>33.38</b>
<b>A. Technology pillar</b> .....	<b>93</b>	<b>32.45</b>
1st sub-pillar: Access.....	94	41.91
2nd sub-pillar: Content.....	95	25.96
3rd sub-pillar: Future Technologies.....	65	29.49
<b>B. People pillar</b> .....	<b>111</b>	<b>21.07</b>
1st sub-pillar: Individuals .....	116	12.59
2nd sub-pillar: Businesses .....	94	21.47
3rd sub-pillar: Governments .....	99	29.15
<b>C. Governance pillar</b> .....	<b>101</b>	<b>43.37</b>
1st sub-pillar: Trust .....	93	41.34
2nd sub-pillar: Regulation.....	95	52.61
3rd sub-pillar: Inclusion.....	112	36.14
<b>D. Impact pillar</b> .....	<b>101</b>	<b>36.63</b>
1st sub-pillar: Economy .....	88	11.31
2nd sub-pillar: Quality of Life .....	89	54.16
3rd sub-pillar: SDG Contribution.....	104	44.42



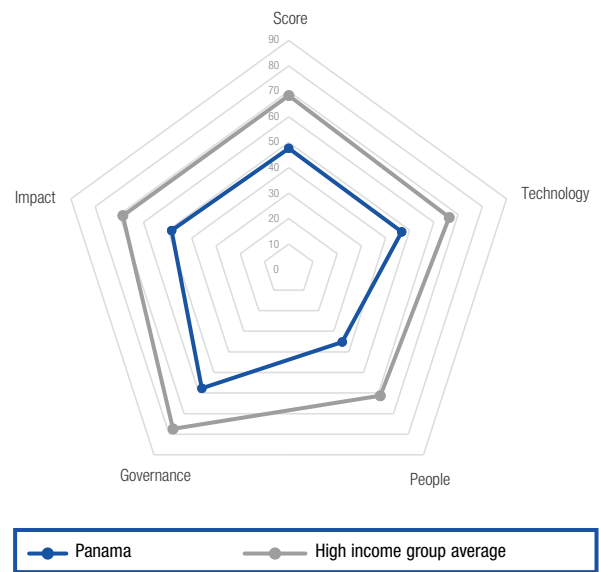
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	67	61.32
1.1.2 Handset prices.....	98	29.63
1.1.3 Households with internet access.....	104	16.93
1.1.4 4G mobile network coverage.....	89	68.60
1.1.5 Fixed-broadband subscriptions.....	94	12.88
1.1.6 International Internet bandwidth.....	93	62.13
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	92	45.19
1.2.3 Intellectual property receipts.....	72	0.19
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	68	51.59
1.3.2 Company investment in emerging technology.....	49	43.86
1.3.3 Government procurement of advanced technology products ..	30	53.93
1.3.4 ICT PCT patent applications.....	78	0.28
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	70	0.00
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	115	6.35
2.1.2 Active mobile-broadband subscriptions.....	111	9.51
2.1.3 Use of virtual social networks.....	105	15.80
2.1.4 Tertiary enrolment.....	105	6.08
2.1.5 Adult literacy rate.....	92	36.68
2.1.6 ICT skills.....	61	1.11
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	72	36.74
2.2.2 Internet shopping.....	114	1.05
2.2.3 Professionals.....	99	11.91
2.2.4 Technicians and associate professionals.....	96	16.55
2.2.5 Extent of staff training.....	58	41.09
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	96	50.00
2.3.2 Publication and use of open data.....	97	3.59
2.3.3 ICT use and government efficiency.....	63	42.47
2.3.4 R&D expenditure by governments and higher education.....	68	20.54

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	99	37.98
3.1.2 Software piracy rate.....	93	8.11
3.1.3 Secure Internet servers.....	96	40.00
3.1.4 Cybersecurity.....	91	42.54
3.1.5 Online trust and safety.....	17	78.08
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	103	37.22
3.2.2 Ease of doing business.....	92	54.34
3.2.3 Legal framework's adaptability to digital business models....	52	45.82
3.2.4 E-commerce legislation.....	100	50.00
3.2.5 Social safety net protection.....	70	39.12
3.2.6 ICT regulatory environment.....	40	89.19
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	99	43.31
3.3.2 Socioeconomic gap in use of digital payments.....	95	42.35
3.3.3 Availability of local online content.....	74	46.78
3.3.4 Gender gap in internet use.....	85	0.00
3.3.5 Rural gap in use of digital payments.....	97	48.25
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	62	31.28
4.1.2 High-tech exports.....	95	4.16
4.1.3 PCT patent applications.....	87	0.00
4.1.4 Labour productivity per employee.....	88	9.81
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	70	50.29
4.2.2 Freedom to make life choices.....	82	56.49
4.2.3 Income inequality.....	39	77.63
4.2.4 Healthy life expectancy at birth.....	104	32.23
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	99	67.90
4.3.2 Pollution.....	111	44.15
4.3.3 Road safety.....	61	63.75
4.3.4 Reading proficiency in schools.....	61	34.62
4.3.5 Maths proficiency in schools.....	68	12.75
4.3.6 Use of clean fuels and technology.....	95	43.33

# Panama

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>74</b>	<b>46.96</b>
<b>A. Technology pillar</b> .....	<b>60</b>	<b>46.38</b>
1st sub-pillar: Access.....	77	54.32
2nd sub-pillar: Content.....	57	48.59
3rd sub-pillar: Future Technologies.....	45	36.23
<b>B. People pillar</b> .....	<b>83</b>	<b>35.50</b>
1st sub-pillar: Individuals.....	75	51.71
2nd sub-pillar: Businesses.....	93	21.75
3rd sub-pillar: Governments.....	94	33.05
<b>C. Governance pillar</b> .....	<b>70</b>	<b>57.81</b>
1st sub-pillar: Trust.....	65	54.99
2nd sub-pillar: Regulation.....	67	63.10
3rd sub-pillar: Inclusion.....	83	55.36
<b>D. Impact pillar</b> .....	<b>77</b>	<b>48.16</b>
1st sub-pillar: Economy.....	94	9.54
2nd sub-pillar: Quality of Life.....	56	63.45
3rd sub-pillar: SDG Contribution.....	72	71.50



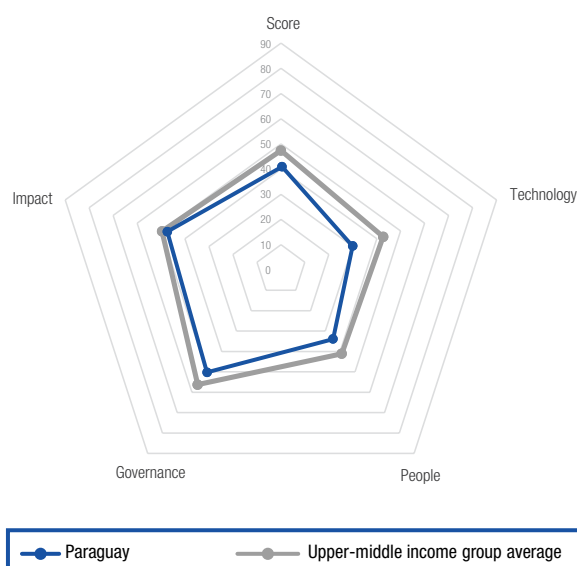
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs.....	76	57.36
1.1.2 Handset prices.....	28	64.54
1.1.3 Households with internet access.....	73	58.09
1.1.4 4G mobile network coverage.....	109	33.00
1.1.5 Fixed-broadband subscriptions.....	77	41.75
1.1.6 International Internet bandwidth.....	41	71.19
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	56	64.16
1.2.3 Intellectual property receipts.....	68	0.22
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	36	68.87
1.3.2 Company investment in emerging technology.....	63	35.34
1.3.3 Government procurement of advanced technology products ..	45	46.05
1.3.4 ICT PCT patent applications.....	44	12.71
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	82	53.49
2.1.2 Active mobile-broadband subscriptions.....	72	26.37
2.1.3 Use of virtual social networks.....	68	51.14
2.1.4 Tertiary enrolment.....	63	34.60
2.1.5 Adult literacy rate.....	45	92.93
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	82	28.43
2.2.2 Internet shopping.....	80	7.81
2.2.3 Professionals.....	63	27.03
2.2.4 Technicians and associate professionals.....	63	33.22
2.2.5 Extent of staff training.....	75	33.97
2.2.6 R&D expenditure by businesses.....	91	0.02
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	77	62.31
2.3.2 Publication and use of open data.....	75	17.90
2.3.3 ICT use and government efficiency.....	47	50.00
2.3.4 R&D expenditure by governments and higher education.....	103	1.98

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	63	51.98
3.1.2 Software piracy rate.....	72	24.32
3.1.3 Secure Internet servers.....	51	65.43
3.1.4 Cybersecurity.....	95	38.38
3.1.5 Online trust and safety.....	2	94.82
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	52	60.26
3.2.2 Ease of doing business.....	79	64.26
3.2.3 Legal framework's adaptability to digital business models.....	53	45.70
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	54	46.48
3.2.6 ICT regulatory environment.....	50	86.88
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	63	68.15
3.3.2 Socioeconomic gap in use of digital payments.....	99	41.27
3.3.3 Availability of local online content.....	61	54.16
3.3.4 Gender gap in internet use.....	3	75.79
3.3.5 Rural gap in use of digital payments.....	108	37.42
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	108	7.65
4.1.2 High-tech exports.....	49	17.41
4.1.3 PCT patent applications.....	36	3.55
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	35	67.16
4.2.2 Freedom to make life choices.....	47	77.08
4.2.3 Income inequality.....	99	34.47
4.2.4 Healthy life expectancy at birth.....	31	75.09
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	83	86.61
4.3.2 Pollution.....	19	93.85
4.3.3 Road safety.....	61	63.75
4.3.4 Reading proficiency in schools.....	56	51.02
4.3.5 Maths proficiency in schools.....	49	39.36
4.3.6 Use of clean fuels and technology.....	72	94.44

# Paraguay

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>88</b>	<b>40.55</b>
<b>A. Technology pillar</b> .....	<b>98</b>	<b>29.40</b>
1st sub-pillar: Access.....	102	35.58
2nd sub-pillar: Content.....	80	34.85
3rd sub-pillar: Future Technologies.....	109	17.78
<b>B. People pillar</b> .....	<b>86</b>	<b>34.35</b>
1st sub-pillar: Individuals .....	82	50.09
2nd sub-pillar: Businesses .....	81	24.29
3rd sub-pillar: Governments .....	101	28.66
<b>C. Governance pillar</b> .....	<b>89</b>	<b>50.61</b>
1st sub-pillar: Trust .....	97	40.04
2nd sub-pillar: Regulation.....	93	53.11
3rd sub-pillar: Inclusion.....	73	58.69
<b>D. Impact pillar</b> .....	<b>79</b>	<b>47.82</b>
1st sub-pillar: Economy .....	57	23.09
2nd sub-pillar: Quality of Life .....	73	59.18
3rd sub-pillar: SDG Contribution.....	88	61.20



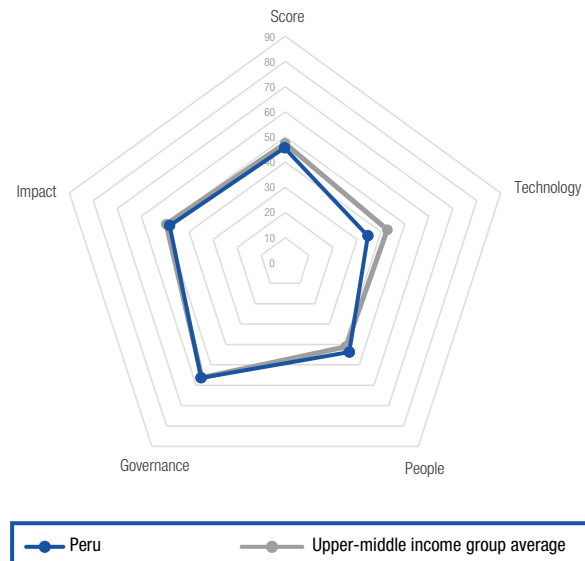
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	82	53.48
1.1.2 Handset prices.....	68	43.99
1.1.3 Households with internet access.....	98	19.35
1.1.4 4G mobile network coverage.....	93	65.00
1.1.5 Fixed-broadband subscriptions.....	109	0.66
1.1.6 International Internet bandwidth.....	95	61.54
1.1.7 Internet access in schools.....	63	5.02
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	74	53.81
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	110	27.96
1.3.2 Company investment in emerging technology.....	111	12.24
1.3.3 Government procurement of advanced technology products ..	85	30.94
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	71	61.43
2.1.2 Active mobile-broadband subscriptions.....	86	21.17
2.1.3 Use of virtual social networks.....	65	52.18
2.1.4 Tertiary enrolment.....	77	24.90
2.1.5 Adult literacy rate.....	53	90.77
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	31	68.80
2.2.2 Internet shopping.....	106	3.22
2.2.3 Professionals.....	90	15.26
2.2.4 Technicians and associate professionals.....	66	32.37
2.2.5 Extent of staff training.....	100	26.07
2.2.6 R&D expenditure by businesses.....	93	0.01
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	95	50.78
2.3.2 Publication and use of open data.....	53	28.07
2.3.3 ICT use and government efficiency.....	97	26.16
2.3.4 R&D expenditure by governments and higher education.....	89	9.62

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	94	40.99
3.1.2 Software piracy rate.....	93	8.11
3.1.3 Secure Internet servers.....	81	47.04
3.1.4 Cybersecurity.....	67	64.04
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	79	48.68
3.2.2 Ease of doing business.....	101	50.98
3.2.3 Legal framework's adaptability to digital business models....	84	35.07
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	99	25.03
3.2.6 ICT regulatory environment.....	108	58.88
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	91	51.59
3.3.2 Socioeconomic gap in use of digital payments.....	67	62.91
3.3.3 Availability of local online content.....	101	26.48
3.3.4 Gender gap in internet use.....	6	70.51
3.3.5 Rural gap in use of digital payments.....	4	81.99
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	70	27.82
4.1.2 High-tech exports.....	48	18.36
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	64	55.32
4.2.2 Freedom to make life choices.....	31	83.96
4.2.3 Income inequality.....	97	37.37
4.2.4 Healthy life expectancy at birth.....	78	60.07
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	64	93.00
4.3.2 Pollution.....	18	93.88
4.3.3 Road safety.....	93	37.50
4.3.4 Reading proficiency in schools.....	59	42.36
4.3.5 Maths proficiency in schools.....	55	32.65
4.3.6 Use of clean fuels and technology.....	85	67.78

# Peru

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>77</b>	<b>45.68</b>
<b>A. Technology pillar.....</b>	<b>87</b>	<b>34.75</b>
1st sub-pillar: Access.....	87	48.60
2nd sub-pillar: Content.....	72	38.12
3rd sub-pillar: Future Technologies.....	112	17.53
<b>B. People pillar.....</b>	<b>59</b>	<b>43.72</b>
1st sub-pillar: Individuals .....	53	57.57
2nd sub-pillar: Businesses .....	50	34.86
3rd sub-pillar: Governments .....	84	38.75
<b>C. Governance pillar .....</b>	<b>73</b>	<b>56.33</b>
1st sub-pillar: Trust .....	75	49.89
2nd sub-pillar: Regulation.....	66	63.66
3rd sub-pillar: Inclusion.....	81	55.43
<b>D. Impact pillar .....</b>	<b>78</b>	<b>47.90</b>
1st sub-pillar: Economy .....	89	10.94
2nd sub-pillar: Quality of Life .....	67	61.08
3rd sub-pillar: SDG Contribution.....	71	71.70



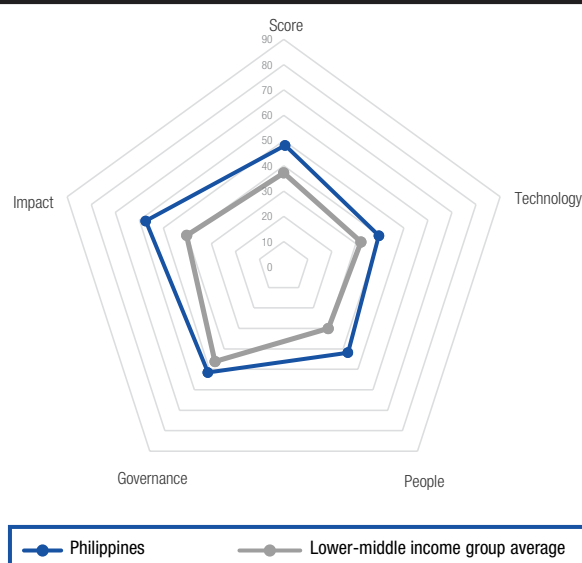
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	14	87.40
1.1.2 Handset prices.....	52	52.02
1.1.3 Households with internet access.....	93	25.10
1.1.4 4G mobile network coverage.....	99	52.24
1.1.5 Fixed-broadband subscriptions.....	91	17.39
1.1.6 International Internet bandwidth.....	78	65.54
1.1.7 Internet access in schools.....	46	40.53
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	76	52.49
1.2.3 Intellectual property receipts.....	70	0.20
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	87	40.84
1.3.2 Company investment in emerging technology.....	102	18.81
1.3.3 Government procurement of advanced technology products ..	102	25.61
1.3.4 ICT PCT patent applications.....	69	1.53
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	63	0.19
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	88	47.57
2.1.2 Active mobile-broadband subscriptions.....	79	24.45
2.1.3 Use of virtual social networks.....	17	72.97
2.1.4 Tertiary enrolment.....	27	51.49
2.1.5 Adult literacy rate.....	52	91.37
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	38	65.68
2.2.2 Internet shopping.....	88	5.56
2.2.3 Professionals.....	60	27.82
2.2.4 Technicians and associate professionals.....	36	54.45
2.2.5 Extent of staff training.....	112	20.77
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	41	80.00
2.3.2 Publication and use of open data.....	48	33.33
2.3.3 ICT use and government efficiency.....	84	35.99
2.3.4 R&D expenditure by governments and higher education.....	98	5.66

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	93	41.54
3.1.2 Software piracy rate.....	60	36.49
3.1.3 Secure Internet servers.....	80	47.34
3.1.4 Cybersecurity.....	94	41.89
3.1.5 Online trust and safety.....	13	82.19
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	44	62.83
3.2.2 Ease of doing business.....	69	68.04
3.2.3 Legal framework's adaptability to digital business models.....	85	34.45
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	94	28.64
3.2.6 ICT regulatory environment.....	45	88.03
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	36	84.72
3.3.2 Socioeconomic gap in use of digital payments.....	105	38.38
3.3.3 Availability of local online content.....	91	34.99
3.3.4 Gender gap in internet use.....	72	50.00
3.3.5 Rural gap in use of digital payments.....	58	69.07
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	86	20.10
4.1.2 High-tech exports.....	80	8.65
4.1.3 PCT patent applications.....	71	0.22
4.1.4 Labour productivity per employee.....	77	14.79
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	66	54.62
4.2.2 Freedom to make life choices.....	60	69.71
4.2.3 Income inequality.....	85	51.84
4.2.4 Healthy life expectancy at birth.....	46	68.13
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	93	77.23
4.3.2 Pollution.....	79	79.08
4.3.3 Road safety.....	55	66.25
4.3.4 Reading proficiency in schools.....	38	67.92
4.3.5 Maths proficiency in schools.....	33	60.83
4.3.6 Use of clean fuels and technology.....	82	78.89

# Philippines

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>71</b>	<b>47.70</b>
<b>A. Technology pillar</b> .....	<b>80</b>	<b>38.93</b>
1st sub-pillar: Access.....	83	51.07
2nd sub-pillar: Content.....	74	36.99
3rd sub-pillar: Future Technologies.....	70	28.75
<b>B. People pillar</b> .....	<b>62</b>	<b>42.22</b>
1st sub-pillar: Individuals .....	65	55.03
2nd sub-pillar: Businesses .....	77	25.54
3rd sub-pillar: Governments .....	60	46.08
<b>C. Governance pillar</b> .....	<b>88</b>	<b>51.84</b>
1st sub-pillar: Trust .....	71	51.54
2nd sub-pillar: Regulation.....	78	58.84
3rd sub-pillar: Inclusion.....	100	45.14
<b>D. Impact pillar</b> .....	<b>45</b>	<b>57.81</b>
1st sub-pillar: Economy .....	21	42.45
2nd sub-pillar: Quality of Life .....	66	61.13
3rd sub-pillar: SDG Contribution.....	77	69.83



## The Network Readiness Index in detail

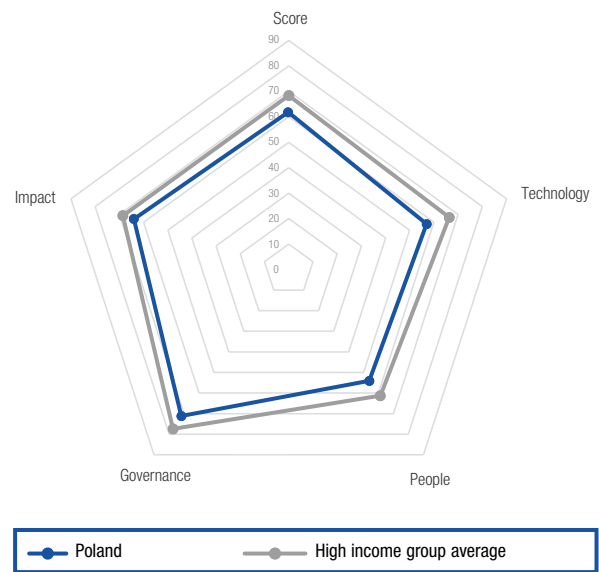
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	101	38.60
1.1.2 Handset prices.....	86	36.43
1.1.3 Households with internet access.....	84	38.88
1.1.4 4G mobile network coverage.....	79	80.00
1.1.5 Fixed-broadband subscriptions.....	n/a	n/a
1.1.6 International Internet bandwidth.....	96	61.46
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	98	38.93
1.2.3 Intellectual property receipts.....	77	0.13
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	71	49.66
1.3.2 Company investment in emerging technology.....	31	57.80
1.3.3 Government procurement of advanced technology products ..	78	33.81
1.3.4 ICT PCT patent applications.....	62	2.75
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	51	1.18
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	78	55.93
2.1.2 Active mobile-broadband subscriptions.....	74	25.59
2.1.3 Use of virtual social networks.....	21	70.89
2.1.4 Tertiary enrolment.....	75	25.52
2.1.5 Adult literacy rate.....	29	97.22
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	65	43.88
2.2.2 Internet shopping.....	70	11.62
2.2.3 Professionals.....	97	12.43
2.2.4 Technicians and associate professionals.....	95	16.86
2.2.5 Extent of staff training.....	25	67.20
2.2.6 R&D expenditure by businesses.....	71	1.25
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	30	86.92
2.3.2 Publication and use of open data.....	22	54.70
2.3.3 ICT use and government efficiency.....	85	35.93
2.3.4 R&D expenditure by governments and higher education.....	93	6.77

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	91	42.44
3.1.2 Software piracy rate.....	63	33.78
3.1.3 Secure Internet servers.....	98	38.62
3.1.4 Cybersecurity.....	60	68.42
3.1.5 Online trust and safety.....	26	74.43
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	65	52.42
3.2.2 Ease of doing business.....	85	57.66
3.2.3 Legal framework's adaptability to digital business models....	80	37.32
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	69	40.76
3.2.6 ICT regulatory environment.....	101	64.87
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	19	92.99
3.3.2 Socioeconomic gap in use of digital payments.....	116	17.77
3.3.3 Availability of local online content.....	73	48.19
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	113	21.61
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	20	57.04
4.1.2 High-tech exports.....	1	100.00
4.1.3 PCT patent applications.....	76	0.08
4.1.4 Labour productivity per employee.....	82	12.67
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	59	58.57
4.2.2 Freedom to make life choices.....	18	90.13
4.2.3 Income inequality.....	88	48.95
4.2.4 Healthy life expectancy at birth.....	93	46.89
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	90	80.28
4.3.2 Pollution.....	60	85.72
4.3.3 Road safety.....	49	70.00
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	95	43.33



# Poland

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>37</b>	<b>61.46</b>
<b>A. Technology pillar</b> .....	<b>39</b>	<b>57.06</b>
1st sub-pillar: Access.....	32	80.34
2nd sub-pillar: Content.....	36	60.74
3rd sub-pillar: Future Technologies.....	63	30.09
<b>B. People pillar</b> .....	<b>34</b>	<b>54.16</b>
1st sub-pillar: Individuals .....	27	64.92
2nd sub-pillar: Businesses .....	32	48.51
3rd sub-pillar: Governments .....	46	49.06
<b>C. Governance pillar</b> .....	<b>38</b>	<b>71.14</b>
1st sub-pillar: Trust .....	36	69.44
2nd sub-pillar: Regulation.....	49	67.78
3rd sub-pillar: Inclusion.....	27	76.19
<b>D. Impact pillar</b> .....	<b>35</b>	<b>63.49</b>
1st sub-pillar: Economy .....	44	28.07
2nd sub-pillar: Quality of Life .....	32	72.34
3rd sub-pillar: SDG Contribution.....	36	90.07



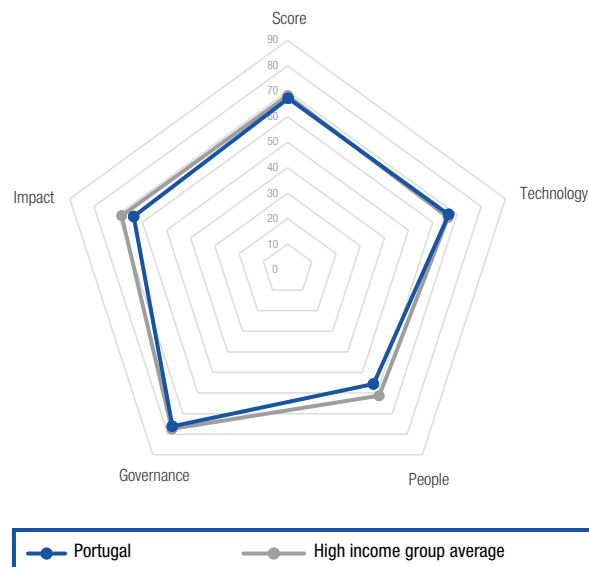
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	10	91.61
1.1.2 Handset prices.....	42	57.01
1.1.3 Households with internet access.....	35	83.13
1.1.4 4G mobile network coverage.....	1	100.00
1.1.5 Fixed-broadband subscriptions.....	61	67.89
1.1.6 International Internet bandwidth.....	91	62.73
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	40	72.83
1.2.3 Intellectual property receipts.....	37	1.08
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	62	53.66
1.3.2 Company investment in emerging technology.....	72	31.90
1.3.3 Government procurement of advanced technology products ..	76	34.59
1.3.4 ICT PCT patent applications.....	33	20.62
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	31	12.54
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	47	75.39
2.1.2 Active mobile-broadband subscriptions.....	3	67.90
2.1.3 Use of virtual social networks.....	80	45.95
2.1.4 Tertiary enrolment.....	33	49.35
2.1.5 Adult literacy rate.....	20	98.09
2.1.6 ICT skills.....	34	52.85
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	43	62.60
2.2.2 Internet shopping.....	23	61.28
2.2.3 Professionals.....	23	51.54
2.2.4 Technicians and associate professionals.....	28	58.11
2.2.5 Extent of staff training.....	59	40.54
2.2.6 R&D expenditure by businesses.....	30	16.99
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	17	92.31
2.3.2 Publication and use of open data.....	47	33.95
2.3.3 ICT use and government efficiency.....	79	37.46
2.3.4 R&D expenditure by governments and higher education.....	50	32.51

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	44	63.09
3.1.2 Software piracy rate.....	36	58.11
3.1.3 Secure Internet servers.....	27	82.71
3.1.4 Cybersecurity.....	31	87.28
3.1.5 Online trust and safety.....	57	56.01
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	36	70.84
3.2.2 Ease of doing business.....	39	81.63
3.2.3 Legal framework's adaptability to digital business models.....	60	43.83
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	106	20.63
3.2.6 ICT regulatory environment.....	34	89.77
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	31	87.90
3.3.2 Socioeconomic gap in use of digital payments.....	23	92.30
3.3.3 Availability of local online content.....	46	61.39
3.3.4 Gender gap in internet use.....	28	65.60
3.3.5 Rural gap in use of digital payments.....	41	73.79
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	38	45.17
4.1.2 High-tech exports.....	42	20.09
4.1.3 PCT patent applications.....	37	3.50
4.1.4 Labour productivity per employee.....	34	43.54
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	41	65.49
4.2.2 Freedom to make life choices.....	58	69.99
4.2.3 Income inequality.....	24	82.11
4.2.4 Healthy life expectancy at birth.....	37	71.79
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	32	99.02
4.3.2 Pollution.....	67	83.28
4.3.3 Road safety.....	41	78.12
4.3.4 Reading proficiency in schools.....	7	98.79
4.3.5 Maths proficiency in schools.....	14	81.18
4.3.6 Use of clean fuels and technology.....	1	100.00

# Portugal

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>28</b>	<b>65.56</b>
<b>A. Technology pillar</b> .....	<b>24</b>	<b>65.67</b>
1st sub-pillar: Access.....	25	83.36
2nd sub-pillar: Content.....	28	66.45
3rd sub-pillar: Future Technologies.....	29	47.21
<b>B. People pillar</b> .....	<b>30</b>	<b>56.46</b>
1st sub-pillar: Individuals .....	43	60.26
2nd sub-pillar: Businesses .....	40	41.64
3rd sub-pillar: Governments .....	21	67.49
<b>C. Governance pillar</b> .....	<b>27</b>	<b>76.80</b>
1st sub-pillar: Trust .....	21	78.60
2nd sub-pillar: Regulation.....	32	76.66
3rd sub-pillar: Inclusion.....	28	75.13
<b>D. Impact pillar</b> .....	<b>36</b>	<b>63.30</b>
1st sub-pillar: Economy .....	60	21.63
2nd sub-pillar: Quality of Life .....	27	74.35
3rd sub-pillar: SDG Contribution.....	19	93.93



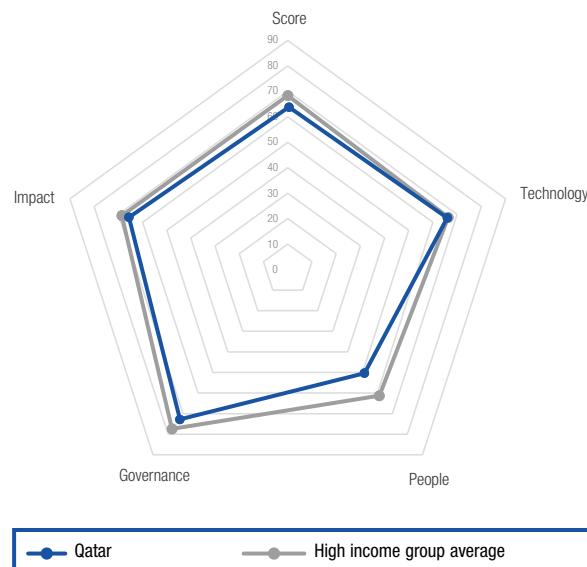
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	47	70.08
1.1.2 Handset prices.....	22	67.20
1.1.3 Households with internet access.....	48	78.05
1.1.4 4G mobile network coverage.....	22	99.20
1.1.5 Fixed-broadband subscriptions.....	4	99.21
1.1.6 International Internet bandwidth.....	52	69.77
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	34	76.58
1.2.3 Intellectual property receipts.....	49	0.78
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	20	84.35
1.3.2 Company investment in emerging technology.....	39	48.89
1.3.3 Government procurement of advanced technology products ..	40	46.78
1.3.4 ICT PCT patent applications.....	30	28.47
1.3.5 Computer software spending.....	8	54.55
1.3.6 Robot density.....	25	20.21
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	52	72.19
2.1.2 Active mobile-broadband subscriptions.....	69	27.80
2.1.3 Use of virtual social networks.....	38	64.66
2.1.4 Tertiary enrolment.....	40	46.48
2.1.5 Adult literacy rate.....	41	94.05
2.1.6 ICT skills.....	28	56.39
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	53	57.22
2.2.2 Internet shopping.....	42	32.24
2.2.3 Professionals.....	26	48.70
2.2.4 Technicians and associate professionals.....	43	49.29
2.2.5 Extent of staff training.....	54	45.37
2.2.6 R&D expenditure by businesses.....	29	17.02
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	17	92.31
2.3.2 Publication and use of open data.....	34	41.89
2.3.3 ICT use and government efficiency.....	13	78.14
2.3.4 R&D expenditure by governments and higher education.....	20	57.63

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	24	79.35
3.1.2 Software piracy rate.....	27	68.92
3.1.3 Secure Internet servers.....	28	82.58
3.1.4 Cybersecurity.....	44	81.03
3.1.5 Online trust and safety.....	14	81.13
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	35	71.02
3.2.2 Ease of doing business.....	38	81.78
3.2.3 Legal framework's adaptability to digital business models....	56	44.98
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	32	66.06
3.2.6 ICT regulatory environment.....	11	96.14
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	30	88.54
3.3.2 Socioeconomic gap in use of digital payments.....	36	82.32
3.3.3 Availability of local online content.....	33	70.00
3.3.4 Gender gap in internet use.....	55	58.97
3.3.5 Rural gap in use of digital payments.....	25	75.82
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	59	32.55
4.1.2 High-tech exports.....	76	9.97
4.1.3 PCT patent applications.....	32	5.95
4.1.4 Labour productivity per employee.....	45	38.03
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	53	59.62
4.2.2 Freedom to make life choices.....	37	80.77
4.2.3 Income inequality.....	50	72.37
4.2.4 Healthy life expectancy at birth.....	21	84.62
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	16	99.68
4.3.2 Pollution.....	10	97.58
4.3.3 Road safety.....	29	85.31
4.3.4 Reading proficiency in schools.....	13	97.77
4.3.5 Maths proficiency in schools.....	12	83.20
4.3.6 Use of clean fuels and technology.....	1	100.00

# Qatar

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>33</b>	<b>63.73</b>
<b>A. Technology pillar.....</b>	<b>25</b>	<b>65.41</b>
1st sub-pillar: Access.....	2	92.22
2nd sub-pillar: Content.....	49	50.59
3rd sub-pillar: Future Technologies.....	21	53.43
<b>B. People pillar.....</b>	<b>44</b>	<b>50.49</b>
1st sub-pillar: Individuals .....	25	66.44
2nd sub-pillar: Businesses .....	63	29.79
3rd sub-pillar: Governments .....	37	55.25
<b>C. Governance pillar .....</b>	<b>32</b>	<b>72.90</b>
1st sub-pillar: Trust .....	37	69.24
2nd sub-pillar: Regulation.....	35	75.30
3rd sub-pillar: Inclusion.....	31	74.15
<b>D. Impact pillar .....</b>	<b>29</b>	<b>66.11</b>
1st sub-pillar: Economy .....	8	56.41
2nd sub-pillar: Quality of Life .....	23	77.63
3rd sub-pillar: SDG Contribution.....	82	64.27



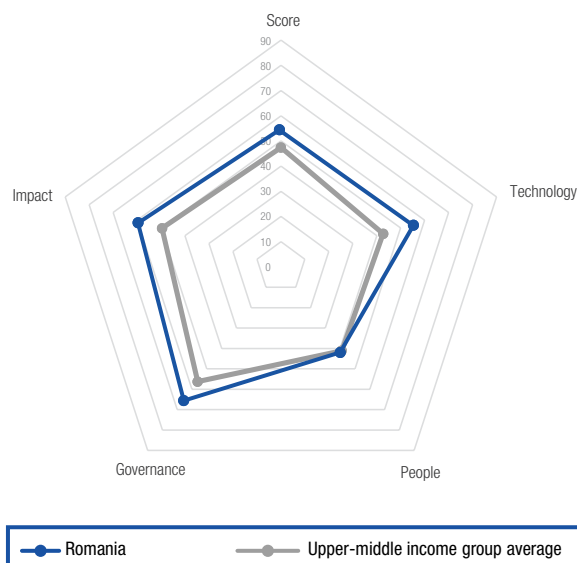
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	17	84.43
1.1.2 Handset prices.....	1	100.00
1.1.3 Households with internet access.....	14	93.59
1.1.4 4G mobile network coverage.....	19	99.50
1.1.5 Fixed-broadband subscriptions.....	19	95.48
1.1.6 International Internet bandwidth.....	35	72.56
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	51	66.08
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	22	81.54
1.3.2 Company investment in emerging technology.....	17	68.74
1.3.3 Government procurement of advanced technology products ..	3	89.48
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	67	0.10
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	1	100.00
2.1.2 Active mobile-broadband subscriptions.....	14	49.15
2.1.3 Use of virtual social networks.....	1	100.00
2.1.4 Tertiary enrolment.....	94	12.55
2.1.5 Adult literacy rate.....	56	89.91
2.1.6 ICT skills.....	42	47.02
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	n/a	n/a
2.2.2 Internet shopping.....	n/a	n/a
2.2.3 Professionals.....	71	22.21
2.2.4 Technicians and associate professionals.....	73	29.12
2.2.5 Extent of staff training.....	26	65.61
2.2.6 R&D expenditure by businesses.....	63	2.22
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	48	76.93
2.3.2 Publication and use of open data.....	71	19.26
2.3.3 ICT use and government efficiency.....	4	87.01
2.3.4 R&D expenditure by governments and higher education.....	43	37.79

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	36	70.09
3.1.2 Software piracy rate.....	38	56.76
3.1.3 Secure Internet servers.....	71	51.03
3.1.4 Cybersecurity.....	19	92.21
3.1.5 Online trust and safety.....	24	76.10
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	45	62.76
3.2.2 Ease of doing business.....	70	67.98
3.2.3 Legal framework's adaptability to digital business models.....	12	81.72
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	25	71.38
3.2.6 ICT regulatory environment.....	97	67.96
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	64	67.52
3.3.2 Socioeconomic gap in use of digital payments.....	n/a	n/a
3.3.3 Availability of local online content.....	12	87.69
3.3.4 Gender gap in internet use.....	17	67.24
3.3.5 Rural gap in use of digital payments.....	n/a	n/a
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	9	69.23
4.1.2 High-tech exports.....	118	0.00
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	1	100.00
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	31	69.10
4.2.2 Freedom to make life choices.....	15	91.64
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	36	72.16
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	15	99.72
4.3.2 Pollution.....	119	4.50
4.3.3 Road safety.....	39	79.38
4.3.4 Reading proficiency in schools.....	43	66.38
4.3.5 Maths proficiency in schools.....	51	35.68
4.3.6 Use of clean fuels and technology.....	1	100.00

# Romania

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>47</b>	<b>55.47</b>
<b>A. Technology pillar.....</b>	<b>41</b>	<b>56.25</b>
1st sub-pillar: Access.....	18	85.22
2nd sub-pillar: Content.....	37	60.73
3rd sub-pillar: Future Technologies.....	90	22.78
<b>B. People pillar.....</b>	<b>66</b>	<b>41.29</b>
1st sub-pillar: Individuals .....	56	56.89
2nd sub-pillar: Businesses .....	62	29.96
3rd sub-pillar: Governments .....	86	37.01
<b>C. Governance pillar .....</b>	<b>49</b>	<b>64.99</b>
1st sub-pillar: Trust .....	44	65.77
2nd sub-pillar: Regulation.....	36	75.01
3rd sub-pillar: Inclusion.....	86	54.21
<b>D. Impact pillar .....</b>	<b>40</b>	<b>59.36</b>
1st sub-pillar: Economy .....	45	27.38
2nd sub-pillar: Quality of Life .....	44	68.47
3rd sub-pillar: SDG Contribution.....	52	82.23



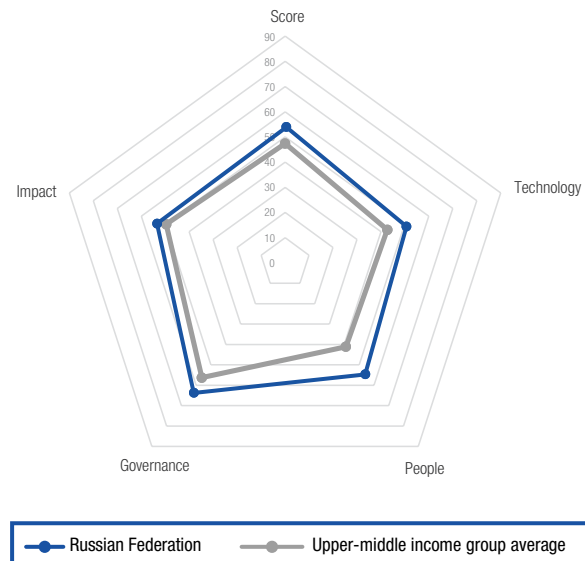
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	1	100.00
1.1.2 Handset prices.....	9	78.47
1.1.3 Households with internet access.....	44	79.61
1.1.4 4G mobile network coverage.....	62	92.56
1.1.5 Fixed-broadband subscriptions.....	26	92.92
1.1.6 International Internet bandwidth.....	68	67.77
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	39	72.91
1.2.3 Intellectual property receipts.....	62	0.48
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	69	50.55
1.3.2 Company investment in emerging technology.....	89	25.33
1.3.3 Government procurement of advanced technology products .....	116	13.77
1.3.4 ICT PCT patent applications.....	43	13.53
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	38	6.25
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	62	67.76
2.1.2 Active mobile-broadband subscriptions.....	46	33.59
2.1.3 Use of virtual social networks.....	58	55.30
2.1.4 Tertiary enrolment.....	62	34.92
2.1.5 Adult literacy rate.....	19	98.25
2.1.6 ICT skills.....	35	51.54
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	40	63.87
2.2.2 Internet shopping.....	59	19.99
2.2.3 Professionals.....	40	39.23
2.2.4 Technicians and associate professionals.....	78	25.69
2.2.5 Extent of staff training.....	109	23.73
2.2.6 R&D expenditure by businesses.....	48	7.24
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	77	62.31
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	96	30.00
2.3.4 R&D expenditure by governments and higher education.....	72	18.71

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	47	60.76
3.1.2 Software piracy rate.....	55	40.54
3.1.3 Secure Internet servers.....	29	82.56
3.1.4 Cybersecurity.....	73	60.20
3.1.5 Online trust and safety.....	7	84.78
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	51	61.22
3.2.2 Ease of doing business.....	n/a	n/a
3.2.3 Legal framework's adaptability to digital business models.....	38	54.63
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	33	65.38
3.2.6 ICT regulatory environment.....	22	93.83
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	66	66.88
3.3.2 Socioeconomic gap in use of digital payments.....	96	41.96
3.3.3 Availability of local online content.....	68	51.08
3.3.4 Gender gap in internet use.....	41	61.38
3.3.5 Rural gap in use of digital payments.....	96	49.73
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	23	54.28
4.1.2 High-tech exports.....	46	19.10
4.1.3 PCT patent applications.....	49	1.15
4.1.4 Labour productivity per employee.....	49	34.99
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	44	64.44
4.2.2 Freedom to make life choices.....	54	73.30
4.2.3 Income inequality.....	54	71.32
4.2.4 Healthy life expectancy at birth.....	58	64.84
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	75	89.65
4.3.2 Pollution.....	36	90.34
4.3.3 Road safety.....	46	76.25
4.3.4 Reading proficiency in schools.....	27	86.49
4.3.5 Maths proficiency in schools.....	36	57.29
4.3.6 Use of clean fuels and technology.....	73	93.33

# Russian Federation

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>48</b>	<b>54.98</b>
<b>A. Technology pillar</b> .....	<b>51</b>	<b>50.16</b>
1st sub-pillar: Access.....	59	69.43
2nd sub-pillar: Content.....	44	52.67
3rd sub-pillar: Future Technologies.....	72	28.39
<b>B. People pillar</b> .....	<b>39</b>	<b>53.32</b>
1st sub-pillar: Individuals .....	57	56.46
2nd sub-pillar: Businesses .....	35	45.24
3rd sub-pillar: Governments .....	32	58.24
<b>C. Governance pillar</b> .....	<b>56</b>	<b>62.44</b>
1st sub-pillar: Trust .....	54	58.81
2nd sub-pillar: Regulation.....	91	53.89
3rd sub-pillar: Inclusion.....	29	74.63
<b>D. Impact pillar</b> .....	<b>59</b>	<b>53.98</b>
1st sub-pillar: Economy .....	54	23.78
2nd sub-pillar: Quality of Life .....	85	54.42
3rd sub-pillar: SDG Contribution.....	49	83.74



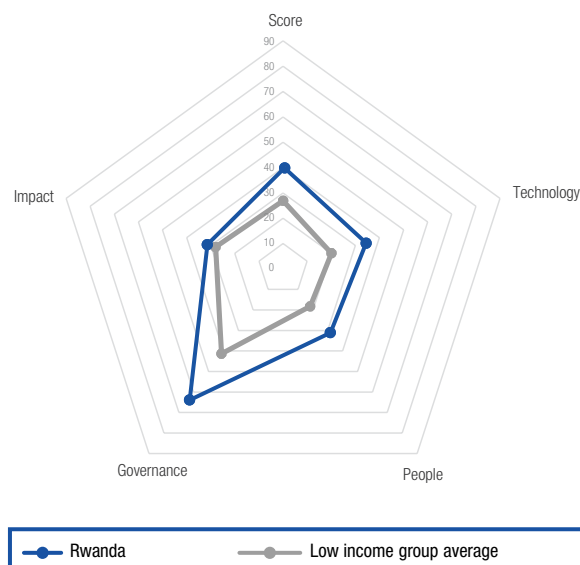
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	59	66.09
1.1.2 Handset prices.....	37	58.97
1.1.3 Households with internet access.....	52	75.01
1.1.4 4G mobile network coverage.....	87	70.00
1.1.5 Fixed-broadband subscriptions.....	50	76.74
1.1.6 International Internet bandwidth.....	53	69.74
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	43	70.39
1.2.3 Intellectual property receipts.....	40	1.00
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	77	43.63
1.3.2 Company investment in emerging technology.....	47	44.57
1.3.3 Government procurement of advanced technology products ..	56	42.91
1.3.4 ICT PCT patent applications.....	36	19.61
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	49	1.42
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	36	79.09
2.1.2 Active mobile-broadband subscriptions.....	49	33.31
2.1.3 Use of virtual social networks.....	76	48.02
2.1.4 Tertiary enrolment.....	17	59.72
2.1.5 Adult literacy rate.....	10	99.62
2.1.6 ICT skills.....	54	19.02
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	49	59.71
2.2.2 Internet shopping.....	40	34.47
2.2.3 Professionals.....	12	64.06
2.2.4 Technicians and associate professionals.....	32	56.29
2.2.5 Extent of staff training.....	60	40.02
2.2.6 R&D expenditure by businesses.....	31	16.90
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	25	90.77
2.3.2 Publication and use of open data.....	25	48.53
2.3.3 ICT use and government efficiency.....	42	54.50
2.3.4 R&D expenditure by governments and higher education.....	42	39.17

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	107	34.74
3.1.2 Software piracy rate.....	60	36.49
3.1.3 Secure Internet servers.....	45	72.99
3.1.4 Cybersecurity.....	28	89.58
3.1.5 Online trust and safety.....	54	60.27
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	99	39.51
3.2.2 Ease of doing business.....	27	84.78
3.2.3 Legal framework's adaptability to digital business models.....	37	54.98
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	80	33.15
3.2.6 ICT regulatory environment.....	116	35.91
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	23	91.08
3.3.2 Socioeconomic gap in use of digital payments.....	33	83.18
3.3.3 Availability of local online content.....	44	63.11
3.3.4 Gender gap in internet use.....	34	63.10
3.3.5 Rural gap in use of digital payments.....	44	72.70
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	49	38.54
4.1.2 High-tech exports.....	41	20.77
4.1.3 PCT patent applications.....	47	2.07
4.1.4 Labour productivity per employee.....	52	33.74
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	68	51.16
4.2.2 Freedom to make life choices.....	95	46.47
4.2.3 Income inequality.....	62	66.58
4.2.4 Healthy life expectancy at birth.....	86	53.48
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	68	91.80
4.3.2 Pollution.....	34	90.95
4.3.3 Road safety.....	79	52.19
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Rwanda

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>89</b>	<b>39.97</b>
<b>A. Technology pillar</b> .....	<b>91</b>	<b>33.78</b>
1st sub-pillar: Access.....	98	38.18
2nd sub-pillar: Content.....	105	16.79
3rd sub-pillar: Future Technologies.....	32	46.36
<b>B. People pillar</b> .....	<b>95</b>	<b>30.70</b>
1st sub-pillar: Individuals .....	114	18.38
2nd sub-pillar: Businesses .....	106	14.97
3rd sub-pillar: Governments .....	30	58.75
<b>C. Governance pillar</b> .....	<b>54</b>	<b>63.48</b>
1st sub-pillar: Trust .....	60	57.13
2nd sub-pillar: Regulation.....	30	77.22
3rd sub-pillar: Inclusion.....	79	56.08
<b>D. Impact pillar</b> .....	<b>105</b>	<b>31.94</b>
1st sub-pillar: Economy .....	74	15.99
2nd sub-pillar: Quality of Life .....	99	48.30
3rd sub-pillar: SDG Contribution.....	115	31.54



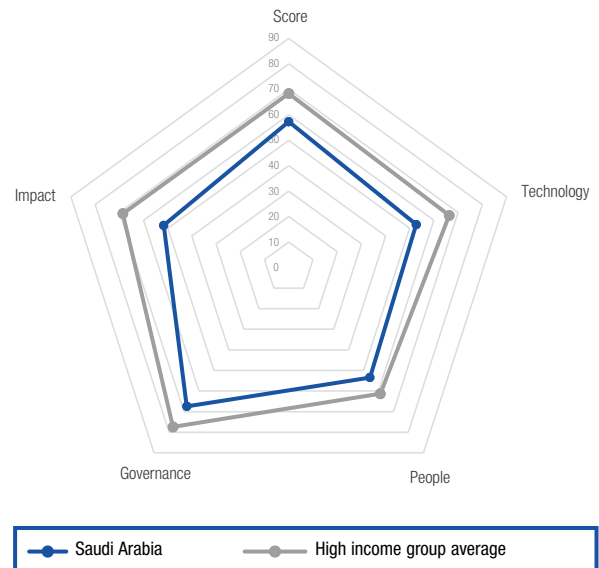
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	110	33.10
1.1.2 Handset prices.....	118	2.90
1.1.3 Households with internet access.....	117	3.23
1.1.4 4G mobile network coverage.....	49	96.60
1.1.5 Fixed-broadband subscriptions.....	74	45.37
1.1.6 International Internet bandwidth.....	108	56.34
1.1.7 Internet access in schools.....	52	29.72
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	117	17.02
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	48	60.49
1.3.2 Company investment in emerging technology.....	42	45.79
1.3.3 Government procurement of advanced technology products ..	7	79.18
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	112	13.32
2.1.2 Active mobile-broadband subscriptions.....	104	13.53
2.1.3 Use of virtual social networks.....	119	2.18
2.1.4 Tertiary enrolment.....	109	4.35
2.1.5 Adult literacy rate.....	86	58.51
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	94	20.25
2.2.2 Internet shopping.....	113	1.23
2.2.3 Professionals.....	98	12.23
2.2.4 Technicians and associate professionals.....	110	5.48
2.2.5 Extent of staff training.....	70	35.64
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	67	69.23
2.3.2 Publication and use of open data.....	70	19.62
2.3.3 ICT use and government efficiency.....	3	87.40
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	55	56.03
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	107	30.58
3.1.4 Cybersecurity.....	51	74.34
3.1.5 Online trust and safety.....	41	67.58
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	63	53.27
3.2.2 Ease of doing business.....	37	81.81
3.2.3 Legal framework's adaptability to digital business models.....	8	84.09
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	35	61.55
3.2.6 ICT regulatory environment.....	69	82.62
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	59	72.61
3.3.2 Socioeconomic gap in use of digital payments.....	103	40.63
3.3.3 Availability of local online content.....	80	41.41
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	56	69.65
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	107	8.22
4.1.2 High-tech exports.....	37	23.76
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	n/a	n/a
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	117	10.49
4.2.2 Freedom to make life choices.....	16	91.62
4.2.3 Income inequality.....	87	50.79
4.2.4 Healthy life expectancy at birth.....	98	40.29
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	106	50.07
4.3.2 Pollution.....	105	60.48
4.3.3 Road safety.....	112	15.62
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	111	0.00

# Saudi Arabia

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>45</b>	<b>56.49</b>
<b>A. Technology pillar.....</b>	<b>46</b>	<b>52.47</b>
1st sub-pillar: Access.....	19	84.75
2nd sub-pillar: Content.....	86	31.66
3rd sub-pillar: Future Technologies.....	35	41.00
<b>B. People pillar.....</b>	<b>35</b>	<b>54.02</b>
1st sub-pillar: Individuals .....	22	67.37
2nd sub-pillar: Businesses .....	49	35.10
3rd sub-pillar: Governments .....	29	59.58
<b>C. Governance pillar .....</b>	<b>44</b>	<b>67.99</b>
1st sub-pillar: Trust .....	46	64.24
2nd sub-pillar: Regulation.....	47	68.42
3rd sub-pillar: Inclusion.....	42	71.31
<b>D. Impact pillar .....</b>	<b>68</b>	<b>51.49</b>
1st sub-pillar: Economy .....	34	33.46
2nd sub-pillar: Quality of Life .....	43	68.61
3rd sub-pillar: SDG Contribution.....	97	52.41



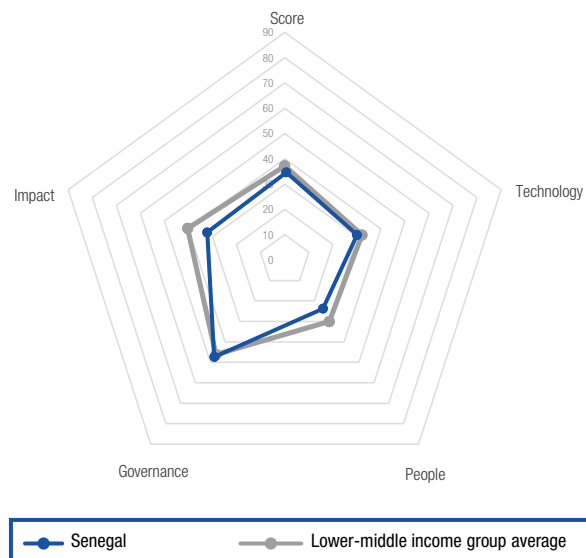
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	20	83.49
1.1.2 Handset prices.....	44	56.91
1.1.3 Households with internet access.....	12	94.16
1.1.4 4G mobile network coverage.....	59	93.10
1.1.5 Fixed-broadband subscriptions.....	35	87.61
1.1.6 International Internet bandwidth.....	12	77.95
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	69	56.71
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	39	68.01
1.3.2 Company investment in emerging technology.....	30	58.27
1.3.3 Government procurement of advanced technology products ..	14	66.04
1.3.4 ICT PCT patent applications.....	41	16.83
1.3.5 Computer software spending.....	21	36.36
1.3.6 Robot density.....	60	0.47
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	12	92.94
2.1.2 Active mobile-broadband subscriptions.....	22	43.07
2.1.3 Use of virtual social networks.....	30	67.78
2.1.4 Tertiary enrolment.....	32	49.50
2.1.5 Adult literacy rate.....	47	92.80
2.1.6 ICT skills.....	25	58.16
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	n/a	n/a
2.2.2 Internet shopping.....	44	31.95
2.2.3 Professionals.....	109	5.09
2.2.4 Technicians and associate professionals.....	38	52.94
2.2.5 Extent of staff training.....	43	50.40
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	48	76.93
2.3.2 Publication and use of open data.....	73	18.66
2.3.3 ICT use and government efficiency.....	7	83.17
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	54	56.57
3.1.2 Software piracy rate.....	38	56.76
3.1.3 Secure Internet servers.....	89	43.36
3.1.4 Cybersecurity.....	14	94.52
3.1.5 Online trust and safety.....	37	70.02
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	71	50.40
3.2.2 Ease of doing business.....	58	73.10
3.2.3 Legal framework's adaptability to digital business models.....	16	74.24
3.2.4 E-commerce legislation.....	100	50.00
3.2.5 Social safety net protection.....	29	68.94
3.2.6 ICT regulatory environment.....	22	93.83
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	64	67.52
3.3.2 Socioeconomic gap in use of digital payments.....	43	79.32
3.3.3 Availability of local online content.....	27	77.33
3.3.4 Gender gap in internet use.....	47	60.82
3.3.5 Rural gap in use of digital payments.....	46	71.56
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	34	48.32
4.1.2 High-tech exports.....	110	1.15
4.1.3 PCT patent applications.....	38	3.31
4.1.4 Labour productivity per employee.....	6	81.05
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	33	68.72
4.2.2 Freedom to make life choices.....	50	75.57
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	72	61.54
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	1	100.00
4.3.2 Pollution.....	117	18.00
4.3.3 Road safety.....	109	18.44
4.3.4 Reading proficiency in schools.....	46	63.48
4.3.5 Maths proficiency in schools.....	64	14.54
4.3.6 Use of clean fuels and technology.....	1	100.00

# Senegal

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>103</b>	<b>33.67</b>
<b>A. Technology pillar</b> .....	<b>99</b>	<b>29.31</b>
1st sub-pillar: Access.....	106	33.51
2nd sub-pillar: Content.....	109	13.14
3rd sub-pillar: Future Technologies.....	34	41.29
<b>B. People pillar</b> .....	<b>106</b>	<b>24.62</b>
1st sub-pillar: Individuals .....	109	21.60
2nd sub-pillar: Businesses .....	113	11.15
3rd sub-pillar: Governments .....	73	41.10
<b>C. Governance pillar</b> .....	<b>96</b>	<b>48.12</b>
1st sub-pillar: Trust .....	102	37.33
2nd sub-pillar: Regulation.....	87	55.88
3rd sub-pillar: Inclusion.....	90	51.16
<b>D. Impact pillar</b> .....	<b>104</b>	<b>32.65</b>
1st sub-pillar: Economy .....	82	13.27
2nd sub-pillar: Quality of Life .....	110	38.74
3rd sub-pillar: SDG Contribution.....	102	45.93



## The Network Readiness Index in detail

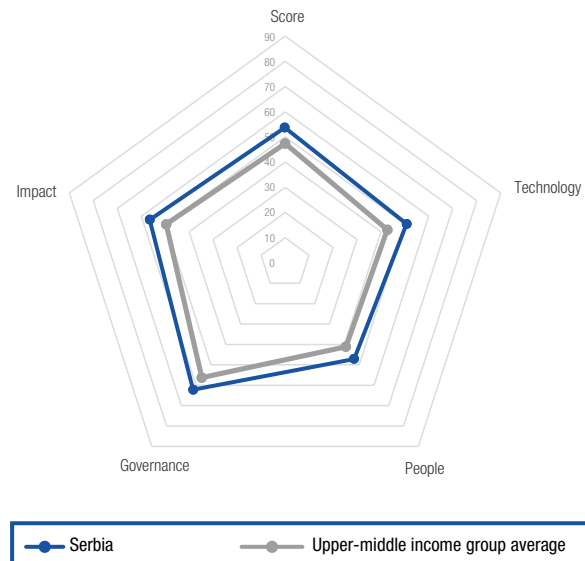
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	95	46.44
1.1.2 Handset prices.....	101	27.73
1.1.3 Households with internet access.....	100	19.08
1.1.4 4G mobile network coverage.....	95	62.00
1.1.5 Fixed-broadband subscriptions.....	92	15.86
1.1.6 International Internet bandwidth.....	114	51.13
1.1.7 Internet access in schools.....	58	12.30
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	112	25.08
1.2.3 Intellectual property receipts.....	52	0.68
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	57	55.21
1.3.2 Company investment in emerging technology.....	59	36.23
1.3.3 Government procurement of advanced technology products ..	42	46.43
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	93	40.29
2.1.2 Active mobile-broadband subscriptions.....	103	14.54
2.1.3 Use of virtual social networks.....	102	18.92
2.1.4 Tertiary enrolment.....	98	8.79
2.1.5 Adult literacy rate.....	93	25.47
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	93	20.77
2.2.2 Internet shopping.....	105	3.24
2.2.3 Professionals.....	104	8.67
2.2.4 Technicians and associate professionals.....	109	5.56
2.2.5 Extent of staff training.....	94	28.61
2.2.6 R&D expenditure by businesses.....	88	0.04
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	101	42.31
2.3.2 Publication and use of open data.....	91	8.74
2.3.3 ICT use and government efficiency.....	52	48.10
2.3.4 R&D expenditure by governments and higher education.....	16	65.26

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	70	48.59
3.1.2 Software piracy rate.....	74	20.27
3.1.3 Secure Internet servers.....	114	24.02
3.1.4 Cybersecurity.....	98	31.36
3.1.5 Online trust and safety.....	51	62.40
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	78	49.04
3.2.2 Ease of doing business.....	99	51.37
3.2.3 Legal framework's adaptability to digital business models....	42	52.65
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	96	27.29
3.2.6 ICT regulatory environment.....	79	79.93
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	98	43.95
3.3.2 Socioeconomic gap in use of digital payments.....	60	70.00
3.3.3 Availability of local online content.....	88	35.87
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	83	54.81
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	72	27.47
4.1.2 High-tech exports.....	90	5.32
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	90	7.03
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	98	35.66
4.2.2 Freedom to make life choices.....	111	23.30
4.2.3 Income inequality.....	75	59.74
4.2.4 Healthy life expectancy at birth.....	101	36.26
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	104	55.25
4.3.2 Pollution.....	100	64.12
4.3.3 Road safety.....	96	35.31
4.3.4 Reading proficiency in schools.....	65	28.25
4.3.5 Maths proficiency in schools.....	29	63.76
4.3.6 Use of clean fuels and technology.....	100	28.89



# Serbia

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>52</b>	<b>53.65</b>
<b>A. Technology pillar</b> .....	<b>50</b>	<b>50.54</b>
1st sub-pillar: Access.....	51	73.79
2nd sub-pillar: Content.....	39	58.26
3rd sub-pillar: Future Technologies.....	104	19.59
<b>B. People pillar</b> .....	<b>51</b>	<b>46.53</b>
1st sub-pillar: Individuals .....	63	55.30
2nd sub-pillar: Businesses .....	45	37.20
3rd sub-pillar: Governments .....	56	47.09
<b>C. Governance pillar</b> .....	<b>60</b>	<b>61.49</b>
1st sub-pillar: Trust .....	63	56.23
2nd sub-pillar: Regulation.....	68	62.44
3rd sub-pillar: Inclusion.....	55	65.80
<b>D. Impact pillar</b> .....	<b>55</b>	<b>56.03</b>
1st sub-pillar: Economy .....	46	26.38
2nd sub-pillar: Quality of Life .....	69	59.56
3rd sub-pillar: SDG Contribution.....	53	82.14



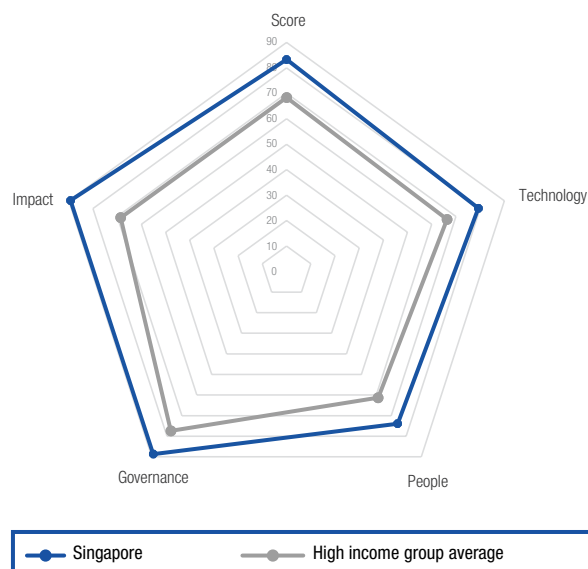
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	58	66.86
1.1.2 Handset prices.....	66	44.90
1.1.3 Households with internet access.....	58	71.09
1.1.4 4G mobile network coverage.....	48	96.70
1.1.5 Fixed-broadband subscriptions.....	27	92.91
1.1.6 International Internet bandwidth.....	48	70.25
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	42	71.07
1.2.3 Intellectual property receipts.....	35	1.26
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	80	43.11
1.3.2 Company investment in emerging technology.....	88	25.53
1.3.3 Government procurement of advanced technology products ..	91	28.32
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	53	0.99
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	56	70.74
2.1.2 Active mobile-broadband subscriptions.....	78	25.01
2.1.3 Use of virtual social networks.....	84	41.79
2.1.4 Tertiary enrolment.....	34	48.86
2.1.5 Adult literacy rate.....	27	97.39
2.1.6 ICT skills.....	40	48.00
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	28	71.91
2.2.2 Internet shopping.....	52	25.17
2.2.3 Professionals.....	47	35.28
2.2.4 Technicians and associate professionals.....	40	50.60
2.2.5 Extent of staff training.....	83	31.60
2.2.6 R&D expenditure by businesses.....	45	8.65
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	57	70.77
2.3.2 Publication and use of open data.....	64	22.77
2.3.3 ICT use and government efficiency.....	68	41.57
2.3.4 R&D expenditure by governments and higher education.....	26	53.24

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	67	49.99
3.1.2 Software piracy rate.....	65	31.08
3.1.3 Secure Internet servers.....	41	75.42
3.1.4 Cybersecurity.....	60	68.42
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	66	51.58
3.2.2 Ease of doing business.....	43	80.34
3.2.3 Legal framework's adaptability to digital business models.....	64	42.84
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	88	30.47
3.2.6 ICT regulatory environment.....	20	94.41
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	48	78.98
3.3.2 Socioeconomic gap in use of digital payments.....	54	73.24
3.3.3 Availability of local online content.....	42	63.28
3.3.4 Gender gap in internet use.....	70	51.52
3.3.5 Rural gap in use of digital payments.....	73	62.00
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	56	33.50
4.1.2 High-tech exports.....	n/a	n/a
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	71	19.26
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	52	59.97
4.2.2 Freedom to make life choices.....	93	48.93
4.2.3 Income inequality.....	72	61.58
4.2.4 Healthy life expectancy at birth.....	48	67.77
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	81	87.51
4.3.2 Pollution.....	80	79.07
4.3.3 Road safety.....	29	85.31
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	83	76.67

# Singapore

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>2</b>	<b>82.13</b>
<b>A. Technology pillar.....</b>	<b>6</b>	<b>78.45</b>
1st sub-pillar: Access.....	5	89.69
2nd sub-pillar: Content.....	16	71.48
3rd sub-pillar: Future Technologies.....	4	74.19
<b>B. People pillar.....</b>	<b>9</b>	<b>73.55</b>
1st sub-pillar: Individuals .....	7	73.20
2nd sub-pillar: Businesses .....	16	64.47
3rd sub-pillar: Governments .....	5	82.97
<b>C. Governance pillar .....</b>	<b>6</b>	<b>88.19</b>
1st sub-pillar: Trust .....	13	85.56
2nd sub-pillar: Regulation.....	5	90.83
3rd sub-pillar: Inclusion.....	2	88.19
<b>D. Impact pillar .....</b>	<b>1</b>	<b>88.33</b>
1st sub-pillar: Economy .....	1	82.22
2nd sub-pillar: Quality of Life .....	12	86.28
3rd sub-pillar: SDG Contribution.....	9	96.49



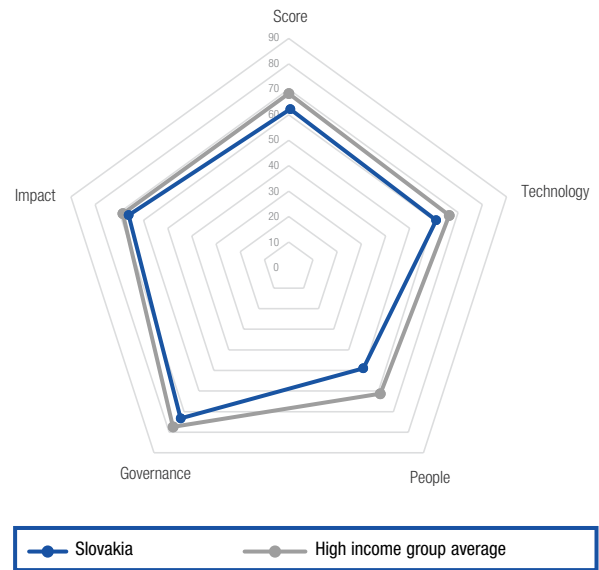
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	7	93.63
1.1.2 Handset prices.....	27	64.61
1.1.3 Households with internet access.....	6	97.58
1.1.4 4G mobile network coverage.....	1	100.00
1.1.5 Fixed-broadband subscriptions.....	15	95.90
1.1.6 International Internet bandwidth.....	3	86.40
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	1	100.00
1.2.3 Intellectual property receipts.....	15	9.66
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	15	87.11
1.3.2 Company investment in emerging technology.....	13	76.79
1.3.3 Government procurement of advanced technology products ..	5	84.99
1.3.4 ICT PCT patent applications.....	10	68.96
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	1	100.00
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	22	87.22
2.1.2 Active mobile-broadband subscriptions.....	6	57.25
2.1.3 Use of virtual social networks.....	9	79.21
2.1.4 Tertiary enrolment.....	13	61.84
2.1.5 Adult literacy rate.....	35	95.92
2.1.6 ICT skills.....	26	57.77
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	n/a	n/a
2.2.2 Internet shopping.....	22	61.58
2.2.3 Professionals.....	21	51.81
2.2.4 Technicians and associate professionals.....	4	90.75
2.2.5 Extent of staff training.....	6	84.23
2.2.6 R&D expenditure by businesses.....	16	34.00
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	2	98.46
2.3.2 Publication and use of open data.....	23	52.69
2.3.3 ICT use and government efficiency.....	1	100.00
2.3.4 R&D expenditure by governments and higher education.....	8	80.74

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	7	95.41
3.1.2 Software piracy rate.....	17	83.78
3.1.3 Secure Internet servers.....	3	96.81
3.1.4 Cybersecurity.....	6	96.38
3.1.5 Online trust and safety.....	60	55.40
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	2	98.36
3.2.2 Ease of doing business.....	2	99.00
3.2.3 Legal framework's adaptability to digital business models....	4	94.44
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	38	59.91
3.2.6 ICT regulatory environment.....	25	93.25
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	13	96.18
3.3.2 Socioeconomic gap in use of digital payments.....	25	90.74
3.3.3 Availability of local online content.....	7	90.82
3.3.4 Gender gap in internet use.....	32	64.36
3.3.5 Rural gap in use of digital payments.....	2	98.86
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	1	100.00
4.1.2 High-tech exports.....	3	98.01
4.1.3 PCT patent applications.....	13	41.21
4.1.4 Labour productivity per employee.....	2	89.64
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	30	69.10
4.2.2 Freedom to make life choices.....	20	89.73
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	1	100.00
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	1	100.00
4.3.2 Pollution.....	58	85.86
4.3.3 Road safety.....	3	99.69
4.3.4 Reading proficiency in schools.....	11	98.02
4.3.5 Maths proficiency in schools.....	4	95.38
4.3.6 Use of clean fuels and technology.....	1	100.00

# Slovakia

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>35</b>	<b>61.95</b>
<b>A. Technology pillar.....</b>	<b>35</b>	<b>60.00</b>
1st sub-pillar: Access.....	38	78.59
2nd sub-pillar: Content.....	38	60.43
3rd sub-pillar: Future Technologies.....	36	40.99
<b>B. People pillar.....</b>	<b>47</b>	<b>48.62</b>
1st sub-pillar: Individuals .....	80	50.73
2nd sub-pillar: Businesses .....	33	48.09
3rd sub-pillar: Governments .....	57	47.03
<b>C. Governance pillar .....</b>	<b>33</b>	<b>72.78</b>
1st sub-pillar: Trust .....	28	74.26
2nd sub-pillar: Regulation.....	44	70.96
3rd sub-pillar: Inclusion.....	37	73.13
<b>D. Impact pillar .....</b>	<b>28</b>	<b>66.39</b>
1st sub-pillar: Economy .....	33	33.95
2nd sub-pillar: Quality of Life .....	33	71.59
3rd sub-pillar: SDG Contribution.....	20	93.64



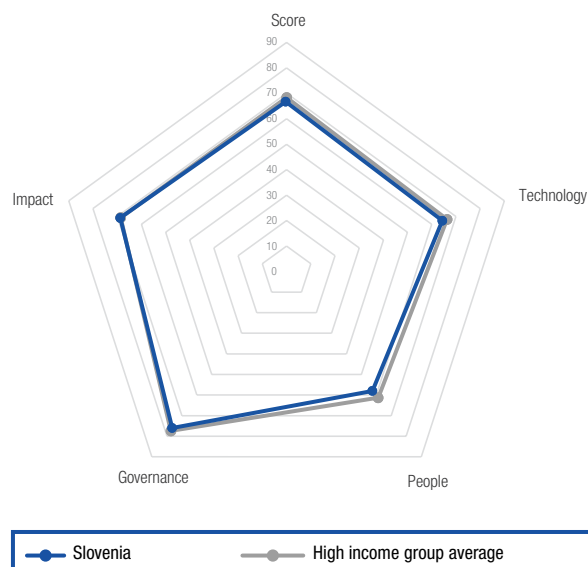
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	36	74.43
1.1.2 Handset prices.....	48	55.08
1.1.3 Households with internet access.....	43	80.08
1.1.4 4G mobile network coverage.....	54	94.00
1.1.5 Fixed-broadband subscriptions.....	53	74.89
1.1.6 International Internet bandwidth.....	36	71.94
1.1.7 Internet access in schools.....	24	99.70
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	37	74.63
1.2.3 Intellectual property receipts.....	69	0.22
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	38	68.28
1.3.2 Company investment in emerging technology.....	44	45.13
1.3.3 Government procurement of advanced technology products ..	68	37.98
1.3.4 ICT PCT patent applications.....	39	18.53
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	16	48.76
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	38	78.86
2.1.2 Active mobile-broadband subscriptions.....	52	32.78
2.1.3 Use of virtual social networks.....	74	49.06
2.1.4 Tertiary enrolment.....	64	33.74
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	24	59.21
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	25	74.57
2.2.2 Internet shopping.....	31	53.52
2.2.3 Professionals.....	51	31.56
2.2.4 Technicians and associate professionals.....	19	68.37
2.2.5 Extent of staff training.....	50	48.40
2.2.6 R&D expenditure by businesses.....	39	12.10
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	57	70.77
2.3.2 Publication and use of open data.....	30	44.90
2.3.3 ICT use and government efficiency.....	81	36.61
2.3.4 R&D expenditure by governments and higher education.....	46	35.83

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	40	65.40
3.1.2 Software piracy rate.....	25	72.97
3.1.3 Secure Internet servers.....	33	80.82
3.1.4 Cybersecurity.....	47	77.85
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	37	69.27
3.2.2 Ease of doing business.....	44	80.22
3.2.3 Legal framework's adaptability to digital business models.....	75	38.41
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	50	48.48
3.2.6 ICT regulatory environment.....	39	89.39
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	50	78.34
3.3.2 Socioeconomic gap in use of digital payments.....	39	80.38
3.3.3 Availability of local online content.....	41	64.98
3.3.4 Gender gap in internet use.....	22	66.50
3.3.5 Rural gap in use of digital payments.....	28	75.42
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	12	65.65
4.1.2 High-tech exports.....	43	20.04
4.1.3 PCT patent applications.....	34	3.68
4.1.4 Labour productivity per employee.....	31	46.43
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	39	66.19
4.2.2 Freedom to make life choices.....	87	53.03
4.2.3 Income inequality.....	6	96.05
4.2.4 Healthy life expectancy at birth.....	40	71.06
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	37	98.50
4.3.2 Pollution.....	53	86.67
4.3.3 Road safety.....	22	89.38
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Slovenia

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>27</b>	<b>66.89</b>
<b>A. Technology pillar.....</b>	<b>27</b>	<b>64.86</b>
1st sub-pillar: Access.....	24	83.54
2nd sub-pillar: Content.....	18	71.29
3rd sub-pillar: Future Technologies.....	38	39.76
<b>B. People pillar.....</b>	<b>27</b>	<b>58.06</b>
1st sub-pillar: Individuals .....	38	61.87
2nd sub-pillar: Businesses .....	24	57.45
3rd sub-pillar: Governments .....	39	54.85
<b>C. Governance pillar .....</b>	<b>28</b>	<b>76.13</b>
1st sub-pillar: Trust .....	25	76.48
2nd sub-pillar: Regulation.....	29	77.59
3rd sub-pillar: Inclusion.....	30	74.32
<b>D. Impact pillar .....</b>	<b>25</b>	<b>68.53</b>
1st sub-pillar: Economy .....	41	28.87
2nd sub-pillar: Quality of Life .....	13	85.08
3rd sub-pillar: SDG Contribution.....	29	91.64



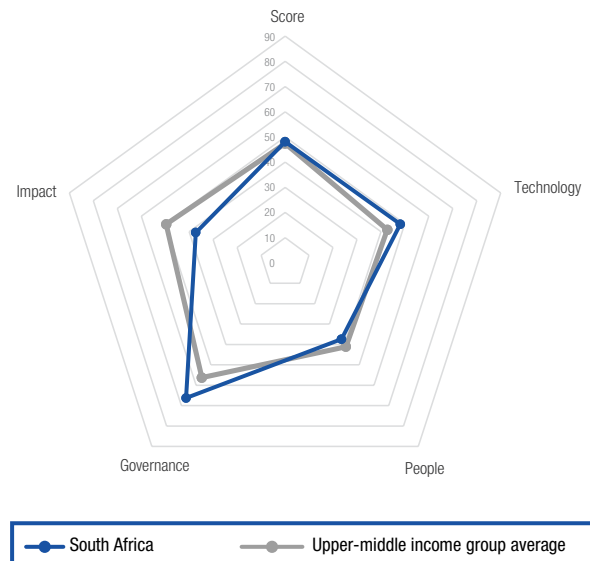
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	29	78.51
1.1.2 Handset prices.....	38	58.52
1.1.3 Households with internet access.....	29	85.79
1.1.4 4G mobile network coverage.....	19	99.50
1.1.5 Fixed-broadband subscriptions.....	36	87.57
1.1.6 International Internet bandwidth.....	17	74.87
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	19	84.15
1.2.3 Intellectual property receipts.....	43	0.89
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	26	76.99
1.3.2 Company investment in emerging technology.....	41	47.52
1.3.3 Government procurement of advanced technology products .....	106	22.86
1.3.4 ICT PCT patent applications.....	29	30.55
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	13	51.53
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	41	77.85
2.1.2 Active mobile-broadband subscriptions.....	60	29.37
2.1.3 Use of virtual social networks.....	65	52.18
2.1.4 Tertiary enrolment.....	21	57.27
2.1.5 Adult literacy rate.....	11	99.57
2.1.6 ICT skills.....	30	54.95
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	9	84.94
2.2.2 Internet shopping.....	27	58.35
2.2.3 Professionals.....	16	57.72
2.2.4 Technicians and associate professionals.....	30	56.82
2.2.5 Extent of staff training.....	40	51.79
2.2.6 R&D expenditure by businesses.....	15	35.10
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	45	77.69
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	59	45.21
2.3.4 R&D expenditure by governments and higher education.....	38	41.65

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	26	77.47
3.1.2 Software piracy rate.....	29	64.86
3.1.3 Secure Internet servers.....	14	88.80
3.1.4 Cybersecurity.....	50	74.78
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	38	66.72
3.2.2 Ease of doing business.....	36	81.87
3.2.3 Legal framework's adaptability to digital business models.....	44	51.74
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	27	69.63
3.2.6 ICT regulatory environment.....	15	95.56
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	48	78.98
3.3.2 Socioeconomic gap in use of digital payments.....	17	95.23
3.3.3 Availability of local online content.....	39	65.30
3.3.4 Gender gap in internet use.....	61	57.57
3.3.5 Rural gap in use of digital payments.....	35	74.54
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	36	47.78
4.1.2 High-tech exports.....	66	12.89
4.1.3 PCT patent applications.....	25	12.11
4.1.4 Labour productivity per employee.....	37	42.71
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	38	66.49
4.2.2 Freedom to make life choices.....	7	95.74
4.2.3 Income inequality.....	2	98.95
4.2.4 Healthy life expectancy at birth.....	29	79.12
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	31	99.11
4.3.2 Pollution.....	45	88.62
4.3.3 Road safety.....	26	88.44
4.3.4 Reading proficiency in schools.....	15	97.07
4.3.5 Maths proficiency in schools.....	18	76.63
4.3.6 Use of clean fuels and technology.....	1	100.00

# South Africa

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>72</b>	<b>47.38</b>
<b>A. Technology pillar.....</b>	<b>58</b>	<b>47.88</b>
1st sub-pillar: Access.....	69	61.33
2nd sub-pillar: Content.....	54	48.92
3rd sub-pillar: Future Technologies.....	53	33.39
<b>B. People pillar.....</b>	<b>79</b>	<b>37.87</b>
1st sub-pillar: Individuals .....	86	42.95
2nd sub-pillar: Businesses .....	85	23.22
3rd sub-pillar: Governments .....	53	47.44
<b>C. Governance pillar .....</b>	<b>47</b>	<b>66.61</b>
1st sub-pillar: Trust .....	38	69.07
2nd sub-pillar: Regulation.....	69	61.96
3rd sub-pillar: Inclusion.....	46	68.81
<b>D. Impact pillar .....</b>	<b>99</b>	<b>37.14</b>
1st sub-pillar: Economy .....	71	17.28
2nd sub-pillar: Quality of Life .....	118	28.71
3rd sub-pillar: SDG Contribution.....	81	65.42



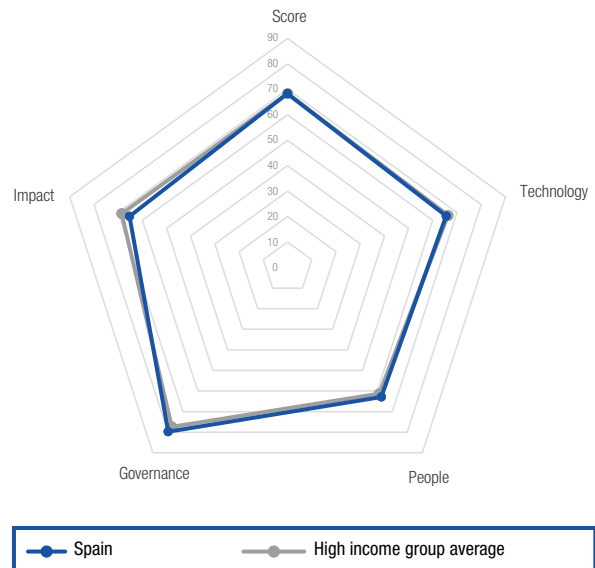
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	63	64.43
1.1.2 Handset prices.....	47	55.16
1.1.3 Households with internet access.....	71	59.28
1.1.4 4G mobile network coverage.....	64	90.32
1.1.5 Fixed-broadband subscriptions.....	78	41.30
1.1.6 International Internet bandwidth.....	106	57.50
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	66	59.32
1.2.3 Intellectual property receipts.....	54	0.66
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	44	62.75
1.3.2 Company investment in emerging technology.....	40	47.75
1.3.3 Government procurement of advanced technology products ..	51	44.37
1.3.4 ICT PCT patent applications.....	46	10.85
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	36	7.36
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	85	51.60
2.1.2 Active mobile-broadband subscriptions.....	65	28.68
2.1.3 Use of virtual social networks.....	87	38.67
2.1.4 Tertiary enrolment.....	89	15.87
2.1.5 Adult literacy rate.....	69	79.96
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	90	22.59
2.2.2 Internet shopping.....	73	10.05
2.2.3 Professionals.....	96	12.62
2.2.4 Technicians and associate professionals.....	59	37.77
2.2.5 Extent of staff training.....	51	47.68
2.2.6 R&D expenditure by businesses.....	46	8.62
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	37	81.54
2.3.2 Publication and use of open data.....	46	34.43
2.3.3 ICT use and government efficiency.....	91	32.70
2.3.4 R&D expenditure by governments and higher education.....	39	41.08

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	64	51.00
3.1.2 Software piracy rate.....	20	77.03
3.1.3 Secure Internet servers.....	35	80.16
3.1.4 Cybersecurity.....	57	69.41
3.1.5 Online trust and safety.....	40	67.73
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	59	55.20
3.2.2 Ease of doing business.....	77	65.07
3.2.3 Legal framework's adaptability to digital business models.....	51	45.91
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	76	35.69
3.2.6 ICT regulatory environment.....	94	69.88
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	39	82.80
3.3.2 Socioeconomic gap in use of digital payments.....	52	74.94
3.3.3 Availability of local online content.....	78	42.56
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	34	74.94
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	63	31.04
4.1.2 High-tech exports.....	74	10.07
4.1.3 PCT patent applications.....	48	1.48
4.1.4 Labour productivity per employee.....	58	26.52
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	95	38.05
4.2.2 Freedom to make life choices.....	89	51.90
4.2.3 Income inequality.....	107	0.00
4.2.4 Healthy life expectancy at birth.....	111	24.91
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	91	79.18
4.3.2 Pollution.....	76	79.86
4.3.3 Road safety.....	103	27.50
4.3.4 Reading proficiency in schools.....	57	51.00
4.3.5 Maths proficiency in schools.....	28	65.02
4.3.6 Use of clean fuels and technology.....	75	90.00

# Spain

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>25</b>	<b>68.01</b>
<b>A. Technology pillar</b> .....	<b>26</b>	<b>65.30</b>
1st sub-pillar: Access.....	22	83.85
2nd sub-pillar: Content.....	33	64.05
3rd sub-pillar: Future Technologies.....	27	48.00
<b>B. People pillar</b> .....	<b>23</b>	<b>62.52</b>
1st sub-pillar: Individuals .....	11	71.17
2nd sub-pillar: Businesses .....	31	48.67
3rd sub-pillar: Governments .....	20	67.72
<b>C. Governance pillar</b> .....	<b>22</b>	<b>79.33</b>
1st sub-pillar: Trust .....	26	76.16
2nd sub-pillar: Regulation.....	25	79.28
3rd sub-pillar: Inclusion.....	13	82.54
<b>D. Impact pillar</b> .....	<b>30</b>	<b>64.90</b>
1st sub-pillar: Economy .....	35	32.27
2nd sub-pillar: Quality of Life .....	38	69.64
3rd sub-pillar: SDG Contribution.....	23	92.80



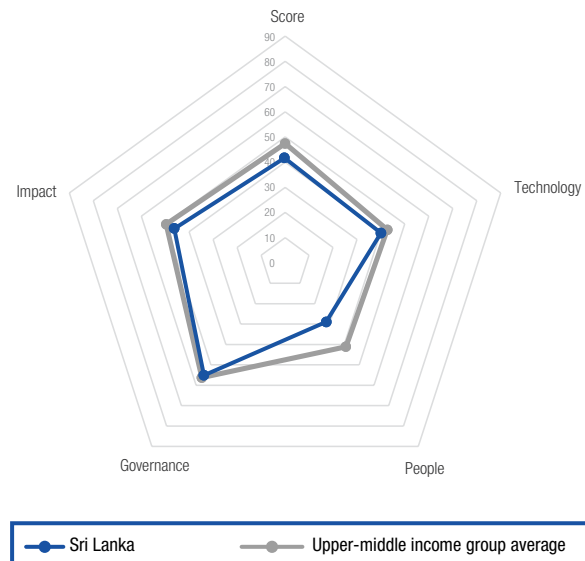
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	28	79.58
1.1.2 Handset prices.....	31	64.23
1.1.3 Households with internet access.....	30	85.49
1.1.4 4G mobile network coverage.....	42	97.80
1.1.5 Fixed-broadband subscriptions.....	14	96.04
1.1.6 International Internet bandwidth.....	83	63.78
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	25	82.03
1.2.3 Intellectual property receipts.....	27	2.95
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	35	69.69
1.3.2 Company investment in emerging technology.....	55	38.19
1.3.3 Government procurement of advanced technology products ..	74	35.23
1.3.4 ICT PCT patent applications.....	27	31.52
1.3.5 Computer software spending.....	4	63.64
1.3.6 Robot density.....	15	49.72
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	26	84.92
2.1.2 Active mobile-broadband subscriptions.....	30	37.90
2.1.3 Use of virtual social networks.....	48	59.46
2.1.4 Tertiary enrolment.....	5	64.83
2.1.5 Adult literacy rate.....	24	97.62
2.1.6 ICT skills.....	11	82.30
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	27	73.91
2.2.2 Internet shopping.....	18	69.47
2.2.3 Professionals.....	32	46.05
2.2.4 Technicians and associate professionals.....	44	48.72
2.2.5 Extent of staff training.....	64	37.04
2.2.6 R&D expenditure by businesses.....	32	16.83
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	16	93.08
2.3.2 Publication and use of open data.....	12	73.36
2.3.3 ICT use and government efficiency.....	40	55.51
2.3.4 R&D expenditure by governments and higher education.....	31	48.91

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	30	75.43
3.1.2 Software piracy rate.....	31	63.51
3.1.3 Secure Internet servers.....	37	79.64
3.1.4 Cybersecurity.....	7	96.16
3.1.5 Online trust and safety.....	45	66.06
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	33	72.23
3.2.2 Ease of doing business.....	29	84.38
3.2.3 Legal framework's adaptability to digital business models....	47	47.40
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	15	84.78
3.2.6 ICT regulatory environment.....	50	86.88
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	5	98.08
3.3.2 Socioeconomic gap in use of digital payments.....	9	97.21
3.3.3 Availability of local online content.....	29	75.35
3.3.4 Gender gap in internet use.....	31	64.70
3.3.5 Rural gap in use of digital payments.....	14	77.36
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	30	50.84
4.1.2 High-tech exports.....	62	13.62
4.1.3 PCT patent applications.....	26	10.75
4.1.4 Labour productivity per employee.....	25	53.87
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	28	71.99
4.2.2 Freedom to make life choices.....	99	44.84
4.2.3 Income inequality.....	56	70.53
4.2.4 Healthy life expectancy at birth.....	3	91.21
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	12	99.89
4.3.2 Pollution.....	13	95.77
4.3.3 Road safety.....	8	95.62
4.3.4 Reading proficiency in schools.....	14	97.32
4.3.5 Maths proficiency in schools.....	27	68.20
4.3.6 Use of clean fuels and technology.....	1	100.00

# Sri Lanka

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>83</b>	<b>42.42</b>
<b>A. Technology pillar.....</b>	<b>78</b>	<b>40.46</b>
1st sub-pillar: Access.....	81	52.59
2nd sub-pillar: Content.....	71	38.94
3rd sub-pillar: Future Technologies.....	64	29.85
<b>B. People pillar.....</b>	<b>98</b>	<b>28.36</b>
1st sub-pillar: Individuals .....	96	35.66
2nd sub-pillar: Businesses .....	110	14.52
3rd sub-pillar: Governments .....	92	34.90
<b>C. Governance pillar .....</b>	<b>79</b>	<b>54.66</b>
1st sub-pillar: Trust .....	78	49.42
2nd sub-pillar: Regulation.....	97	52.01
3rd sub-pillar: Inclusion.....	62	62.55
<b>D. Impact pillar .....</b>	<b>83</b>	<b>46.19</b>
1st sub-pillar: Economy .....	105	7.94
2nd sub-pillar: Quality of Life .....	79	57.41
3rd sub-pillar: SDG Contribution.....	65	73.22



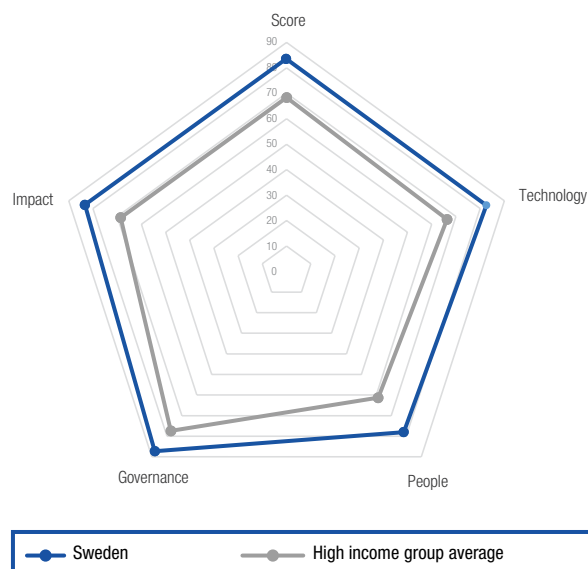
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	21	83.17
1.1.2 Handset prices.....	84	36.79
1.1.3 Households with internet access.....	99	19.30
1.1.4 4G mobile network coverage.....	63	91.00
1.1.5 Fixed-broadband subscriptions.....	87	22.40
1.1.6 International Internet bandwidth.....	90	62.87
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	85	48.73
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	83	41.95
1.3.2 Company investment in emerging technology.....	69	33.14
1.3.3 Government procurement of advanced technology products ..	62	40.97
1.3.4 ICT PCT patent applications.....	56	5.93
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	100	27.06
2.1.2 Active mobile-broadband subscriptions.....	85	21.63
2.1.3 Use of virtual social networks.....	97	28.27
2.1.4 Tertiary enrolment.....	92	13.85
2.1.5 Adult literacy rate.....	60	87.48
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	111	0.00
2.2.2 Internet shopping.....	103	3.45
2.2.3 Professionals.....	87	16.08
2.2.4 Technicians and associate professionals.....	74	28.90
2.2.5 Extent of staff training.....	62	37.77
2.2.6 R&D expenditure by businesses.....	73	0.92
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	74	63.08
2.3.2 Publication and use of open data.....	n/a	n/a
2.3.3 ICT use and government efficiency.....	82	36.32
2.3.4 R&D expenditure by governments and higher education.....	99	5.30

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	58	53.93
3.1.2 Software piracy rate.....	81	16.22
3.1.3 Secure Internet servers.....	69	51.37
3.1.4 Cybersecurity.....	82	49.01
3.1.5 Online trust and safety.....	23	76.56
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	81	48.06
3.2.2 Ease of doing business.....	87	55.85
3.2.3 Legal framework's adaptability to digital business models.....	82	35.64
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	72	38.06
3.2.6 ICT regulatory environment.....	107	59.46
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	81	57.96
3.3.2 Socioeconomic gap in use of digital payments.....	32	83.98
3.3.3 Availability of local online content.....	79	42.15
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	65	66.10
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	102	9.39
4.1.2 High-tech exports.....	107	1.93
4.1.3 PCT patent applications.....	70	0.28
4.1.4 Labour productivity per employee.....	68	20.16
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	107	27.97
4.2.2 Freedom to make life choices.....	51	75.03
4.2.3 Income inequality.....	73	61.05
4.2.4 Healthy life expectancy at birth.....	53	65.57
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	72	90.24
4.3.2 Pollution.....	40	89.26
4.3.3 Road safety.....	63	61.88
4.3.4 Reading proficiency in schools.....	26	86.56
4.3.5 Maths proficiency in schools.....	8	85.86
4.3.6 Use of clean fuels and technology.....	103	25.56

# Sweden

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>1</b>	<b>82.65</b>
<b>A. Technology pillar.....</b>	<b>4</b>	<b>82.28</b>
1st sub-pillar: Access.....	14	86.53
2nd sub-pillar: Content.....	5	81.53
3rd sub-pillar: Future Technologies.....	3	78.77
<b>B. People pillar.....</b>	<b>2</b>	<b>78.17</b>
1st sub-pillar: Individuals .....	14	69.35
2nd sub-pillar: Businesses .....	1	81.14
3rd sub-pillar: Governments .....	4	84.02
<b>C. Governance pillar .....</b>	<b>9</b>	<b>87.43</b>
1st sub-pillar: Trust .....	12	85.57
2nd sub-pillar: Regulation.....	6	90.57
3rd sub-pillar: Inclusion.....	7	86.14
<b>D. Impact pillar .....</b>	<b>3</b>	<b>82.73</b>
1st sub-pillar: Economy .....	5	62.37
2nd sub-pillar: Quality of Life .....	6	90.16
3rd sub-pillar: SDG Contribution.....	12	95.65



## The Network Readiness Index in detail

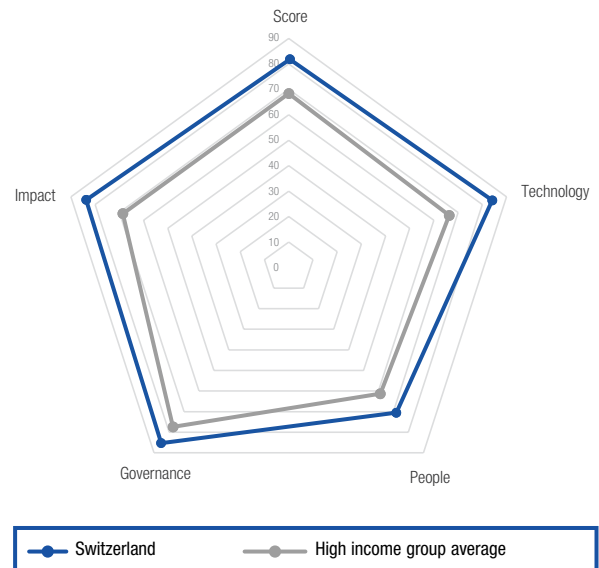
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	8	92.50
1.1.2 Handset prices.....	15	70.48
1.1.3 Households with internet access.....	11	94.38
1.1.4 4G mobile network coverage.....	1	100.00
1.1.5 Fixed-broadband subscriptions.....	30	92.12
1.1.6 International Internet bandwidth.....	54	69.71
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	13	87.49
1.2.3 Intellectual property receipts.....	7	27.29
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	5	96.45
1.3.2 Company investment in emerging technology.....	3	91.30
1.3.3 Government procurement of advanced technology products ..	16	65.09
1.3.4 ICT PCT patent applications.....	2	92.33
1.3.5 Computer software spending.....	8	54.55
1.3.6 Robot density.....	5	72.93
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	13	91.64
2.1.2 Active mobile-broadband subscriptions.....	17	47.96
2.1.3 Use of virtual social networks.....	18	71.93
2.1.4 Tertiary enrolment.....	35	48.73
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	9	86.49
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	4	95.85
2.2.2 Internet shopping.....	6	91.90
2.2.3 Professionals.....	2	75.32
2.2.4 Technicians and associate professionals.....	9	81.09
2.2.5 Extent of staff training.....	7	83.35
2.2.6 R&D expenditure by businesses.....	5	59.34
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	14	93.84
2.3.2 Publication and use of open data.....	15	69.84
2.3.3 ICT use and government efficiency.....	5	83.35
2.3.4 R&D expenditure by governments and higher education.....	3	89.05

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	4	96.57
3.1.2 Software piracy rate.....	6	94.59
3.1.3 Secure Internet servers.....	23	83.87
3.1.4 Cybersecurity.....	34	86.73
3.1.5 Online trust and safety.....	45	66.06
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	6	91.06
3.2.2 Ease of doing business.....	10	91.56
3.2.3 Legal framework's adaptability to digital business models....	6	85.14
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	14	85.34
3.2.6 ICT regulatory environment.....	32	90.35
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	19	92.99
3.3.2 Socioeconomic gap in use of digital payments.....	7	97.28
3.3.3 Availability of local online content.....	5	91.96
3.3.4 Gender gap in internet use.....	4	72.47
3.3.5 Rural gap in use of digital payments.....	23	75.98
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	10	67.74
4.1.2 High-tech exports.....	30	27.18
4.1.3 PCT patent applications.....	2	92.95
4.1.4 Labour productivity per employee.....	13	61.60
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	8	89.93
4.2.2 Freedom to make life choices.....	9	95.67
4.2.3 Income inequality.....	17	88.95
4.2.4 Healthy life expectancy at birth.....	16	86.08
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	19	99.54
4.3.2 Pollution.....	3	99.82
4.3.3 Road safety.....	3	99.69
4.3.4 Reading proficiency in schools.....	6	98.86
4.3.5 Maths proficiency in schools.....	19	76.02
4.3.6 Use of clean fuels and technology.....	1	100.00



# Switzerland

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>5</b>	<b>81.08</b>
<b>A. Technology pillar.....</b>	<b>3</b>	<b>83.47</b>
1st sub-pillar: Access.....	4	90.24
2nd sub-pillar: Content.....	3	89.69
3rd sub-pillar: Future Technologies.....	7	70.48
<b>B. People pillar.....</b>	<b>12</b>	<b>71.06</b>
1st sub-pillar: Individuals .....	44	60.22
2nd sub-pillar: Businesses .....	3	79.52
3rd sub-pillar: Governments .....	17	73.43
<b>C. Governance pillar .....</b>	<b>12</b>	<b>85.81</b>
1st sub-pillar: Trust .....	8	87.13
2nd sub-pillar: Regulation.....	11	88.90
3rd sub-pillar: Inclusion.....	18	81.42
<b>D. Impact pillar .....</b>	<b>2</b>	<b>83.99</b>
1st sub-pillar: Economy .....	3	64.31
2nd sub-pillar: Quality of Life .....	8	88.94
3rd sub-pillar: SDG Contribution.....	2	98.72



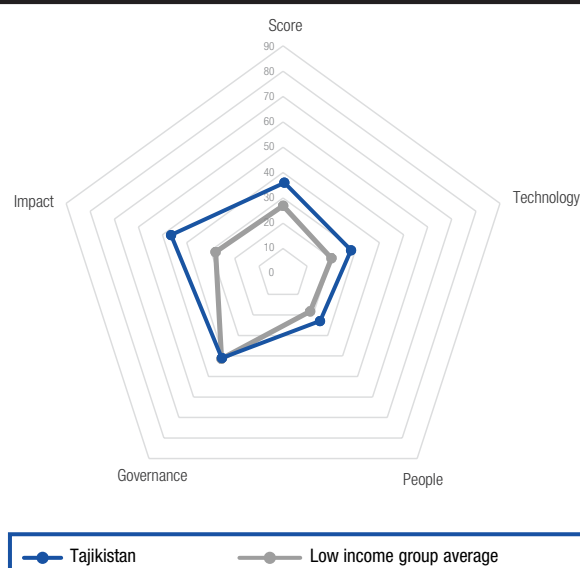
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	6	93.92
1.1.2 Handset prices.....	5	82.77
1.1.3 Households with internet access.....	22	87.81
1.1.4 4G mobile network coverage.....	24	99.00
1.1.5 Fixed-broadband subscriptions.....	11	97.05
1.1.6 International Internet bandwidth.....	42	71.11
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	9	89.72
1.2.3 Intellectual property receipts.....	3	71.11
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	3	97.52
1.3.2 Company investment in emerging technology.....	4	88.54
1.3.3 Government procurement of advanced technology products ..	32	51.54
1.3.4 ICT PCT patent applications.....	9	69.25
1.3.5 Computer software spending.....	2	72.73
1.3.6 Robot density.....	18	43.32
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	17	88.91
2.1.2 Active mobile-broadband subscriptions.....	31	37.80
2.1.3 Use of virtual social networks.....	69	50.10
2.1.4 Tertiary enrolment.....	48	43.26
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	12	81.05
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	5	94.95
2.2.2 Internet shopping.....	15	71.84
2.2.3 Professionals.....	8	66.19
2.2.4 Technicians and associate professionals.....	8	83.33
2.2.5 Extent of staff training.....	1	100.00
2.2.6 R&D expenditure by businesses.....	4	60.80
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	35	83.07
2.3.2 Publication and use of open data.....	19	57.46
2.3.3 ICT use and government efficiency.....	22	68.26
2.3.4 R&D expenditure by governments and higher education.....	6	84.92

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	3	97.38
3.1.2 Software piracy rate.....	10	91.89
3.1.3 Secure Internet servers.....	5	94.96
3.1.4 Cybersecurity.....	39	84.32
3.1.5 Online trust and safety.....	42	67.12
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	8	90.63
3.2.2 Ease of doing business.....	35	82.05
3.2.3 Legal framework's adaptability to digital business models.....	21	69.73
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	8	95.40
3.2.6 ICT regulatory environment.....	15	95.56
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	41	82.17
3.3.2 Socioeconomic gap in use of digital payments.....	15	95.67
3.3.3 Availability of local online content.....	6	91.59
3.3.4 Gender gap in internet use.....	39	62.12
3.3.5 Rural gap in use of digital payments.....	27	75.53
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	2	82.59
4.1.2 High-tech exports.....	34	25.34
4.1.3 PCT patent applications.....	3	87.04
4.1.4 Labour productivity per employee.....	12	62.27
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	3	92.72
4.2.2 Freedom to make life choices.....	14	92.12
4.2.3 Income inequality.....	29	80.79
4.2.4 Healthy life expectancy at birth.....	4	90.11
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	10	99.93
4.3.2 Pollution.....	16	94.94
4.3.3 Road safety.....	1	100.00
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Tajikistan

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>99</b>	<b>34.90</b>
<b>A. Technology pillar</b> .....	<b>106</b>	<b>27.40</b>
1st sub-pillar: Access.....	103	34.65
2nd sub-pillar: Content.....	114	11.45
3rd sub-pillar: Future Technologies.....	47	36.11
<b>B. People pillar</b> .....	<b>108</b>	<b>23.77</b>
1st sub-pillar: Individuals .....	102	28.93
2nd sub-pillar: Businesses .....	96	20.48
3rd sub-pillar: Governments .....	109	21.89
<b>C. Governance pillar</b> .....	<b>103</b>	<b>41.72</b>
1st sub-pillar: Trust .....	116	26.31
2nd sub-pillar: Regulation.....	109	41.60
3rd sub-pillar: Inclusion.....	76	57.24
<b>D. Impact pillar</b> .....	<b>82</b>	<b>46.72</b>
1st sub-pillar: Economy .....	116	4.35
2nd sub-pillar: Quality of Life .....	54	64.45
3rd sub-pillar: SDG Contribution.....	73	71.36



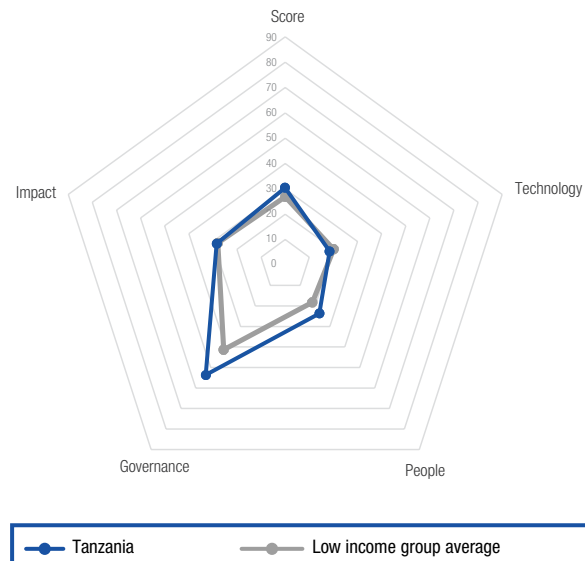
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	113	25.50
1.1.2 Handset prices.....	113	16.67
1.1.3 Households with internet access.....	113	5.95
1.1.4 4G mobile network coverage.....	79	80.00
1.1.5 Fixed-broadband subscriptions.....	n/a	n/a
1.1.6 International Internet bandwidth.....	118	45.13
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	106	32.40
1.2.3 Intellectual property receipts.....	98	0.00
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	85	41.51
1.3.2 Company investment in emerging technology.....	57	36.96
1.3.3 Government procurement of advanced technology products ..	25	56.87
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	77	9.09
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	111	13.53
2.1.2 Active mobile-broadband subscriptions.....	114	6.90
2.1.3 Use of virtual social networks.....	120	2.08
2.1.4 Tertiary enrolment.....	80	22.41
2.1.5 Adult literacy rate.....	5	99.73
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	87	24.14
2.2.2 Internet shopping.....	74	9.65
2.2.3 Professionals.....	80	18.18
2.2.4 Technicians and associate professionals.....	82	24.53
2.2.5 Extent of staff training.....	103	25.90
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	110	26.93
2.3.2 Publication and use of open data.....	89	9.70
2.3.3 ICT use and government efficiency.....	67	41.58
2.3.4 R&D expenditure by governments and higher education.....	90	9.37

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	119	24.08
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	109	28.09
3.1.4 Cybersecurity.....	101	26.75
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	116	28.32
3.2.2 Ease of doing business.....	91	54.90
3.2.3 Legal framework's adaptability to digital business models....	n/a	n/a
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	55	46.33
3.2.6 ICT regulatory environment.....	120	3.48
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	108	30.57
3.3.2 Socioeconomic gap in use of digital payments.....	63	68.11
3.3.3 Availability of local online content.....	n/a	n/a
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	43	73.04
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	115	2.48
4.1.2 High-tech exports.....	n/a	n/a
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	94	6.22
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	61	57.74
4.2.2 Freedom to make life choices.....	57	70.26
4.2.3 Income inequality.....	43	76.32
4.2.4 Healthy life expectancy at birth.....	86	53.48
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	85	85.64
4.3.2 Pollution.....	103	61.27
4.3.3 Road safety.....	80	51.88
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	77	86.67

# Tanzania

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>109</b>	<b>30.73</b>
<b>A. Technology pillar.....</b>	<b>115</b>	<b>18.49</b>
1st sub-pillar: Access.....	118	16.77
2nd sub-pillar: Content.....	115	10.90
3rd sub-pillar: Future Technologies.....	75	27.80
<b>B. People pillar.....</b>	<b>109</b>	<b>23.12</b>
1st sub-pillar: Individuals .....	113	18.38
2nd sub-pillar: Businesses .....	115	10.17
3rd sub-pillar: Governments .....	76	40.80
<b>C. Governance pillar .....</b>	<b>82</b>	<b>53.06</b>
1st sub-pillar: Trust .....	66	54.85
2nd sub-pillar: Regulation.....	102	46.51
3rd sub-pillar: Inclusion.....	75	57.80
<b>D. Impact pillar .....</b>	<b>109</b>	<b>28.26</b>
1st sub-pillar: Economy .....	104	8.06
2nd sub-pillar: Quality of Life .....	103	41.68
3rd sub-pillar: SDG Contribution.....	111	35.04



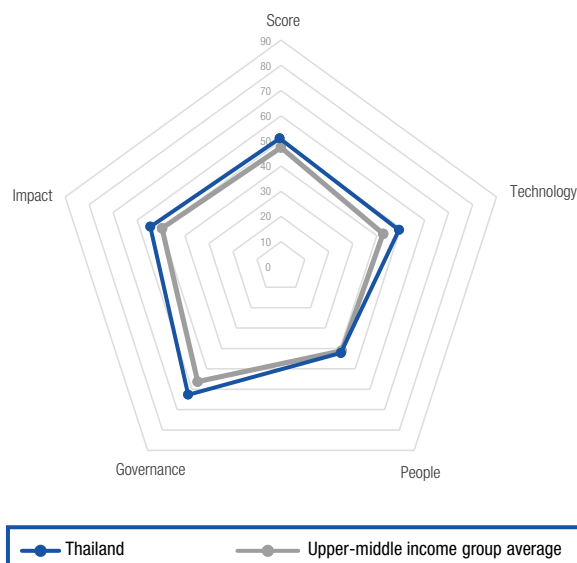
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	104	36.07
1.1.2 Handset prices.....	102	26.12
1.1.3 Households with internet access.....	112	8.67
1.1.4 4G mobile network coverage.....	117	13.00
1.1.5 Fixed-broadband subscriptions.....	n/a	n/a
1.1.6 International Internet bandwidth.....	121	0.00
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	113	23.50
1.2.3 Intellectual property receipts.....	90	0.01
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	108	28.58
1.3.2 Company investment in emerging technology.....	58	36.70
1.3.3 Government procurement of advanced technology products ..	46	45.93
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	107	16.92
2.1.2 Active mobile-broadband subscriptions.....	120	1.27
2.1.3 Use of virtual social networks.....	112	5.61
2.1.4 Tertiary enrolment.....	114	2.35
2.1.5 Adult literacy rate.....	79	65.76
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	104	5.19
2.2.2 Internet shopping.....	83	6.82
2.2.3 Professionals.....	116	0.00
2.2.4 Technicians and associate professionals.....	106	8.17
2.2.5 Extent of staff training.....	87	30.65
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	93	51.54
2.3.2 Publication and use of open data.....	65	21.73
2.3.3 ICT use and government efficiency.....	64	42.19
2.3.4 R&D expenditure by governments and higher education.....	33	47.75

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	95	40.68
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	110	28.07
3.1.4 Cybersecurity.....	62	68.31
3.1.5 Online trust and safety.....	12	82.34
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	102	37.92
3.2.2 Ease of doing business.....	109	42.86
3.2.3 Legal framework's adaptability to digital business models.....	63	42.91
3.2.4 E-commerce legislation.....	110	25.00
3.2.5 Social safety net protection.....	60	44.69
3.2.6 ICT regulatory environment.....	60	85.72
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	86	56.69
3.3.2 Socioeconomic gap in use of digital payments.....	64	67.56
3.3.3 Availability of local online content.....	86	37.27
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	55	69.69
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	105	8.44
4.1.2 High-tech exports.....	65	13.05
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	101	2.68
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	119	8.07
4.2.2 Freedom to make life choices.....	71	64.50
4.2.3 Income inequality.....	63	66.32
4.2.4 Healthy life expectancy at birth.....	107	27.84
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	116	25.20
4.3.2 Pollution.....	84	77.59
4.3.3 Road safety.....	111	17.19
4.3.4 Reading proficiency in schools.....	52	55.99
4.3.5 Maths proficiency in schools.....	53	34.28
4.3.6 Use of clean fuels and technology.....	111	0.00

# Thailand

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>56</b>	<b>51.54</b>
<b>A. Technology pillar</b> .....	<b>54</b>	<b>49.61</b>
1st sub-pillar: Access.....	39	78.34
2nd sub-pillar: Content.....	69	39.34
3rd sub-pillar: Future Technologies.....	60	31.13
<b>B. People pillar</b> .....	<b>67</b>	<b>41.16</b>
1st sub-pillar: Individuals .....	49	58.29
2nd sub-pillar: Businesses .....	78	25.54
3rd sub-pillar: Governments .....	79	39.66
<b>C. Governance pillar</b> .....	<b>59</b>	<b>61.61</b>
1st sub-pillar: Trust .....	67	54.68
2nd sub-pillar: Regulation.....	58	64.76
3rd sub-pillar: Inclusion.....	56	65.38
<b>D. Impact pillar</b> .....	<b>60</b>	<b>53.80</b>
1st sub-pillar: Economy .....	40	29.13
2nd sub-pillar: Quality of Life .....	35	70.99
3rd sub-pillar: SDG Contribution.....	87	61.28



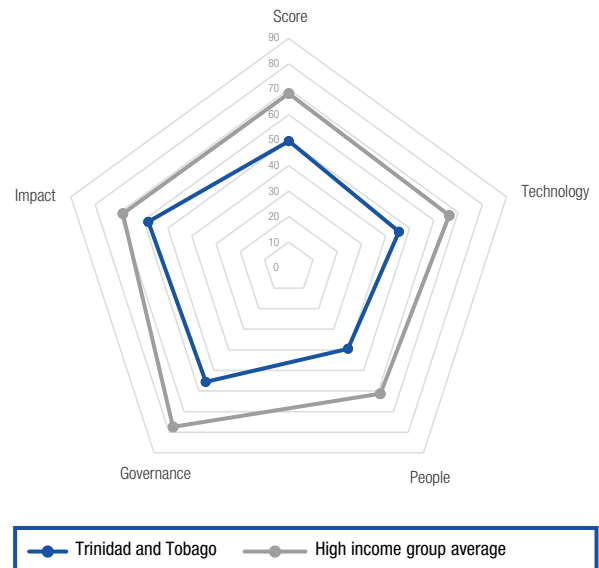
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	72	60.55
1.1.2 Handset prices.....	50	52.99
1.1.3 Households with internet access.....	67	65.55
1.1.4 4G mobile network coverage.....	38	98.00
1.1.5 Fixed-broadband subscriptions.....	9	97.86
1.1.6 International Internet bandwidth.....	18	74.67
1.1.7 Internet access in schools.....	26	98.80
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	67	59.28
1.2.3 Intellectual property receipts.....	71	0.20
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	54	56.50
1.3.2 Company investment in emerging technology.....	37	50.58
1.3.3 Government procurement of advanced technology products ..	50	44.49
1.3.4 ICT PCT patent applications.....	66	1.87
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	28	15.19
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	84	52.33
2.1.2 Active mobile-broadband subscriptions.....	25	40.43
2.1.3 Use of virtual social networks.....	16	74.01
2.1.4 Tertiary enrolment.....	59	35.69
2.1.5 Adult literacy rate.....	58	88.98
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	73	34.92
2.2.2 Internet shopping.....	57	21.54
2.2.3 Professionals.....	95	12.73
2.2.4 Technicians and associate professionals.....	89	19.23
2.2.5 Extent of staff training.....	44	50.35
2.2.6 R&D expenditure by businesses.....	35	14.46
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	83	60.00
2.3.2 Publication and use of open data.....	56	27.55
2.3.3 ICT use and government efficiency.....	44	53.11
2.3.4 R&D expenditure by governments and higher education.....	73	17.96

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	60	53.86
3.1.2 Software piracy rate.....	65	31.08
3.1.3 Secure Internet servers.....	63	58.53
3.1.4 Cybersecurity.....	37	85.20
3.1.5 Online trust and safety.....	72	44.75
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	62	53.87
3.2.2 Ease of doing business.....	20	88.20
3.2.3 Legal framework's adaptability to digital business models....	62	43.04
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	52	47.02
3.2.6 ICT regulatory environment.....	74	81.47
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	79	60.51
3.3.2 Socioeconomic gap in use of digital payments.....	42	79.33
3.3.3 Availability of local online content.....	51	58.75
3.3.4 Gender gap in internet use.....	43	60.99
3.3.5 Rural gap in use of digital payments.....	61	67.30
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	28	51.95
4.1.2 High-tech exports.....	12	44.22
4.1.3 PCT patent applications.....	59	0.67
4.1.4 Labour productivity per employee.....	70	19.68
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	49	61.54
4.2.2 Freedom to make life choices.....	26	87.12
4.2.3 Income inequality.....	58	69.74
4.2.4 Healthy life expectancy at birth.....	53	65.57
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	29	99.13
4.3.2 Pollution.....	86	76.87
4.3.3 Road safety.....	117	6.25
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	46	43.03
4.3.6 Use of clean fuels and technology.....	81	81.11

# Trinidad and Tobago

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>64</b>	<b>49.29</b>
<b>A. Technology pillar.....</b>	<b>61</b>	<b>45.17</b>
1st sub-pillar: Access.....	64	63.95
2nd sub-pillar: Content.....	61	47.48
3rd sub-pillar: Future Technologies.....	88	24.08
<b>B. People pillar.....</b>	<b>77</b>	<b>39.23</b>
1st sub-pillar: Individuals .....	37	62.01
2nd sub-pillar: Businesses .....	70	27.30
3rd sub-pillar: Governments .....	102	28.38
<b>C. Governance pillar .....</b>	<b>78</b>	<b>55.13</b>
1st sub-pillar: Trust .....	100	39.07
2nd sub-pillar: Regulation.....	75	60.14
3rd sub-pillar: Inclusion.....	53	66.17
<b>D. Impact pillar .....</b>	<b>46</b>	<b>57.64</b>
1st sub-pillar: Economy .....	58	22.58
2nd sub-pillar: Quality of Life .....	52	64.86
3rd sub-pillar: SDG Contribution.....	47	85.49



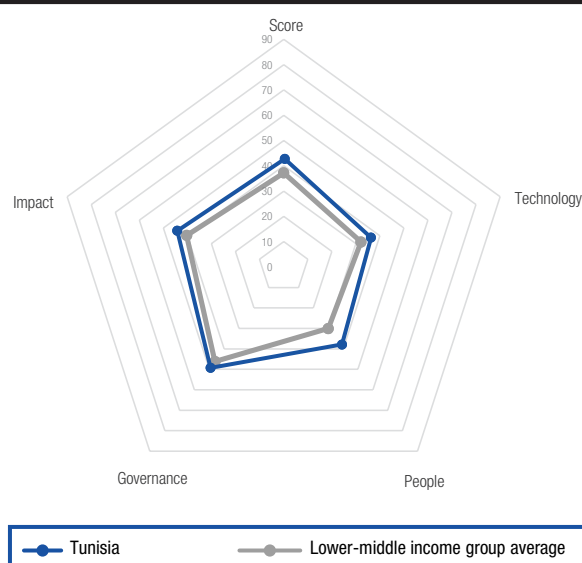
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	106	35.40
1.1.2 Handset prices.....	57	48.96
1.1.3 Households with internet access.....	51	76.00
1.1.4 4G mobile network coverage.....	83	75.00
1.1.5 Fixed-broadband subscriptions.....	55	72.76
1.1.6 International Internet bandwidth.....	14	75.57
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	79	51.56
1.2.3 Intellectual property receipts.....	79	0.11
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	52	58.16
1.3.2 Company investment in emerging technology.....	106	15.74
1.3.3 Government procurement of advanced technology products .....	112	19.94
1.3.4 ICT PCT patent applications.....	64	2.50
1.3.5 Computer software spending.....	n/a	n/a
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	48	75.15
2.1.2 Active mobile-broadband subscriptions.....	98	16.46
2.1.3 Use of virtual social networks.....	49	58.42
2.1.4 Tertiary enrolment.....	n/a	n/a
2.1.5 Adult literacy rate.....	22	98.02
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	99	15.84
2.2.2 Internet shopping.....	58	21.09
2.2.3 Professionals.....	92	14.20
2.2.4 Technicians and associate professionals.....	29	57.87
2.2.5 Extent of staff training.....	37	54.77
2.2.6 R&D expenditure by businesses.....	90	0.03
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	83	60.00
2.3.2 Publication and use of open data.....	74	17.99
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	91	7.16

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	65	50.59
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	77	48.10
3.1.4 Cybersecurity.....	110	18.53
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	67	50.96
3.2.2 Ease of doing business.....	90	54.94
3.2.3 Legal framework's adaptability to digital business models.....	105	24.15
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	59	44.70
3.2.6 ICT regulatory environment.....	59	86.10
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	90	52.23
3.3.2 Socioeconomic gap in use of digital payments.....	30	86.14
3.3.3 Availability of local online content.....	63	52.39
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	39	73.91
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	32	50.52
4.1.2 High-tech exports.....	116	0.25
4.1.3 PCT patent applications.....	66	0.32
4.1.4 Labour productivity per employee.....	44	39.22
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	42	65.29
4.2.2 Freedom to make life choices.....	49	76.54
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	90	52.75
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	56	94.45
4.3.2 Pollution.....	72	81.60
4.3.3 Road safety.....	47	70.62
4.3.4 Reading proficiency in schools.....	31	80.79
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Tunisia

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>84</b>	<b>42.04</b>
<b>A. Technology pillar</b> .....	<b>86</b>	<b>35.70</b>
1st sub-pillar: Access.....	76	57.74
2nd sub-pillar: Content.....	91	27.48
3rd sub-pillar: Future Technologies.....	97	21.88
<b>B. People pillar</b> .....	<b>78</b>	<b>38.29</b>
1st sub-pillar: Individuals .....	91	40.88
2nd sub-pillar: Businesses .....	75	25.80
3rd sub-pillar: Governments .....	51	48.21
<b>C. Governance pillar</b> .....	<b>91</b>	<b>49.68</b>
1st sub-pillar: Trust .....	84	45.74
2nd sub-pillar: Regulation.....	79	58.47
3rd sub-pillar: Inclusion.....	101	44.83
<b>D. Impact pillar</b> .....	<b>88</b>	<b>44.50</b>
1st sub-pillar: Economy .....	64	20.17
2nd sub-pillar: Quality of Life .....	96	51.58
3rd sub-pillar: SDG Contribution.....	86	61.76



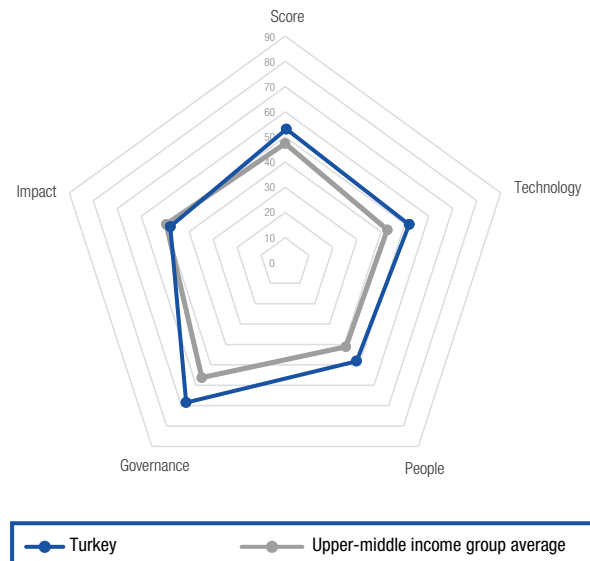
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	54	68.38
1.1.2 Handset prices.....	76	41.27
1.1.3 Households with internet access.....	82	42.44
1.1.4 4G mobile network coverage.....	51	96.00
1.1.5 Fixed-broadband subscriptions.....	79	40.64
1.1.6 International Internet bandwidth.....	74	67.01
1.1.7 Internet access in schools.....	42	48.44
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	75	53.24
1.2.3 Intellectual property receipts.....	51	0.73
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	72	47.84
1.3.2 Company investment in emerging technology.....	77	30.18
1.3.3 Government procurement of advanced technology products .....	107	22.36
1.3.4 ICT PCT patent applications.....	63	2.66
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	54	0.95
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	75	60.53
2.1.2 Active mobile-broadband subscriptions.....	64	28.72
2.1.3 Use of virtual social networks.....	41	63.62
2.1.4 Tertiary enrolment.....	79	23.07
2.1.5 Adult literacy rate.....	78	67.54
2.1.6 ICT skills.....	60	1.77
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	44	61.92
2.2.2 Internet shopping.....	87	5.96
2.2.3 Professionals.....	89	15.95
2.2.4 Technicians and associate professionals.....	65	32.49
2.2.5 Extent of staff training.....	72	35.40
2.2.6 R&D expenditure by businesses.....	59	3.07
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	44	78.47
2.3.2 Publication and use of open data.....	52	32.17
2.3.3 ICT use and government efficiency.....	88	34.04
2.3.4 R&D expenditure by governments and higher education.....	32	48.17

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	57	54.23
3.1.2 Software piracy rate.....	73	21.62
3.1.3 Secure Internet servers.....	75	49.10
3.1.4 Cybersecurity.....	76	56.69
3.1.5 Online trust and safety.....	71	47.03
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	95	42.36
3.2.2 Ease of doing business.....	71	67.97
3.2.3 Legal framework's adaptability to digital business models.....	88	33.00
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	78	33.76
3.2.6 ICT regulatory environment.....	85	73.75
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	53	77.07
3.3.2 Socioeconomic gap in use of digital payments.....	108	35.33
3.3.3 Availability of local online content.....	83	39.46
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	110	27.44
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	42	42.88
4.1.2 High-tech exports.....	59	14.00
4.1.3 PCT patent applications.....	69	0.31
4.1.4 Labour productivity per employee.....	64	23.51
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	99	35.07
4.2.2 Freedom to make life choices.....	109	28.03
4.2.3 Income inequality.....	34	79.47
4.2.4 Healthy life expectancy at birth.....	62	63.74
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	69	91.54
4.3.2 Pollution.....	99	66.23
4.3.3 Road safety.....	94	37.19
4.3.4 Reading proficiency in schools.....	44	66.19
4.3.5 Maths proficiency in schools.....	71	9.39
4.3.6 Use of clean fuels and technology.....	1	100.00

# Turkey

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>51</b>	<b>53.75</b>
<b>A. Technology pillar.....</b>	<b>49</b>	<b>51.27</b>
1st sub-pillar: Access.....	54	71.63
2nd sub-pillar: Content.....	52	50.02
3rd sub-pillar: Future Technologies.....	58	32.17
<b>B. People pillar.....</b>	<b>49</b>	<b>47.45</b>
1st sub-pillar: Individuals .....	50	58.29
2nd sub-pillar: Businesses .....	61	30.17
3rd sub-pillar: Governments .....	40	53.90
<b>C. Governance pillar .....</b>	<b>45</b>	<b>67.79</b>
1st sub-pillar: Trust .....	45	64.53
2nd sub-pillar: Regulation.....	31	77.09
3rd sub-pillar: Inclusion.....	66	61.75
<b>D. Impact pillar .....</b>	<b>76</b>	<b>48.49</b>
1st sub-pillar: Economy .....	56	23.19
2nd sub-pillar: Quality of Life .....	107	40.62
3rd sub-pillar: SDG Contribution.....	54	81.64



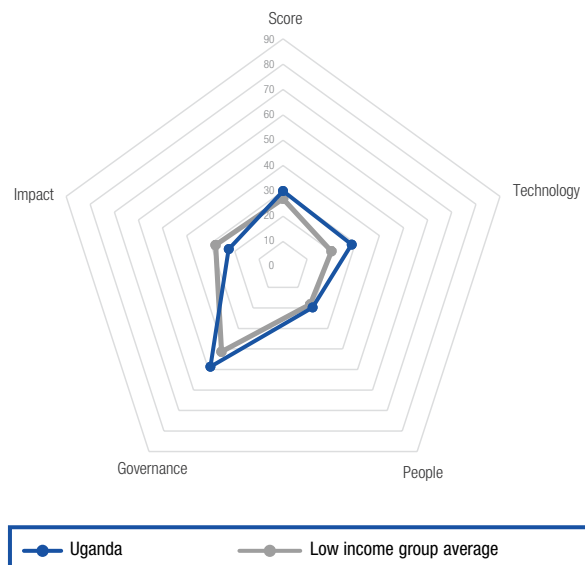
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	49	69.79
1.1.2 Handset prices.....	88	35.86
1.1.3 Households with internet access.....	37	82.71
1.1.4 4G mobile network coverage.....	58	93.17
1.1.5 Fixed-broadband subscriptions.....	51	76.42
1.1.6 International Internet bandwidth.....	38	71.87
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	48	67.77
1.2.3 Intellectual property receipts.....	86	0.05
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	55	56.45
1.3.2 Company investment in emerging technology.....	97	21.50
1.3.3 Government procurement of advanced technology products ..	57	42.19
1.3.4 ICT PCT patent applications.....	38	18.58
1.3.5 Computer software spending.....	19	45.45
1.3.6 Robot density.....	35	8.83
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	61	68.16
2.1.2 Active mobile-broadband subscriptions.....	68	27.95
2.1.3 Use of virtual social networks.....	44	62.58
2.1.4 Tertiary enrolment.....	n/a	n/a
2.1.5 Adult literacy rate.....	40	94.07
2.1.6 ICT skills.....	45	38.69
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	46	61.63
2.2.2 Internet shopping.....	50	27.31
2.2.3 Professionals.....	65	25.91
2.2.4 Technicians and associate professionals.....	80	25.42
2.2.5 Extent of staff training.....	99	26.87
2.2.6 R&D expenditure by businesses.....	37	13.88
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	27	87.69
2.3.2 Publication and use of open data.....	43	36.88
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	44	37.12

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	80	46.05
3.1.2 Software piracy rate.....	50	44.59
3.1.3 Secure Internet servers.....	47	71.45
3.1.4 Cybersecurity.....	22	91.45
3.1.5 Online trust and safety.....	39	69.10
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	72	50.37
3.2.2 Ease of doing business.....	32	82.36
3.2.3 Legal framework's adaptability to digital business models.....	n/a	n/a
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	42	56.03
3.2.6 ICT regulatory environment.....	8	96.72
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	37	84.08
3.3.2 Socioeconomic gap in use of digital payments.....	61	68.25
3.3.3 Availability of local online content.....	n/a	n/a
3.3.4 Gender gap in internet use.....	79	34.87
3.3.5 Rural gap in use of digital payments.....	74	59.78
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	45	40.05
4.1.2 High-tech exports.....	94	4.41
4.1.3 PCT patent applications.....	35	3.66
4.1.4 Labour productivity per employee.....	33	44.63
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	83	44.33
4.2.2 Freedom to make life choices.....	121	0.00
4.2.3 Income inequality.....	80	55.53
4.2.4 Healthy life expectancy at birth.....	69	62.64
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	45	97.48
4.3.2 Pollution.....	106	59.10
4.3.3 Road safety.....	49	70.00
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Uganda

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>110</b>	<b>29.70</b>
<b>A. Technology pillar</b> .....	<b>102</b>	<b>28.28</b>
1st sub-pillar: Access.....	95	39.74
2nd sub-pillar: Content.....	104	17.12
3rd sub-pillar: Future Technologies.....	73	27.98
<b>B. People pillar</b> .....	<b>113</b>	<b>19.74</b>
1st sub-pillar: Individuals .....	112	19.26
2nd sub-pillar: Businesses .....	114	10.70
3rd sub-pillar: Governments .....	98	29.26
<b>C. Governance pillar</b> .....	<b>94</b>	<b>48.39</b>
1st sub-pillar: Trust .....	90	42.40
2nd sub-pillar: Regulation.....	96	52.48
3rd sub-pillar: Inclusion.....	91	50.30
<b>D. Impact pillar</b> .....	<b>120</b>	<b>22.39</b>
1st sub-pillar: Economy .....	106	7.79
2nd sub-pillar: Quality of Life .....	112	36.94
3rd sub-pillar: SDG Contribution.....	120	22.44



## The Network Readiness Index in detail

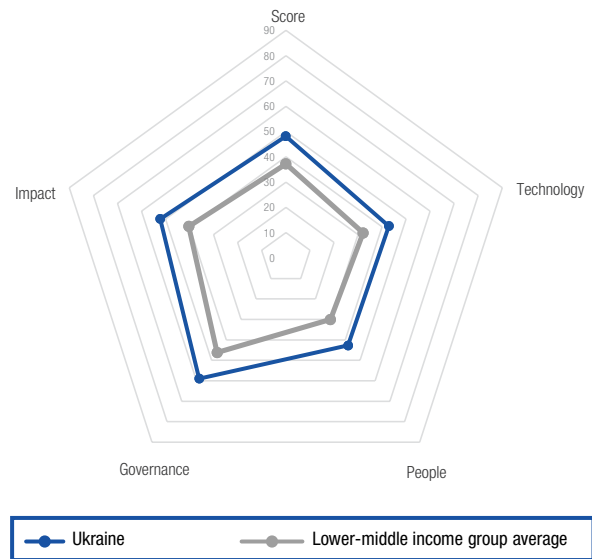
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	112	28.67
1.1.2 Handset prices.....	108	21.53
1.1.3 Households with internet access.....	116	4.80
1.1.4 4G mobile network coverage.....	97	57.00
1.1.5 Fixed-broadband subscriptions.....	58	71.01
1.1.6 International Internet bandwidth.....	109	55.42
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	114	21.98
1.2.3 Intellectual property receipts.....	58	0.53
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	101	35.12
1.3.2 Company investment in emerging technology.....	75	30.61
1.3.3 Government procurement of advanced technology products ..	43	46.20
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	109	15.48
2.1.2 Active mobile-broadband subscriptions.....	107	11.32
2.1.3 Use of virtual social networks.....	117	2.91
2.1.4 Tertiary enrolment.....	112	2.96
2.1.5 Adult literacy rate.....	81	63.65
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	110	0.78
2.2.2 Internet shopping.....	93	4.91
2.2.3 Professionals.....	93	13.65
2.2.4 Technicians and associate professionals.....	100	11.77
2.2.5 Extent of staff training.....	77	32.91
2.2.6 R&D expenditure by businesses.....	83	0.18
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	90	52.30
2.3.2 Publication and use of open data.....	85	11.59
2.3.3 ICT use and government efficiency.....	74	39.76
2.3.4 R&D expenditure by governments and higher education.....	83	13.37

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	78	46.61
3.1.2 Software piracy rate.....	n/a	n/a
3.1.3 Secure Internet servers.....	113	25.46
3.1.4 Cybersecurity.....	66	66.01
3.1.5 Online trust and safety.....	84	31.51
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	89	45.88
3.2.2 Ease of doing business.....	96	52.62
3.2.3 Legal framework's adaptability to digital business models.....	89	32.70
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	103	21.83
3.2.6 ICT regulatory environment.....	50	86.88
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	83	57.32
3.3.2 Socioeconomic gap in use of digital payments.....	65	65.42
3.3.3 Availability of local online content.....	114	4.24
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	37	74.20
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	96	13.88
4.1.2 High-tech exports.....	87	6.69
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	100	2.80
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	109	26.33
4.2.2 Freedom to make life choices.....	96	46.29
4.2.3 Income inequality.....	82	53.16
4.2.4 Healthy life expectancy at birth.....	113	21.98
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	119	12.66
4.3.2 Pollution.....	108	51.83
4.3.3 Road safety.....	110	17.81
4.3.4 Reading proficiency in schools.....	62	32.79
4.3.5 Maths proficiency in schools.....	61	19.56
4.3.6 Use of clean fuels and technology.....	111	0.00



# Ukraine

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>67</b>	<b>48.92</b>
<b>A. Technology pillar</b> .....	<b>71</b>	<b>43.01</b>
1st sub-pillar: Access.....	78	53.72
2nd sub-pillar: Content.....	56	48.74
3rd sub-pillar: Future Technologies.....	82	26.57
<b>B. People pillar</b> .....	<b>63</b>	<b>42.05</b>
1st sub-pillar: Individuals .....	68	53.88
2nd sub-pillar: Businesses .....	48	35.69
3rd sub-pillar: Governments .....	87	36.58
<b>C. Governance pillar</b> .....	<b>67</b>	<b>58.32</b>
1st sub-pillar: Trust .....	70	53.00
2nd sub-pillar: Regulation.....	72	61.26
3rd sub-pillar: Inclusion.....	70	60.69
<b>D. Impact pillar</b> .....	<b>65</b>	<b>52.31</b>
1st sub-pillar: Economy .....	75	15.76
2nd sub-pillar: Quality of Life .....	82	54.97
3rd sub-pillar: SDG Contribution.....	43	86.22



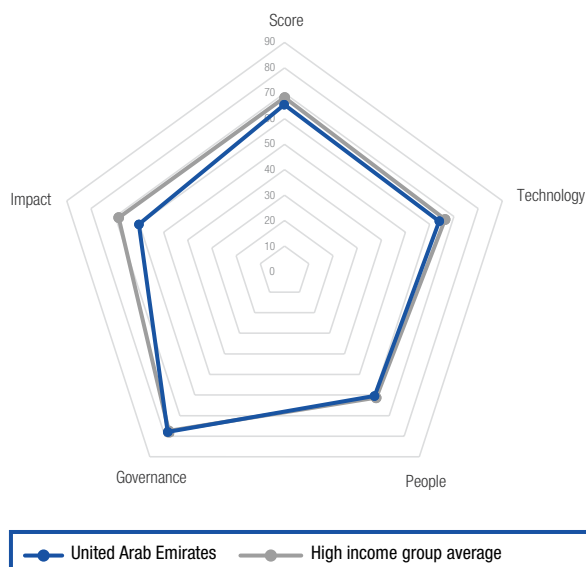
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	46	70.14
1.1.2 Handset prices.....	107	21.72
1.1.3 Households with internet access.....	74	57.60
1.1.4 4G mobile network coverage.....	119	3.00
1.1.5 Fixed-broadband subscriptions.....	16	95.72
1.1.6 International Internet bandwidth.....	49	70.25
1.1.7 Internet access in schools.....	40	57.61
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	61	62.88
1.2.3 Intellectual property receipts.....	46	0.81
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	99	35.19
1.3.2 Company investment in emerging technology.....	62	35.52
1.3.3 Government procurement of advanced technology products ..	83	31.96
1.3.4 ICT PCT patent applications.....	47	10.55
1.3.5 Computer software spending.....	19	45.45
1.3.6 Robot density.....	56	0.74
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	80	54.63
2.1.2 Active mobile-broadband subscriptions.....	97	16.87
2.1.3 Use of virtual social networks.....	92	37.63
2.1.4 Tertiary enrolment.....	14	60.28
2.1.5 Adult literacy rate.....	1	100.00
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	61	47.64
2.2.2 Internet shopping.....	49	27.80
2.2.3 Professionals.....	29	47.44
2.2.4 Technicians and associate professionals.....	45	48.57
2.2.5 Extent of staff training.....	67	36.06
2.2.6 R&D expenditure by businesses.....	50	6.62
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	90	52.30
2.3.2 Publication and use of open data.....	45	35.96
2.3.3 ICT use and government efficiency.....	65	42.01
2.3.4 R&D expenditure by governments and higher education.....	79	16.04

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	102	36.96
3.1.2 Software piracy rate.....	83	12.16
3.1.3 Secure Internet servers.....	43	74.26
3.1.4 Cybersecurity.....	55	70.39
3.1.5 Online trust and safety.....	32	71.23
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	85	46.57
3.2.2 Ease of doing business.....	60	70.72
3.2.3 Legal framework's adaptability to digital business models.....	93	31.40
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	75	37.24
3.2.6 ICT regulatory environment.....	73	81.66
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	72	64.33
3.3.2 Socioeconomic gap in use of digital payments.....	56	71.47
3.3.3 Availability of local online content.....	52	58.65
3.3.4 Gender gap in internet use.....	65	55.03
3.3.5 Rural gap in use of digital payments.....	86	53.97
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	48	38.65
4.1.2 High-tech exports.....	71	10.24
4.1.3 PCT patent applications.....	55	0.91
4.1.4 Labour productivity per employee.....	81	13.23
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	100	33.42
4.2.2 Freedom to make life choices.....	105	31.13
4.2.3 Income inequality.....	1	100.00
4.2.4 Healthy life expectancy at birth.....	84	55.31
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	62	93.41
4.3.2 Pollution.....	59	85.83
4.3.3 Road safety.....	58	65.62
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# United Arab Emirates

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>29</b>	<b>65.45</b>
<b>A. Technology pillar</b> .....	<b>29</b>	<b>63.92</b>
1st sub-pillar: Access.....	10	87.77
2nd sub-pillar: Content.....	48	51.68
3rd sub-pillar: Future Technologies.....	23	52.30
<b>B. People pillar</b> .....	<b>24</b>	<b>60.28</b>
1st sub-pillar: Individuals .....	1	88.09
2nd sub-pillar: Businesses .....	34	46.22
3rd sub-pillar: Governments .....	59	46.53
<b>C. Governance pillar</b> .....	<b>24</b>	<b>77.69</b>
1st sub-pillar: Trust .....	27	74.56
2nd sub-pillar: Regulation.....	23	80.05
3rd sub-pillar: Inclusion.....	23	78.46
<b>D. Impact pillar</b> .....	<b>38</b>	<b>59.92</b>
1st sub-pillar: Economy .....	36	31.13
2nd sub-pillar: Quality of Life .....	21	78.40
3rd sub-pillar: SDG Contribution.....	75	70.24



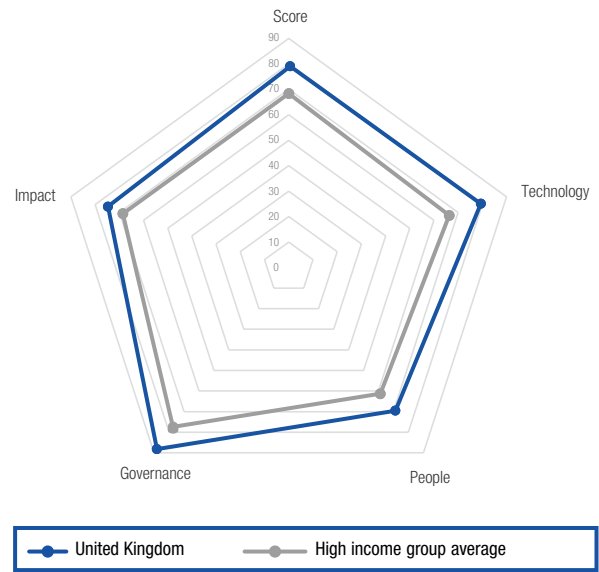
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	43	71.25
1.1.2 Handset prices.....	12	73.52
1.1.3 Households with internet access.....	4	98.29
1.1.4 4G mobile network coverage.....	14	99.73
1.1.5 Fixed-broadband subscriptions.....	31	91.39
1.1.6 International Internet bandwidth.....	7	80.23
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	32	77.30
1.2.3 Intellectual property receipts.....	19	5.93
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	13	87.97
1.3.2 Company investment in emerging technology.....	11	77.84
1.3.3 Government procurement of advanced technology products ..	1	100.00
1.3.4 ICT PCT patent applications.....	35	19.83
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	55	0.90
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	5	98.66
2.1.2 Active mobile-broadband subscriptions.....	1	100.00
2.1.3 Use of virtual social networks.....	1	100.00
2.1.4 Tertiary enrolment.....	n/a	n/a
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	33	53.70
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	n/a	n/a
2.2.2 Internet shopping.....	21	63.63
2.2.3 Professionals.....	48	34.44
2.2.4 Technicians and associate professionals.....	49	44.19
2.2.5 Extent of staff training.....	20	70.09
2.2.6 R&D expenditure by businesses.....	26	18.73
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	14	93.84
2.3.2 Publication and use of open data.....	59	26.17
2.3.3 ICT use and government efficiency.....	n/a	n/a
2.3.4 R&D expenditure by governments and higher education.....	70	19.57

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	33	71.72
3.1.2 Software piracy rate.....	20	77.03
3.1.3 Secure Internet servers.....	59	62.30
3.1.4 Cybersecurity.....	35	86.40
3.1.5 Online trust and safety.....	25	75.34
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	34	71.93
3.2.2 Ease of doing business.....	15	89.65
3.2.3 Legal framework's adaptability to digital business models....	2	97.74
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	34	62.57
3.2.6 ICT regulatory environment.....	65	83.40
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	17	93.63
3.3.2 Socioeconomic gap in use of digital payments.....	31	86.01
3.3.3 Availability of local online content.....	8	90.54
3.3.4 Gender gap in internet use.....	7	69.76
3.3.5 Rural gap in use of digital payments.....	93	52.36
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	60	32.36
4.1.2 High-tech exports.....	32	25.82
4.1.3 PCT patent applications.....	45	2.25
4.1.4 Labour productivity per employee.....	11	64.11
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	25	73.87
4.2.2 Freedom to make life choices.....	6	96.12
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	57	65.20
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	41	97.78
4.3.2 Pollution.....	102	61.95
4.3.3 Road safety.....	80	51.88
4.3.4 Reading proficiency in schools.....	39	67.79
4.3.5 Maths proficiency in schools.....	47	42.06
4.3.6 Use of clean fuels and technology.....	1	100.00

# United Kingdom

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>10</b>	<b>77.73</b>
<b>A. Technology pillar</b> .....	<b>7</b>	<b>78.16</b>
1st sub-pillar: Access.....	3	90.31
2nd sub-pillar: Content.....	6	81.13
3rd sub-pillar: Future Technologies.....	15	63.05
<b>B. People pillar</b> .....	<b>14</b>	<b>69.81</b>
1st sub-pillar: Individuals .....	29	64.10
2nd sub-pillar: Businesses .....	15	65.84
3rd sub-pillar: Governments .....	9	79.48
<b>C. Governance pillar</b> .....	<b>5</b>	<b>88.32</b>
1st sub-pillar: Trust .....	5	88.68
2nd sub-pillar: Regulation.....	10	88.96
3rd sub-pillar: Inclusion.....	5	87.31
<b>D. Impact pillar</b> .....	<b>13</b>	<b>74.62</b>
1st sub-pillar: Economy .....	18	45.37
2nd sub-pillar: Quality of Life .....	18	80.30
3rd sub-pillar: SDG Contribution.....	3	98.19



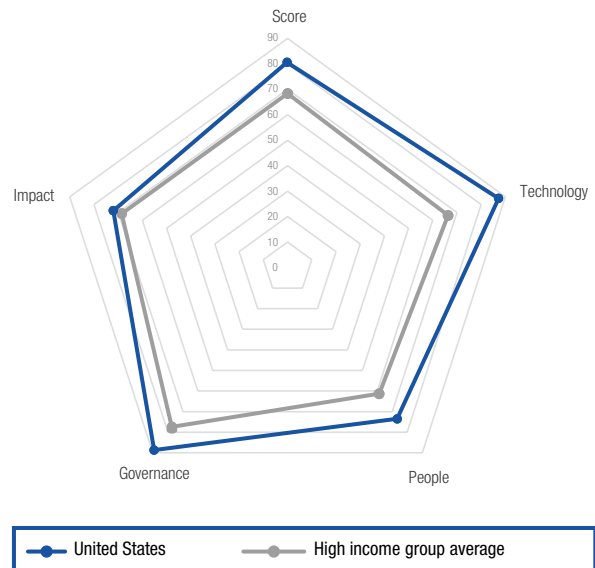
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	12	89.21
1.1.2 Handset prices.....	8	80.12
1.1.3 Households with internet access.....	13	93.59
1.1.4 4G mobile network coverage.....	17	99.70
1.1.5 Fixed-broadband subscriptions.....	8	98.04
1.1.6 International Internet bandwidth.....	5	81.21
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	14	87.22
1.2.3 Intellectual property receipts.....	8	18.43
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	9	91.85
1.3.2 Company investment in emerging technology.....	8	80.94
1.3.3 Government procurement of advanced technology products ..	23	57.31
1.3.4 ICT PCT patent applications.....	17	57.63
1.3.5 Computer software spending.....	4	63.64
1.3.6 Robot density.....	22	26.94
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	10	94.71
2.1.2 Active mobile-broadband subscriptions.....	33	37.24
2.1.3 Use of virtual social networks.....	32	66.74
2.1.4 Tertiary enrolment.....	46	43.58
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	14	78.23
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	14	82.28
2.2.2 Internet shopping.....	4	95.86
2.2.3 Professionals.....	9	65.98
2.2.4 Technicians and associate professionals.....	35	54.81
2.2.5 Extent of staff training.....	23	67.38
2.2.6 R&D expenditure by businesses.....	18	28.70
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	4	97.70
2.3.2 Publication and use of open data.....	1	100.00
2.3.3 ICT use and government efficiency.....	18	74.65
2.3.4 R&D expenditure by governments and higher education.....	34	45.59

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	15	90.70
3.1.2 Software piracy rate.....	10	91.89
3.1.3 Secure Internet servers.....	17	87.14
3.1.4 Cybersecurity.....	1	100.00
3.1.5 Online trust and safety.....	28	73.67
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	9	90.22
3.2.2 Ease of doing business.....	8	94.31
3.2.3 Legal framework's adaptability to digital business models.....	15	77.76
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	22	74.19
3.2.6 ICT regulatory environment.....	5	97.30
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	5	98.08
3.3.2 Socioeconomic gap in use of digital payments.....	20	94.21
3.3.3 Availability of local online content.....	1	100.00
3.3.4 Gender gap in internet use.....	11	68.19
3.3.5 Rural gap in use of digital payments.....	22	76.06
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	18	58.01
4.1.2 High-tech exports.....	14	42.81
4.1.3 PCT patent applications.....	19	26.92
4.1.4 Labour productivity per employee.....	26	53.73
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	11	86.99
4.2.2 Freedom to make life choices.....	56	71.53
4.2.3 Income inequality.....	38	78.42
4.2.4 Healthy life expectancy at birth.....	23	84.25
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	22	99.41
4.3.2 Pollution.....	17	94.59
4.3.3 Road safety.....	5	98.75
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# United States

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>8</b>	<b>80.32</b>
<b>A. Technology pillar</b> .....	<b>1</b>	<b>87.32</b>
1st sub-pillar: Access.....	29	81.41
2nd sub-pillar: Content.....	2	93.27
3rd sub-pillar: Future Technologies.....	1	87.27
<b>B. People pillar</b> .....	<b>8</b>	<b>73.59</b>
1st sub-pillar: Individuals .....	16	69.08
2nd sub-pillar: Businesses .....	9	71.64
3rd sub-pillar: Governments .....	8	80.04
<b>C. Governance pillar</b> .....	<b>4</b>	<b>88.74</b>
1st sub-pillar: Trust .....	11	85.64
2nd sub-pillar: Regulation.....	1	93.18
3rd sub-pillar: Inclusion.....	4	87.39
<b>D. Impact pillar</b> .....	<b>20</b>	<b>71.65</b>
1st sub-pillar: Economy .....	10	55.12
2nd sub-pillar: Quality of Life .....	40	69.15
3rd sub-pillar: SDG Contribution.....	35	90.68



## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	70	60.72
1.1.2 Handset prices.....	4	85.02
1.1.3 Households with internet access.....	36	82.76
1.1.4 4G mobile network coverage.....	12	99.80
1.1.5 Fixed-broadband subscriptions.....	37	87.49
1.1.6 International Internet bandwidth.....	34	72.67
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	6	93.95
1.2.3 Intellectual property receipts.....	2	77.13
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	6	96.12
1.3.2 Company investment in emerging technology.....	1	100.00
1.3.3 Government procurement of advanced technology products ..	2	89.56
1.3.4 ICT PCT patent applications.....	7	73.85
1.3.5 Computer software spending.....	1	100.00
1.3.6 Robot density.....	8	64.06
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	24	86.21
2.1.2 Active mobile-broadband subscriptions.....	7	55.93
2.1.3 Use of virtual social networks.....	27	69.85
2.1.4 Tertiary enrolment.....	8	64.33
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	30	70.42
2.2.2 Internet shopping.....	7	90.33
2.2.3 Professionals.....	15	58.16
2.2.4 Technicians and associate professionals.....	24	61.88
2.2.5 Extent of staff training.....	2	97.05
2.2.6 R&D expenditure by businesses.....	8	51.98
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	2	98.46
2.3.2 Publication and use of open data.....	4	81.62
2.3.3 ICT use and government efficiency.....	9	82.23
2.3.4 R&D expenditure by governments and higher education.....	19	57.85

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	19	86.48
3.1.2 Software piracy rate.....	1	100.00
3.1.3 Secure Internet servers.....	6	94.65
3.1.4 Cybersecurity.....	2	99.45
3.1.5 Online trust and safety.....	68	47.64
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	16	86.17
3.2.2 Ease of doing business.....	6	95.10
3.2.3 Legal framework's adaptability to digital business models....	1	100.00
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	11	88.02
3.2.6 ICT regulatory environment.....	34	89.77
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	5	98.08
3.3.2 Socioeconomic gap in use of digital payments.....	40	79.64
3.3.3 Availability of local online content.....	3	97.91
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	40	73.90
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	16	61.01
4.1.2 High-tech exports.....	22	35.80
4.1.3 PCT patent applications.....	11	46.73
4.1.4 Labour productivity per employee.....	7	76.94
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	21	79.68
4.2.2 Freedom to make life choices.....	61	68.55
4.2.3 Income inequality.....	79	56.58
4.2.4 Healthy life expectancy at birth.....	37	71.79
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	20	99.50
4.3.2 Pollution.....	9	98.12
4.3.3 Road safety.....	51	69.69
4.3.4 Reading proficiency in schools.....	16	96.84
4.3.5 Maths proficiency in schools.....	15	79.94
4.3.6 Use of clean fuels and technology.....	1	100.00

# Uruguay

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>46</b>	<b>56.04</b>
<b>A. Technology pillar.....</b>	<b>47</b>	<b>51.96</b>
1st sub-pillar: Access.....	46	75.43
2nd sub-pillar: Content.....	42	54.44
3rd sub-pillar: Future Technologies.....	83	26.02
<b>B. People pillar.....</b>	<b>42</b>	<b>51.40</b>
1st sub-pillar: Individuals .....	30	63.83
2nd sub-pillar: Businesses .....	54	31.79
3rd sub-pillar: Governments .....	31	58.59
<b>C. Governance pillar .....</b>	<b>50</b>	<b>64.06</b>
1st sub-pillar: Trust .....	52	60.67
2nd sub-pillar: Regulation.....	51	67.55
3rd sub-pillar: Inclusion.....	59	63.97
<b>D. Impact pillar .....</b>	<b>50</b>	<b>56.72</b>
1st sub-pillar: Economy .....	76	15.53
2nd sub-pillar: Quality of Life .....	34	71.07
3rd sub-pillar: SDG Contribution.....	50	83.56



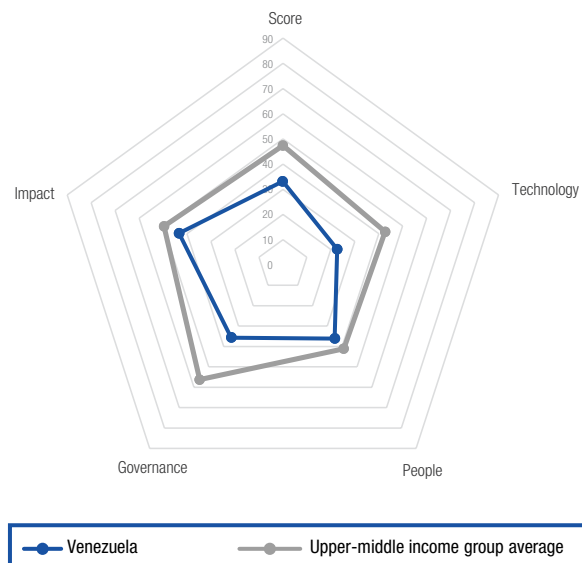
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	39	72.91
1.1.2 Handset prices.....	33	62.73
1.1.3 Households with internet access.....	70	61.61
1.1.4 4G mobile network coverage.....	72	86.20
1.1.5 Fixed-broadband subscriptions.....	57	71.71
1.1.6 International Internet bandwidth.....	32	72.81
1.1.7 Internet access in schools.....	1	100.00
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	45	68.60
1.2.3 Intellectual property receipts.....	32	1.60
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	61	54.83
1.3.2 Company investment in emerging technology.....	98	20.79
1.3.3 Government procurement of advanced technology products ..	93	28.24
1.3.4 ICT PCT patent applications.....	51	8.06
1.3.5 Computer software spending.....	59	18.18
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	66	65.08
2.1.2 Active mobile-broadband subscriptions.....	16	48.29
2.1.3 Use of virtual social networks.....	10	78.17
2.1.4 Tertiary enrolment.....	42	45.88
2.1.5 Adult literacy rate.....	21	98.03
2.1.6 ICT skills.....	41	47.54
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	39	65.55
2.2.2 Internet shopping.....	45	31.10
2.2.3 Professionals.....	55	30.45
2.2.4 Technicians and associate professionals.....	70	31.85
2.2.5 Extent of staff training.....	84	31.30
2.2.6 R&D expenditure by businesses.....	79	0.48
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	27	87.69
2.3.2 Publication and use of open data.....	17	60.85
2.3.3 ICT use and government efficiency.....	45	51.50
2.3.4 R&D expenditure by governments and higher education.....	47	34.30

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	38	67.00
3.1.2 Software piracy rate.....	68	29.73
3.1.3 Secure Internet servers.....	58	62.81
3.1.4 Cybersecurity.....	53	72.59
3.1.5 Online trust and safety.....	32	71.23
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	46	62.41
3.2.2 Ease of doing business.....	88	55.38
3.2.3 Legal framework's adaptability to digital business models.....	46	47.43
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	20	75.21
3.2.6 ICT regulatory environment.....	101	64.87
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	26	90.44
3.3.2 Socioeconomic gap in use of digital payments.....	80	54.89
3.3.3 Availability of local online content.....	57	55.32
3.3.4 Gender gap in internet use.....	30	64.84
3.3.5 Rural gap in use of digital payments.....	84	54.37
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	87	19.30
4.1.2 High-tech exports.....	61	13.63
4.1.3 PCT patent applications.....	57	0.81
4.1.4 Labour productivity per employee.....	55	28.39
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	32	69.04
4.2.2 Freedom to make life choices.....	39	80.50
4.2.3 Income inequality.....	70	61.84
4.2.4 Healthy life expectancy at birth.....	34	72.89
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	47	97.36
4.3.2 Pollution.....	12	96.73
4.3.3 Road safety.....	54	66.56
4.3.4 Reading proficiency in schools.....	34	71.79
4.3.5 Maths proficiency in schools.....	26	68.89
4.3.6 Use of clean fuels and technology.....	1	100.00

# Venezuela

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>102</b>	<b>34.14</b>
<b>A. Technology pillar</b> .....	<b>110</b>	<b>22.87</b>
1st sub-pillar: Access.....	110	29.74
2nd sub-pillar: Content.....	77	36.28
3rd sub-pillar: Future Technologies.....	120	2.58
<b>B. People pillar</b> .....	<b>84</b>	<b>35.34</b>
1st sub-pillar: Individuals .....	60	56.23
2nd sub-pillar: Businesses .....	58	30.50
3rd sub-pillar: Governments .....	114	19.28
<b>C. Governance pillar</b> .....	<b>112</b>	<b>34.88</b>
1st sub-pillar: Trust .....	113	28.01
2nd sub-pillar: Regulation.....	119	27.39
3rd sub-pillar: Inclusion.....	94	49.24
<b>D. Impact pillar</b> .....	<b>90</b>	<b>43.49</b>
1st sub-pillar: Economy .....	68	18.36
2nd sub-pillar: Quality of Life .....	106	40.88
3rd sub-pillar: SDG Contribution.....	74	71.23



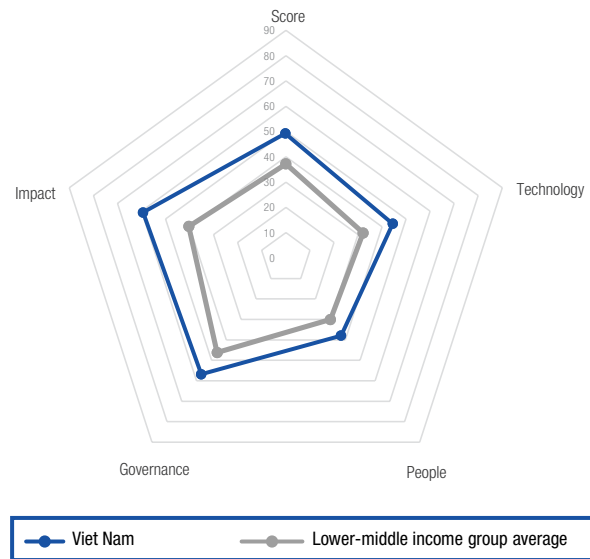
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	121	0.00
1.1.2 Handset prices.....	120	0.00
1.1.3 Households with internet access.....	90	29.06
1.1.4 4G mobile network coverage.....	76	82.00
1.1.5 Fixed-broadband subscriptions.....	99	5.96
1.1.6 International Internet bandwidth.....	97	61.42
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	101	37.79
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	118	9.62
1.3.2 Company investment in emerging technology.....	117	3.23
1.3.3 Government procurement of advanced technology products ..	119	0.00
1.3.4 ICT PCT patent applications.....	80	0.00
1.3.5 Computer software spending.....	n/a	n/a
1.3.6 Robot density.....	69	0.03
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	59	69.22
2.1.2 Active mobile-broadband subscriptions.....	91	19.89
2.1.3 Use of virtual social networks.....	87	38.67
2.1.4 Tertiary enrolment.....	20	57.80
2.1.5 Adult literacy rate.....	36	95.59
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	67	42.71
2.2.2 Internet shopping.....	65	16.52
2.2.3 Professionals.....	43	38.25
2.2.4 Technicians and associate professionals.....	n/a	n/a
2.2.5 Extent of staff training.....	105	24.51
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	108	34.61
2.3.2 Publication and use of open data.....	84	11.62
2.3.3 ICT use and government efficiency.....	107	11.59
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	121	0.00
3.1.2 Software piracy rate.....	100	0.00
3.1.3 Secure Internet servers.....	78	47.93
3.1.4 Cybersecurity.....	97	36.73
3.1.5 Online trust and safety.....	60	55.40
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	121	0.00
3.2.2 Ease of doing business.....	120	0.00
3.2.3 Legal framework's adaptability to digital business models.....	114	0.00
3.2.4 E-commerce legislation.....	66	75.00
3.2.5 Social safety net protection.....	117	6.51
3.2.6 ICT regulatory environment.....	68	82.82
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	105	32.48
3.3.2 Socioeconomic gap in use of digital payments.....	73	60.92
3.3.3 Availability of local online content.....	95	33.04
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	50	70.54
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	41	43.69
4.1.2 High-tech exports.....	n/a	n/a
4.1.3 PCT patent applications.....	82	0.03
4.1.4 Labour productivity per employee.....	83	11.36
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	91	40.58
4.2.2 Freedom to make life choices.....	112	19.04
4.2.3 Income inequality.....	n/a	n/a
4.2.4 Healthy life expectancy at birth.....	66	63.00
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	63	93.18
4.3.2 Pollution.....	46	88.61
4.3.3 Road safety.....	118	3.12
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	1	100.00

# Viet Nam

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>63</b>	<b>49.57</b>
<b>A. Technology pillar.....</b>	<b>65</b>	<b>44.79</b>
1st sub-pillar: Access.....	60	68.57
2nd sub-pillar: Content.....	76	36.41
3rd sub-pillar: Future Technologies.....	66	29.39
<b>B. People pillar.....</b>	<b>80</b>	<b>37.69</b>
1st sub-pillar: Individuals .....	67	54.14
2nd sub-pillar: Businesses .....	86	23.03
3rd sub-pillar: Governments .....	89	35.90
<b>C. Governance pillar .....</b>	<b>72</b>	<b>56.60</b>
1st sub-pillar: Trust .....	48	62.25
2nd sub-pillar: Regulation.....	73	61.16
3rd sub-pillar: Inclusion.....	97	46.38
<b>D. Impact pillar .....</b>	<b>42</b>	<b>59.20</b>
1st sub-pillar: Economy .....	20	44.45
2nd sub-pillar: Quality of Life .....	41	68.95
3rd sub-pillar: SDG Contribution.....	83	64.20



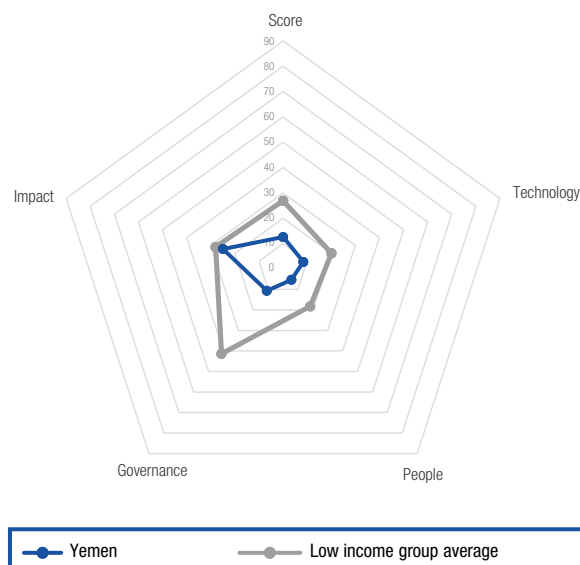
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	51	69.30
1.1.2 Handset prices.....	80	38.84
1.1.3 Households with internet access.....	81	43.52
1.1.4 4G mobile network coverage.....	56	93.89
1.1.5 Fixed-broadband subscriptions.....	13	96.44
1.1.6 International Internet bandwidth.....	57	69.41
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	57	63.72
1.2.3 Intellectual property receipts.....	n/a	n/a
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	104	32.00
1.3.2 Company investment in emerging technology.....	67	33.37
1.3.3 Government procurement of advanced technology products ..	35	49.94
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	30	27.27
1.3.6 Robot density.....	42	4.36
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	63	67.39
2.1.2 Active mobile-broadband subscriptions.....	71	27.00
2.1.3 Use of virtual social networks.....	41	63.62
2.1.4 Tertiary enrolment.....	82	20.42
2.1.5 Adult literacy rate.....	50	92.29
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	70	38.94
2.2.2 Internet shopping.....	53	24.00
2.2.3 Professionals.....	85	16.91
2.2.4 Technicians and associate professionals.....	99	14.02
2.2.5 Extent of staff training.....	73	34.54
2.2.6 R&D expenditure by businesses.....	42	9.76
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	57	70.77
2.3.2 Publication and use of open data.....	77	16.79
2.3.3 ICT use and government efficiency.....	60	44.41
2.3.4 R&D expenditure by governments and higher education.....	85	11.64

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	61	53.26
3.1.2 Software piracy rate.....	74	20.27
3.1.3 Secure Internet servers.....	56	63.80
3.1.4 Cybersecurity.....	52	73.90
3.1.5 Online trust and safety.....	1	100.00
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	94	42.92
3.2.2 Ease of doing business.....	63	69.93
3.2.3 Legal framework's adaptability to digital business models.....	49	47.16
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	63	43.22
3.2.6 ICT regulatory environment.....	103	63.71
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	69	64.97
3.3.2 Socioeconomic gap in use of digital payments.....	109	33.44
3.3.3 Availability of local online content.....	75	44.86
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	103	42.27
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	35	48.17
4.1.2 High-tech exports.....	4	78.47
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	92	6.72
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	78	46.62
4.2.2 Freedom to make life choices.....	23	88.15
4.2.3 Income inequality.....	48	72.89
4.2.4 Healthy life expectancy at birth.....	46	68.13
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	84	85.64
4.3.2 Pollution.....	89	73.00
4.3.3 Road safety.....	104	25.94
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	84	72.22

# Yemen

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>121</b>	<b>12.33</b>
<b>A. Technology pillar</b> .....	<b>121</b>	<b>8.33</b>
1st sub-pillar: Access.....	121	12.00
2nd sub-pillar: Content.....	117	7.59
3rd sub-pillar: Future Technologies.....	119	5.41
<b>B. People pillar</b> .....	<b>121</b>	<b>5.48</b>
1st sub-pillar: Individuals .....	120	7.75
2nd sub-pillar: Businesses .....	120	8.69
3rd sub-pillar: Governments .....	121	0.00
<b>C. Governance pillar</b> .....	<b>121</b>	<b>10.79</b>
1st sub-pillar: Trust .....	121	6.00
2nd sub-pillar: Regulation.....	121	14.06
3rd sub-pillar: Inclusion.....	121	12.30
<b>D. Impact pillar</b> .....	<b>117</b>	<b>24.74</b>
1st sub-pillar: Economy .....	107	7.77
2nd sub-pillar: Quality of Life .....	121	24.38
3rd sub-pillar: SDG Contribution.....	106	42.06



## The Network Readiness Index in detail

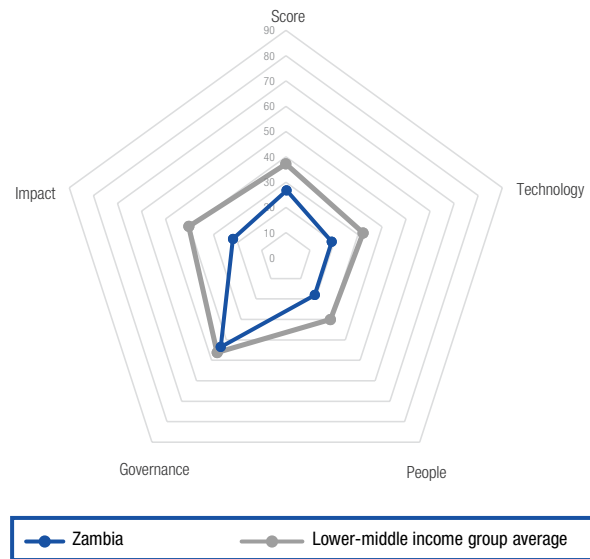
INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	120	0.33
1.1.2 Handset prices.....	111	19.34
1.1.3 Households with internet access.....	121	0.00
1.1.4 4G mobile network coverage.....	120	0.00
1.1.5 Fixed-broadband subscriptions.....	113	0.00
1.1.6 International Internet bandwidth.....	112	52.33
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	115	17.42
1.2.3 Intellectual property receipts.....	33	1.30
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	119	0.00
1.3.2 Company investment in emerging technology.....	118	0.00
1.3.3 Government procurement of advanced technology products ..	110	21.65
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	105	18.83
2.1.2 Active mobile-broadband subscriptions.....	121	0.00
2.1.3 Use of virtual social networks.....	115	5.30
2.1.4 Tertiary enrolment.....	103	6.87
2.1.5 Adult literacy rate.....	n/a	n/a
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	107	3.12
2.2.2 Internet shopping.....	n/a	n/a
2.2.3 Professionals.....	84	17.30
2.2.4 Technicians and associate professionals.....	98	14.34
2.2.5 Extent of staff training.....	119	0.00
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	120	0.00
2.3.2 Publication and use of open data.....	102	0.00
2.3.3 ICT use and government efficiency.....	109	0.00
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	120	12.50
3.1.2 Software piracy rate.....	99	1.35
3.1.3 Secure Internet servers.....	120	10.16
3.1.4 Cybersecurity.....	120	0.00
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	119	17.58
3.2.2 Ease of doing business.....	119	2.70
3.2.3 Legal framework's adaptability to digital business models....	n/a	n/a
3.2.4 E-commerce legislation.....	100	50.00
3.2.5 Social safety net protection.....	119	0.00
3.2.6 ICT regulatory environment.....	121	0.00
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	120	0.00
3.3.2 Socioeconomic gap in use of digital payments.....	117	0.00
3.3.3 Availability of local online content.....	110	10.80
3.3.4 Gender gap in internet use.....	n/a	n/a
3.3.5 Rural gap in use of digital payments.....	107	38.40
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	116	2.31
4.1.2 High-tech exports.....	57	15.18
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	95	5.81
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	121	0.00
4.2.2 Freedom to make life choices.....	119	5.58
4.2.3 Income inequality.....	59	69.21
4.2.4 Healthy life expectancy at birth.....	112	22.71
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	107	48.90
4.3.2 Pollution.....	107	55.72
4.3.3 Road safety.....	90	41.25
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	74	0.00
4.3.6 Use of clean fuels and technology.....	88	64.44



# Zambia

	Rank (out of 121)	Score
<b>Network Readiness Index.....</b>	<b>112</b>	<b>26.20</b>
<b>A. Technology pillar.....</b>	<b>113</b>	<b>18.87</b>
1st sub-pillar: Access.....	112	27.43
2nd sub-pillar: Content.....	120	3.25
3rd sub-pillar: Future Technologies.....	84	25.92
<b>B. People pillar.....</b>	<b>114</b>	<b>18.99</b>
1st sub-pillar: Individuals .....	105	23.45
2nd sub-pillar: Businesses .....	112	11.69
3rd sub-pillar: Governments .....	110	21.84
<b>C. Governance pillar .....</b>	<b>100</b>	<b>44.52</b>
1st sub-pillar: Trust .....	95	40.18
2nd sub-pillar: Regulation.....	84	56.99
3rd sub-pillar: Inclusion.....	111	36.40
<b>D. Impact pillar .....</b>	<b>119</b>	<b>22.43</b>
1st sub-pillar: Economy .....	83	12.50
2nd sub-pillar: Quality of Life .....	117	29.12
3rd sub-pillar: SDG Contribution.....	119	25.68



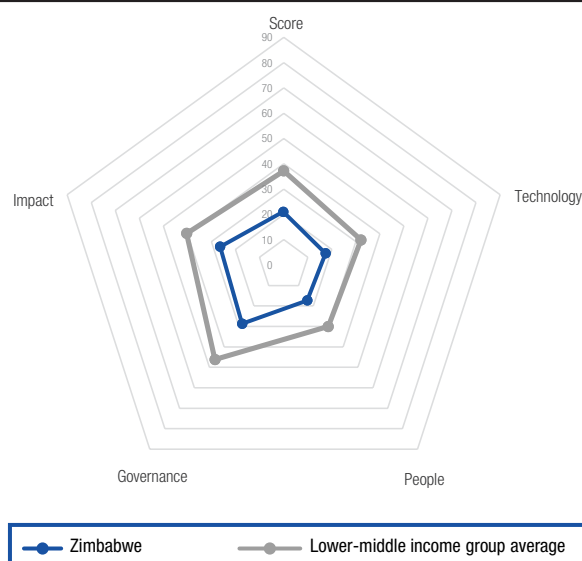
## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	107	35.21
1.1.2 Handset prices.....	99	29.32
1.1.3 Households with internet access.....	109	12.19
1.1.4 4G mobile network coverage.....	102	43.41
1.1.5 Fixed-broadband subscriptions.....	97	6.65
1.1.6 International Internet bandwidth.....	102	59.83
1.1.7 Internet access in schools.....	62	5.43
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	119	10.70
1.2.3 Intellectual property receipts.....	98	0.00
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	102	32.42
1.3.2 Company investment in emerging technology.....	86	25.58
1.3.3 Government procurement of advanced technology products ..	49	45.68
1.3.4 ICT PCT patent applications.....	n/a	n/a
1.3.5 Computer software spending.....	97	0.00
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	117	5.01
2.1.2 Active mobile-broadband subscriptions.....	87	20.75
2.1.3 Use of virtual social networks.....	109	9.56
2.1.4 Tertiary enrolment.....	113	2.42
2.1.5 Adult literacy rate.....	70	79.49
2.1.6 ICT skills.....	n/a	n/a
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	109	2.21
2.2.2 Internet shopping.....	84	6.50
2.2.3 Professionals.....	75	18.82
2.2.4 Technicians and associate professionals.....	97	14.83
2.2.5 Extent of staff training.....	97	27.68
2.2.6 R&D expenditure by businesses.....	85	0.14
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	101	42.31
2.3.2 Publication and use of open data.....	96	3.82
2.3.3 ICT use and government efficiency.....	78	37.58
2.3.4 R&D expenditure by governments and higher education.....	102	3.63

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	81	45.47
3.1.2 Software piracy rate.....	83	12.16
3.1.3 Secure Internet servers.....	106	31.63
3.1.4 Cybersecurity.....	87	45.72
3.1.5 Online trust and safety.....	47	65.91
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	96	41.67
3.2.2 Ease of doing business.....	78	64.92
3.2.3 Legal framework's adaptability to digital business models.....	86	33.88
3.2.4 E-commerce legislation.....	1	100.00
3.2.5 Social safety net protection.....	85	31.21
3.2.6 ICT regulatory environment.....	92	70.28
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	106	31.85
3.3.2 Socioeconomic gap in use of digital payments.....	88	49.51
3.3.3 Availability of local online content.....	111	6.96
3.3.4 Gender gap in internet use.....	77	40.88
3.3.5 Rural gap in use of digital payments.....	90	52.80
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	74	26.74
4.1.2 High-tech exports.....	98	3.78
4.1.3 PCT patent applications.....	n/a	n/a
4.1.4 Labour productivity per employee.....	91	6.97
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	113	20.50
4.2.2 Freedom to make life choices.....	74	60.68
4.2.3 Income inequality.....	105	15.53
4.2.4 Healthy life expectancy at birth.....	115	19.78
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	117	25.03
4.3.2 Pollution.....	83	78.59
4.3.3 Road safety.....	101	31.25
4.3.4 Reading proficiency in schools.....	74	0.00
4.3.5 Maths proficiency in schools.....	72	6.99
4.3.6 Use of clean fuels and technology.....	108	12.22

# Zimbabwe

	Rank (out of 121)	Score
<b>Network Readiness Index</b> .....	<b>119</b>	<b>22.09</b>
<b>A. Technology pillar</b> .....	<b>117</b>	<b>17.76</b>
1st sub-pillar: Access.....	115	23.02
2nd sub-pillar: Content.....	106	15.16
3rd sub-pillar: Future Technologies.....	114	15.11
<b>B. People pillar</b> .....	<b>116</b>	<b>16.37</b>
1st sub-pillar: Individuals .....	108	21.97
2nd sub-pillar: Businesses .....	105	15.38
3rd sub-pillar: Governments .....	120	11.75
<b>C. Governance pillar</b> .....	<b>119</b>	<b>27.84</b>
1st sub-pillar: Trust .....	120	18.82
2nd sub-pillar: Regulation.....	117	31.10
3rd sub-pillar: Inclusion.....	114	33.60
<b>D. Impact pillar</b> .....	<b>114</b>	<b>26.39</b>
1st sub-pillar: Economy .....	103	8.26
2nd sub-pillar: Quality of Life .....	114	34.52
3rd sub-pillar: SDG Contribution.....	110	36.38



## The Network Readiness Index in detail

INDICATOR	RANK/121	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs .....	115	20.44
1.1.2 Handset prices.....	120	0.00
1.1.3 Households with internet access.....	101	18.90
1.1.4 4G mobile network coverage.....	106	35.00
1.1.5 Fixed-broadband subscriptions.....	100	5.11
1.1.6 International Internet bandwidth.....	104	58.65
1.1.7 Internet access in schools.....	n/a	n/a
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation.....	-	-
1.2.2 Mobile apps development.....	104	33.06
1.2.3 Intellectual property receipts.....	73	0.18
<b>3rd sub-pillar: Future Technologies</b>		
1.3.1 Availability of latest technologies.....	106	29.57
1.3.2 Company investment in emerging technology.....	115	4.79
1.3.3 Government procurement of advanced technology products ..	118	4.81
1.3.4 ICT PCT patent applications.....	80	0.00
1.3.5 Computer software spending.....	21	36.36
1.3.6 Robot density.....	n/a	n/a
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users.....	104	19.20
2.1.2 Active mobile-broadband subscriptions.....	94	18.97
2.1.3 Use of virtual social networks.....	116	4.37
2.1.4 Tertiary enrolment.....	104	6.76
2.1.5 Adult literacy rate.....	63	82.51
2.1.6 ICT skills.....	62	0.00
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website.....	85	26.09
2.2.2 Internet shopping.....	94	4.83
2.2.3 Professionals.....	105	7.12
2.2.4 Technicians and associate professionals.....	108	6.06
2.2.5 Extent of staff training.....	78	32.80
2.2.6 R&D expenditure by businesses.....	n/a	n/a
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services.....	111	25.39
2.3.2 Publication and use of open data.....	100	1.87
2.3.3 ICT use and government efficiency.....	108	8.00
2.3.4 R&D expenditure by governments and higher education.....	n/a	n/a

INDICATOR	RANK/121	SCORE
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law.....	118	24.29
3.1.2 Software piracy rate.....	100	0.00
3.1.3 Secure Internet servers.....	105	32.69
3.1.4 Cybersecurity.....	111	18.31
3.1.5 Online trust and safety.....	n/a	n/a
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality.....	120	16.53
3.2.2 Ease of doing business.....	108	42.87
3.2.3 Legal framework's adaptability to digital business models.....	110	20.47
3.2.4 E-commerce legislation.....	110	25.00
3.2.5 Social safety net protection.....	116	8.77
3.2.6 ICT regulatory environment.....	88	72.98
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation.....	113	17.83
3.3.2 Socioeconomic gap in use of digital payments.....	66	65.03
3.3.3 Availability of local online content.....	112	6.48
3.3.4 Gender gap in internet use.....	80	31.51
3.3.5 Rural gap in use of digital payments.....	98	47.15
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry.....	71	27.69
4.1.2 High-tech exports.....	97	3.88
4.1.3 PCT patent applications.....	84	0.03
4.1.4 Labour productivity per employee.....	104	1.43
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness.....	116	11.64
4.2.2 Freedom to make life choices.....	85	54.20
4.2.3 Income inequality.....	84	52.11
4.2.4 Healthy life expectancy at birth.....	114	20.15
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services.....	111	34.23
4.3.2 Pollution.....	62	84.62
4.3.3 Road safety.....	120	0.00
4.3.4 Reading proficiency in schools.....	n/a	n/a
4.3.5 Maths proficiency in schools.....	n/a	n/a
4.3.6 Use of clean fuels and technology.....	101	26.67





# Section 3:

## Data Tables



1st pillar:

**Technology**





## 1.1.1 Mobile tariffs

Mobile tariffs sub-index | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Romania	96.85	100.00	62	Bulgaria	62.83	64.87
2	Norway	94.91	98.00	63	South Africa	62.40	64.43
3	Luxembourg	94.73	97.81	64	Indonesia	61.58	63.58
4	Ireland	94.56	97.63	65	Chile	61.29	63.29
5	Kazakhstan	93.53	96.57	66	Malta	59.57	61.50
6	Switzerland	90.96	93.92	67	Pakistan	59.39	61.32
7	Singapore	90.68	93.63	68	Mauritius	59.04	60.96
8	Sweden	89.58	92.50	69	Argentina	58.94	60.86
9	Hong Kong (China)	88.80	91.69	70	United States	58.81	60.72
10	Poland	88.72	91.61	71	Korea (Republic of)	58.74	60.65
11	Germany	87.42	90.26	72	Thailand	58.64	60.55
12	United Kingdom	86.39	89.21	73	Jamaica	57.18	59.04
13	Israel	85.93	88.73	74	Moldova	56.69	58.54
14	Peru	84.64	87.40	75	Cyprus	55.56	57.37
15	Italy	83.72	86.45	76	Panama	55.55	57.36
16	Austria	81.78	84.44	77	North Macedonia (Republic of)	55.39	57.19
17	Qatar	81.77	84.43	78	Bahrain	55.30	57.10
18	New Zealand	81.65	84.30	79	Mexico	54.73	56.51
19	Lithuania	81.57	84.23	80	Armenia	54.05	55.81
20	Saudi Arabia	80.86	83.49	81	Japan	51.90	53.59
21	Sri Lanka	80.55	83.17	82	Paraguay	51.79	53.48
22	Finland	79.68	82.27	83	Albania	50.73	52.38
23	Hungary	79.35	81.93	84	Nigeria	50.32	51.96
24	Iceland	77.77	80.30	85	Lao People's Democratic Republic	49.73	51.35
25	Australia	77.72	80.25	86	Mongolia	48.92	50.51
26	China	77.30	79.82	87	Cambodia	48.32	49.89
27	Czech Republic	77.21	79.73	88	Colombia	47.99	49.55
28	Spain	77.08	79.58	89	Nepal	47.90	49.45
29	Slovenia	76.04	78.51	90	Namibia	47.88	49.43
30	Netherlands	75.53	77.99	91	Bosnia and Herzegovina	47.86	49.42
31	Denmark	74.89	77.33	92	Kenya	47.75	49.30
32	Egypt	74.61	77.03	93	Dominican Republic	47.25	48.79
33	Estonia	72.90	75.27	94	Lebanon	45.92	47.41
34	Georgia	72.42	74.78	95	Senegal	44.97	46.44
35	Costa Rica	72.19	74.54	96	Botswana	44.60	46.05
36	Slovakia	72.09	74.43	97	Morocco	44.32	45.77
37	Belarus	71.96	74.30	98	Ecuador	43.39	44.80
38	India	71.79	74.13	99	El Salvador	38.69	39.95
39	Uruguay	70.61	72.91	100	Cameroon	38.29	39.53
40	Canada	70.17	72.45	101	Philippines	37.38	38.60
41	Oman	70.01	72.29	102	Eswatini	36.90	38.10
42	Belgium	69.71	71.98	103	Jordan	35.48	36.63
43	United Arab Emirates	69.00	71.25	104	Tanzania	34.94	36.07
44	Croatia	68.61	70.84	105	Algeria	34.81	35.94
45	Kuwait	68.14	70.35	106	Trinidad and Tobago	34.28	35.40
46	Ukraine	67.93	70.14	107	Zambia	34.10	35.21
47	Portugal	67.88	70.08	108	Mozambique	33.68	34.78
48	Greece	67.75	69.95	109	Kyrgyzstan	33.43	34.52
49	Turkey	67.59	69.79	110	Rwanda	32.06	33.10
50	Bangladesh	67.36	69.55	111	Guatemala	28.49	29.41
51	Viet Nam	67.11	69.30	112	Uganda	27.77	28.67
52	Brazil	66.45	68.61	113	Tajikistan	24.70	25.50
53	Malaysia	66.25	68.41	114	Ethiopia	23.58	24.34
54	Tunisia	66.23	68.38	115	Zimbabwe	19.80	20.44
55	Iran (Islamic Republic of)	65.42	67.55	116	Honduras	18.47	19.07
56	Azerbaijan	65.24	67.37	117	Mali	18.32	18.92
57	Latvia	65.12	67.24	118	Malawi	7.97	8.23
58	Serbia	64.75	66.86	119	Madagascar	7.38	7.62
59	Russian Federation	64.01	66.09	120	Yemen	0.32	0.33
60	Ghana	63.28	65.34	121	Venezuela	0.00	0.00
61	France	63.04	65.09				

Source: GSM Association, The GSMA Mobile Connectivity Index 2019 (<http://www.mobileconnectivityindex.com>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 1.1.2 Handset prices

Cost of cheapest Internet-enabled device (% of monthly GDP per capita) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Qatar	99.52	100.00	62	Belarus	46.55	46.77
2	Australia	93.58	94.04	63	China	46.50	46.73
3	Ireland	90.40	90.84	64	Guatemala	46.20	46.42
4	United States	84.60	85.02	65	Dominican Republic	46.11	46.33
5	Switzerland	82.37	82.77	66	Serbia	44.68	44.90
6	Luxembourg	82.06	82.46	67	Argentina	43.91	44.12
7	France	81.26	81.65	68	Paraguay	43.77	43.99
8	United Kingdom	79.73	80.12	69	El Salvador	43.52	43.74
9	Romania	78.09	78.47	70	Malaysia	43.33	43.54
10	Iceland	74.67	75.04	71	Jamaica	42.26	42.46
11	New Zealand	73.60	73.96	72	Indonesia	41.85	42.05
12	United Arab Emirates	73.17	73.52	73	Cameroon	41.56	41.76
13	Japan	71.15	71.50	74	Armenia	41.53	41.74
14	Belgium	70.92	71.27	75	Bosnia and Herzegovina	41.11	41.31
15	Sweden	70.13	70.48	76	Tunisia	41.07	41.27
16	Finland	70.02	70.36	77	Lebanon	40.85	41.05
17	Canada	69.32	69.66	78	North Macedonia (Republic of)	39.13	39.32
18	Kuwait	69.23	69.57	79	Ghana	38.84	39.03
19	Austria	68.79	69.12	80	Viet Nam	38.65	38.84
20	Denmark	67.16	67.49	81	Georgia	38.50	38.69
21	Norway	67.04	67.37	82	Albania	37.25	37.43
22	Portugal	66.87	67.20	83	Iran (Islamic Republic of)	37.22	37.40
23	Hong Kong (China)	65.72	66.04	84	Sri Lanka	36.61	36.79
24	Italy	65.55	65.86	85	Morocco	36.38	36.55
25	Chile	65.00	65.32	86	Philippines	36.25	36.43
26	Greece	64.78	65.09	87	Jordan	35.98	36.15
27	Singapore	64.29	64.61	88	Turkey	35.68	35.86
28	Panama	64.22	64.54	89	Ecuador	34.48	34.65
29	Czech Republic	64.09	64.40	90	Moldova	34.33	34.50
30	Israel	64.05	64.37	91	Egypt	33.97	34.14
31	Spain	63.92	64.23	92	Kenya	32.98	33.14
32	Korea (Republic of)	62.85	63.16	93	Bulgaria	32.90	33.06
33	Uruguay	62.43	62.73	94	Brazil	32.54	32.70
34	Netherlands	62.41	62.71	95	Algeria	32.01	32.17
35	Hungary	62.15	62.46	96	Honduras	31.06	31.21
36	Mexico	59.94	60.23	97	Mongolia	30.46	30.61
37	Russian Federation	58.68	58.97	98	Pakistan	29.48	29.63
38	Slovenia	58.23	58.52	99	Zambia	29.18	29.32
39	Botswana	58.00	58.28	100	Cambodia	28.93	29.07
40	Malta	57.95	58.24	101	Senegal	27.60	27.73
41	Germany	57.74	58.03	102	Tanzania	25.99	26.12
42	Poland	56.73	57.01	103	Madagascar	23.44	23.56
43	Cyprus	56.71	56.98	104	Bahrain	23.05	23.16
44	Saudi Arabia	56.63	56.91	105	Lao People's Democratic Republic	23.03	23.15
45	Kazakhstan	55.61	55.88	106	Azerbaijan	22.73	22.84
46	Estonia	55.34	55.61	107	Ukraine	21.61	21.72
47	South Africa	54.89	55.16	108	Uganda	21.43	21.53
48	Slovakia	54.82	55.08	109	Nepal	21.11	21.21
49	Lithuania	53.68	53.94	110	Nigeria	19.92	20.01
50	Thailand	52.73	52.99	111	Yemen	19.25	19.34
51	Costa Rica	52.23	52.49	112	Eswatini	17.15	17.24
52	Peru	51.77	52.02	113	Tajikistan	16.58	16.67
53	Oman	51.45	51.70	114	Kyrgyzstan	16.35	16.43
54	Latvia	49.84	50.09	115	Mozambique	11.63	11.68
55	India	49.43	49.67	116	Mali	7.44	7.48
56	Colombia	49.00	49.24	117	Malawi	4.08	4.10
57	Trinidad and Tobago	48.73	48.96	118	Rwanda	2.88	2.90
58	Mauritius	47.36	47.59	119	Ethiopia	2.67	2.68
59	Bangladesh	46.73	46.95	120	Venezuela	0.00	0.00
60	Namibia	46.70	46.93	120	Zimbabwe	0.00	0.00
61	Croatia	46.62	46.85				

Source: GSM Association, The GSMA Mobile Connectivity Index 2019 (<http://www.mobileconnectivityindex.com>)

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## 1.1.3 Internet access

Estimated proportion of households with Internet access at home (%) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Kuwait	100.00	100.00	62	Greece	70.96	69.02
2	Korea (Republic of)	99.48	99.44	63	Mauritius	69.73	67.71
3	Japan	98.53	98.43	64	Georgia	69.52	67.48
4	United Arab Emirates	98.40	98.29	65	Bosnia and Herzegovina	69.19	67.13
5	Iceland	97.86	97.72	66	North Macedonia (Republic of)	69.16	67.10
6	Singapore	97.73	97.58	67	Thailand	67.71	65.55
7	Bahrain	97.55	97.38	68	Indonesia	66.22	63.96
8	Denmark	97.00	96.80	69	Armenia	64.70	62.34
9	Netherlands	96.15	95.90	70	Uruguay	64.02	61.61
10	Norway	96.00	95.73	71	South Africa	61.83	59.28
11	Sweden	94.73	94.38	72	Brazil	60.75	58.13
12	Saudi Arabia	94.53	94.16	73	Panama	60.71	58.09
13	United Kingdom	93.99	93.59	74	Ukraine	60.26	57.60
14	Qatar	93.99	93.59	75	China	59.57	56.86
15	Luxembourg	92.99	92.52	76	Jamaica	52.89	49.74
16	Canada	91.24	90.65	77	Mexico	52.86	49.71
17	Estonia	90.48	89.85	78	Egypt	51.04	47.77
18	Germany	89.90	89.22	79	Moldova	50.54	47.23
19	Ireland	89.09	88.36	80	Colombia	49.95	46.60
20	Finland	88.95	88.21	81	Viet Nam	47.06	43.52
21	Austria	88.79	88.04	82	Tunisia	46.05	42.44
22	Switzerland	88.57	87.81	83	Botswana	45.72	42.09
23	Oman	88.56	87.79	84	Philippines	42.71	38.88
24	New Zealand	87.80	86.99	85	Cambodia	40.00	35.99
25	Kazakhstan	87.59	86.76	86	Ecuador	37.20	33.00
26	Chile	87.54	86.71	87	Ghana	35.54	31.23
27	Belgium	87.27	86.42	88	Namibia	34.57	30.19
28	Malaysia	86.98	86.11	89	Kenya	33.65	29.21
29	Slovenia	86.68	85.79	90	Venezuela	33.51	29.06
30	Spain	86.40	85.49	91	Dominican Republic	31.62	27.05
31	Cyprus	86.17	85.25	92	Albania	30.19	25.52
32	Australia	86.11	85.19	93	Peru	29.79	25.10
33	Malta	84.39	83.34	94	Eswatini	27.00	22.12
34	Lebanon	84.36	83.32	95	Honduras	26.48	21.56
35	Poland	84.19	83.13	96	India	25.38	20.39
36	United States	83.84	82.76	97	Lao People's Democratic Republic	24.46	19.40
37	Turkey	83.79	82.71	98	Paraguay	24.41	19.35
38	Hungary	83.31	82.19	99	Sri Lanka	24.36	19.30
39	Jordan	82.88	81.73	100	Senegal	24.16	19.08
40	France	82.37	81.19	101	Zimbabwe	23.99	18.90
41	Latvia	81.58	80.34	102	Guatemala	23.60	18.49
42	Croatia	81.52	80.28	103	Mongolia	22.99	17.84
43	Slovakia	81.33	80.08	104	Pakistan	22.14	16.93
44	Romania	80.89	79.61	105	Cameroon	21.70	16.46
45	Czech Republic	80.48	79.18	106	Kyrgyzstan	21.11	15.83
46	Hong Kong (China)	80.19	78.86	107	Ethiopia	17.98	12.49
47	Iran (Islamic Republic of)	79.56	78.19	108	Nepal	17.93	12.44
48	Portugal	79.43	78.05	109	Zambia	17.70	12.19
49	Lithuania	78.38	76.93	110	Mali	17.37	11.84
50	Azerbaijan	78.20	76.74	111	El Salvador	17.06	11.51
51	Trinidad and Tobago	77.51	76.00	112	Tanzania	14.40	8.67
52	Russian Federation	76.58	75.01	113	Tajikistan	11.85	5.95
53	Argentina	75.94	74.33	114	Malawi	11.07	5.12
54	Algeria	74.38	72.67	115	Mozambique	10.80	4.83
55	Morocco	74.17	72.44	116	Uganda	10.77	4.80
56	Israel	74.06	72.33	117	Rwanda	9.30	3.23
57	Costa Rica	73.08	71.28	118	Madagascar	8.20	2.06
58	Serbia	72.91	71.09	119	Nigeria	7.52	1.34
59	Belarus	72.45	70.60	120	Bangladesh	6.75	0.51
60	Bulgaria	72.13	70.27	121	Yemen	6.27	0.00
61	Italy	71.70	69.81				

**Source:** International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2019 (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)  
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## 1.1.4 4G mobile network coverage

Population covered by at least an LTE/WiMAX mobile network (%) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Bahrain	100.00	100.00	62	Romania	92.56	92.56
1	Belgium	100.00	100.00	63	Sri Lanka	91.00	91.00
1	Denmark	100.00	100.00	64	South Africa	90.32	90.32
1	Kuwait	100.00	100.00	65	Armenia	90.05	90.05
1	Malta	100.00	100.00	66	Ireland	90.00	90.00
1	Poland	100.00	100.00	66	Jordan	90.00	90.00
1	Singapore	100.00	100.00	68	Costa Rica	89.90	89.90
1	Sweden	100.00	100.00	69	Egypt	89.00	89.00
9	Finland	99.90	99.90	70	Iran (Islamic Republic of)	88.02	88.02
9	Korea (Republic of)	99.90	99.90	71	Chile	88.00	88.00
9	Norway	99.90	99.90	72	Uruguay	86.20	86.20
12	Czech Republic	99.80	99.80	73	Albania	85.50	85.50
12	United States	99.80	99.80	74	Argentina	85.00	85.00
14	United Arab Emirates	99.73	99.73	75	Brazil	83.05	83.05
15	Georgia	99.72	99.72	76	Israel	82.00	82.00
16	Bulgaria	99.71	99.71	76	Venezuela	82.00	82.00
17	United Kingdom	99.70	99.70	78	Cambodia	80.30	80.30
18	North Macedonia (Republic of)	99.53	99.53	79	Philippines	80.00	80.00
19	Qatar	99.50	99.50	79	Tajikistan	80.00	80.00
19	Slovenia	99.50	99.50	81	Belarus	75.70	75.70
21	China	99.40	99.40	82	Kazakhstan	75.30	75.30
22	Hungary	99.20	99.20	83	Trinidad and Tobago	75.00	75.00
22	Portugal	99.20	99.20	84	Jamaica	73.00	73.00
24	Australia	99.00	99.00	85	Mexico	70.91	70.91
24	Canada	99.00	99.00	86	Ecuador	70.87	70.87
24	Estonia	99.00	99.00	87	Kyrgyzstan	70.00	70.00
24	France	99.00	99.00	87	Russian Federationonn Federation	70.00	70.00
24	Hong Kong (China)	99.00	99.00	89	Pakistan	68.60	68.60
24	Italy	99.00	99.00	90	El Salvador	68.00	68.00
24	Japan	99.00	99.00	91	Honduras	67.46	67.46
24	Mauritius	99.00	99.00	92	Cameroon	65.48	65.48
24	Netherlands	99.00	99.00	93	Botswana	65.00	65.00
24	Switzerland	99.00	99.00	93	Paraguay	65.00	65.00
34	Greece	98.80	98.80	95	Senegal	62.00	62.00
35	Croatia	98.50	98.50	96	Bangladesh	58.00	58.00
36	Iceland	98.20	98.20	97	Uganda	57.00	57.00
36	Lebanon	98.20	98.20	98	Eswatini	54.00	54.00
38	Austria	98.00	98.00	99	Peru	52.24	52.24
38	Colombia	98.00	98.00	100	Azerbaijan	49.00	49.00
38	Lithuania	98.00	98.00	101	Mongolia	45.00	45.00
38	Thailand	98.00	98.00	102	Zambia	43.41	43.41
42	Spain	97.80	97.80	103	Lao People's Democratic Republic	43.00	43.00
43	Cyprus	97.53	97.53	104	Guatemala	40.35	40.35
44	Germany	97.50	97.50	105	Namibia	39.00	39.00
45	Luxembourg	97.00	97.00	106	Kenya	35.00	35.00
45	Moldova	97.00	97.00	106	Zimbabwe	35.00	35.00
45	New Zealand	97.00	97.00	108	Ghana	34.86	34.86
48	Serbia	96.70	96.70	109	Mozambique	33.00	33.00
49	Rwanda	96.60	96.60	109	Panama	33.00	33.00
50	Oman	96.05	96.05	111	Mali	31.00	31.00
51	Morocco	96.00	96.00	112	Algeria	30.64	30.64
51	Tunisia	96.00	96.00	113	Malawi	30.00	30.00
53	Latvia	95.00	95.00	114	Madagascar	25.00	25.00
54	India	94.00	94.00	115	Nigeria	22.34	22.34
54	Slovakia	94.00	94.00	116	Nepal	15.47	15.47
56	Viet Nam	93.89	93.89	117	Tanzania	13.00	13.00
57	Dominican Republic	93.72	93.72	118	Ethiopia	7.00	7.00
58	Turkey	93.17	93.17	119	Ukraine	3.00	3.00
59	Saudi Arabia	93.10	93.10	120	Bosnia and Herzegovina	0.00	0.00
60	Malaysia	93.00	93.00	120	Yemen	0.00	0.00
61	Indonesia	92.70	92.70				

Source: International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2019 (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)  
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## 1.1.5 Fixed-broadband subscriptions

Fixed-broadband subscriptions that are equal to or above 10 Mbit/s (% of total subscriptions) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Korea (Republic of)	100.00	100.00	62	Kuwait	67.67	67.67
2	Malta	99.73	99.73	63	Kyrgyzstan	64.27	64.27
3	Iceland	99.46	99.46	64	Malaysia	64.04	64.04
4	Portugal	99.21	99.21	65	Belarus	57.86	57.86
5	New Zealand	99.03	99.03	66	Argentina	53.45	53.45
6	Netherlands	98.81	98.81	67	Colombia	53.44	53.44
7	China	98.47	98.47	68	India	53.11	53.11
8	United Kingdom	98.04	98.04	69	Brazil	52.04	52.04
9	Thailand	97.86	97.86	70	Kazakhstan	51.83	51.83
10	Bulgaria	97.71	97.71	71	Indonesia	48.04	48.04
11	Switzerland	97.05	97.05	72	Armenia	47.98	47.98
12	Belgium	96.76	96.76	73	Bosnia and Herzegovina	46.79	46.79
13	Viet Nam	96.44	96.44	74	Rwanda	45.37	45.37
14	Spain	96.04	96.04	75	Jordan	44.83	44.83
15	Singapore	95.90	95.90	76	Israel	42.00	42.00
16	Ukraine	95.72	95.72	77	Panama	41.75	41.75
17	Greece	95.64	95.64	78	South Africa	41.30	41.30
18	Moldova	95.63	95.63	79	Tunisia	40.64	40.64
19	Qatar	95.48	95.48	80	Dominican Republic	34.39	34.39
20	Bahrain	94.83	94.83	81	Morocco	30.87	30.87
21	Lithuania	94.58	94.58	82	Albania	28.65	28.65
22	Denmark	93.95	93.95	83	Algeria	28.20	28.20
23	France	93.56	93.56	84	Madagascar	27.87	27.87
24	Hungary	93.29	93.29	85	Ecuador	24.75	24.75
25	Finland	93.26	93.26	86	Costa Rica	23.71	23.71
26	Romania	92.92	92.92	87	Sri Lanka	22.40	22.40
27	Serbia	92.91	92.91	88	Oman	21.04	21.04
28	Australia	92.80	92.80	89	Iran (Islamic Republic of)	20.27	20.27
29	Norway	92.53	92.53	90	Bangladesh	20.00	20.00
30	Sweden	92.12	92.12	91	Peru	17.39	17.39
31	United Arab Emirates	91.39	91.39	92	Senegal	15.86	15.86
32	Japan	91.19	91.19	93	Egypt	14.60	14.60
33	Czech Republic	88.76	88.76	94	Pakistan	12.88	12.88
34	Germany	88.06	88.06	95	Azerbaijan	8.20	8.20
35	Saudi Arabia	87.61	87.61	96	Nigeria	8.16	8.16
36	Slovenia	87.57	87.57	97	Zambia	6.65	6.65
37	United States	87.49	87.49	98	Mali	6.25	6.25
38	Ireland	87.40	87.40	99	Venezuela	5.96	5.96
39	Canada	86.69	86.69	100	Zimbabwe	5.11	5.11
40	Mexico	86.62	86.62	101	Honduras	3.60	3.60
41	Cambodia	85.21	85.21	102	Ethiopia	3.08	3.08
42	Estonia	85.12	85.12	103	Lao People's Democratic Republic	2.93	2.93
43	Hong Kong (China)	83.86	83.86	104	Namibia	1.80	1.80
44	Luxembourg	83.86	83.86	105	Botswana	1.18	1.18
45	Mauritius	80.82	80.82	106	El Salvador	1.06	1.06
46	Chile	80.46	80.46	107	Malawi	0.77	0.77
47	Latvia	80.11	80.11	108	Mozambique	0.67	0.67
48	North Macedonia (Republic of)	78.06	78.06	109	Paraguay	0.66	0.66
49	Georgia	77.49	77.49	110	Mongolia	0.58	0.58
50	Russian Federation	76.74	76.74	111	Eswatini	0.09	0.09
51	Turkey	76.42	76.42	112	Ghana	0.06	0.06
52	Croatia	76.31	76.31	113	Kenya	0.00	0.00
53	Slovakia	74.89	74.89	113	Yemen	0.00	0.00
54	Italy	73.12	73.12		Cameroon	n/a	n/a
55	Trinidad and Tobago	72.76	72.76		Guatemala	n/a	n/a
56	Cyprus	72.66	72.66		Lebanon	n/a	n/a
57	Uruguay	71.71	71.71		Nepal	n/a	n/a
58	Uganda	71.01	71.01		Philippines	n/a	n/a
59	Austria	69.51	69.51		Tajikistan	n/a	n/a
60	Jamaica	68.63	68.63		Tanzania	n/a	n/a
61	Poland	67.89	67.89				

**Source:** International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2019 (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)  
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## 1.1.6 International Internet bandwidth

International Internet bandwidth per Internet user (bit/s) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Luxembourg	8328979.44	100.00	62	France	54597.89	68.34
2	Hong Kong (China)	8203481.38	99.90	63	Germany	53755.75	68.24
3	Singapore	954274.82	86.40	64	Korea (Republic of)	53107.47	68.17
4	Iceland	491517.05	82.23	65	Austria	52218.77	68.06
5	United Kingdom	418134.87	81.21	66	Azerbaijan	52142.83	68.05
6	Kenya	386743.03	80.72	67	Jamaica	50355.24	67.83
7	United Arab Emirates	357642.24	80.23	68	Romania	49884.78	67.77
8	Malta	355151.78	80.19	69	Jordan	49492.39	67.72
9	Lithuania	350369.86	80.10	70	Dominican Republic	49251.71	67.69
10	Cyprus	322698.45	79.58	71	Honduras	48886.30	67.64
11	Bulgaria	274775.69	78.57	72	Cambodia	48403.85	67.57
12	Saudi Arabia	248839.40	77.95	73	Kyrgyzstan	47863.64	67.50
13	Belarus	197902.49	76.50	74	Tunisia	44316.95	67.01
14	Trinidad and Tobago	170591.93	75.57	75	Indonesia	43194.46	66.84
15	New Zealand	166277.57	75.40	76	Argentina	42275.45	66.71
16	Colombia	157599.01	75.07	77	Mexico	37653.85	65.96
17	Slovenia	152757.16	74.87	78	Peru	35243.30	65.54
18	Thailand	147994.18	74.67	79	Italy	33967.96	65.30
19	Croatia	142630.19	74.44	80	Brazil	29238.07	64.33
20	Georgia	140193.78	74.33	81	China	27722.32	63.98
21	Mauritius	137458.83	74.20	82	Japan	26888.68	63.79
22	El Salvador	134912.77	74.08	83	Spain	26859.40	63.78
23	Belgium	134827.44	74.08	84	India	25942.09	63.55
24	Latvia	134348.12	74.06	85	Egypt	24900.06	63.29
25	Bahrain	130219.49	73.86	86	Lebanon	24383.66	63.15
26	Chile	127751.50	73.74	87	Iran (Islamic Republic of)	24266.06	63.12
27	Estonia	122159.47	73.46	88	North Macedonia (Republic of)	24256.68	63.12
28	Netherlands	119772.31	73.33	89	Bangladesh	24095.79	63.07
29	Moldova	115321.73	73.09	90	Sri Lanka	23348.68	62.87
30	Greece	115021.90	73.08	91	Poland	22885.78	62.73
31	Costa Rica	112520.61	72.94	92	Mongolia	22399.44	62.59
32	Uruguay	110265.52	72.81	93	Pakistan	20853.68	62.13
33	Armenia	109142.89	72.74	94	Botswana	20398.74	61.98
34	United States	107864.66	72.67	95	Paraguay	19074.37	61.54
35	Qatar	106059.64	72.56	96	Philippines	18840.64	61.46
36	Slovakia	96073.38	71.94	97	Venezuela	18737.50	61.42
37	Norway	95622.29	71.91	98	Lao People's Democratic Republic	18116.43	61.20
38	Turkey	94995.15	71.87	99	Ghana	18113.49	61.20
39	Kuwait	87362.47	71.33	100	Algeria	17238.74	60.87
40	Denmark	87136.16	71.32	101	Mozambique	16445.94	60.56
41	Panama	85423.85	71.19	102	Zambia	14745.94	59.83
42	Switzerland	84391.69	71.11	103	Nepal	13198.35	59.08
43	Finland	84012.05	71.09	104	Zimbabwe	12375.58	58.65
44	Ireland	78785.98	70.68	105	Guatemala	11641.94	58.23
45	Albania	76035.50	70.45	106	South Africa	10467.76	57.50
46	Canada	74791.62	70.35	107	Namibia	9744.21	57.01
47	Oman	74086.63	70.29	108	Rwanda	8849.79	56.34
48	Serbia	73692.05	70.25	109	Uganda	7775.25	55.42
49	Ukraine	73625.04	70.25	110	Madagascar	5589.59	53.01
50	Malaysia	72051.03	70.11	111	Mali	5484.88	52.87
51	Bosnia and Herzegovina	71268.60	70.04	112	Yemen	5109.58	52.33
52	Portugal	68283.21	69.77	113	Eswatini	4728.95	51.73
53	Russian Federation	68025.95	69.74	114	Senegal	4384.66	51.13
54	Sweden	67652.04	69.71	115	Malawi	3818.78	50.01
55	Australia	67209.45	69.67	116	Ecuador	3780.75	49.93
56	Morocco	64600.62	69.42	117	Cameroon	2680.67	46.87
57	Viet Nam	64542.21	69.41	118	Tajikistan	2256.29	45.13
58	Hungary	60929.13	69.04	119	Nigeria	2254.63	45.12
59	Czech Republic	59213.04	68.86	120	Ethiopia	1383.17	38.41
60	Israel	57245.42	68.65	121	Tanzania	929.38	0.00
61	Kazakhstan	55067.84	68.40				

Source: International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2019 (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)  
For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 1.1.7 Internet access in schools

Proportion of primary schools with access to Internet for pedagogical purposes (%) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Armenia	100.00	100.00	62	Zambia	5.81	5.43
1	Australia	100.00	100.00	63	Paraguay	5.41	5.02
1	Bahrain	100.00	100.00	64	Bangladesh	4.14	3.75
1	Belgium	100.00	100.00	65	Madagascar	0.41	0.00
1	Denmark	100.00	100.00		Algeria	n/a	n/a
1	Estonia	100.00	100.00		Austria	n/a	n/a
1	Finland	100.00	100.00		Bosnia and Herzegovina	n/a	n/a
1	Georgia	100.00	100.00		Botswana	n/a	n/a
1	Hungary	100.00	100.00		Bulgaria	n/a	n/a
1	Korea (Republic of)	100.00	100.00		Cambodia	n/a	n/a
1	Latvia	100.00	100.00		Cameroon	n/a	n/a
1	Netherlands	100.00	100.00		Canada	n/a	n/a
1	Norway	100.00	100.00		Chile	n/a	n/a
1	Oman	100.00	100.00		Croatia	n/a	n/a
1	Poland	100.00	100.00		Cyprus	n/a	n/a
1	Portugal	100.00	100.00		Czech Republic	n/a	n/a
1	Qatar	100.00	100.00		Ethiopia	n/a	n/a
1	Saudi Arabia	100.00	100.00		Germany	n/a	n/a
1	Slovenia	100.00	100.00		Greece	n/a	n/a
1	Spain	100.00	100.00		Iceland	n/a	n/a
1	Switzerland	100.00	100.00		India	n/a	n/a
1	United Arab Emirates	100.00	100.00		Indonesia	n/a	n/a
1	Uruguay	100.00	100.00		Ireland	n/a	n/a
24	Slovakia	99.70	99.70		Japan	n/a	n/a
25	Hong Kong (China)	99.22	99.21		Kazakhstan	n/a	n/a
26	Thailand	98.80	98.80		Kenya	n/a	n/a
27	France	98.00	97.99		Kuwait	n/a	n/a
28	Malaysia	97.18	97.17		Lao People's Democratic Republic	n/a	n/a
29	China	96.25	96.23		Lithuania	n/a	n/a
30	Moldova	90.56	90.52		Luxembourg	n/a	n/a
31	Lebanon	89.88	89.84		Malawi	n/a	n/a
32	Belarus	87.01	86.95		Mali	n/a	n/a
33	Israel	85.00	84.94		Malta	n/a	n/a
34	Jamaica	84.31	84.24		Mozambique	n/a	n/a
35	Morocco	78.96	78.88		Namibia	n/a	n/a
36	Mongolia	70.66	70.54		Nepal	n/a	n/a
37	Italy	70.00	69.88		New Zealand	n/a	n/a
38	Brazil	62.04	61.89		Nigeria	n/a	n/a
39	Costa Rica	59.24	59.08		North Macedonia (Republic of)	n/a	n/a
40	Ukraine	57.79	57.61		Pakistan	n/a	n/a
41	Azerbaijan	53.63	53.44		Panama	n/a	n/a
42	Tunisia	48.66	48.44		Philippines	n/a	n/a
43	Egypt	47.58	47.37		Romania	n/a	n/a
44	Albania	46.77	46.55		Russian Federation	n/a	n/a
45	Kyrgyzstan	41.37	41.13		Serbia	n/a	n/a
46	Peru	40.77	40.53		Singapore	n/a	n/a
47	Argentina	39.98	39.74		South Africa	n/a	n/a
48	Colombia	39.38	39.14		Sri Lanka	n/a	n/a
49	Mexico	38.88	38.63		Sweden	n/a	n/a
50	Ecuador	38.16	37.91		Tajikistan	n/a	n/a
51	El Salvador	36.03	35.77		Tanzania	n/a	n/a
52	Rwanda	30.01	29.72		Trinidad and Tobago	n/a	n/a
53	Mauritius	27.04	26.74		Turkey	n/a	n/a
54	Dominican Republic	23.16	22.85		Uganda	n/a	n/a
55	Honduras	16.14	15.80		United Kingdom	n/a	n/a
56	Eswatini	15.59	15.25		United States	n/a	n/a
57	Jordan	12.74	12.39		Venezuela	n/a	n/a
58	Senegal	12.66	12.30		Viet Nam	n/a	n/a
59	Iran (Islamic Republic of)	10.55	10.18		Yemen	n/a	n/a
60	Guatemala	9.12	8.74		Zimbabwe	n/a	n/a
61	Ghana	8.41	8.03				

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 1.2.1 Digital participation and content creation

DKEI digital participation and content creation sub-index | 2012

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Data for indicator 1.2.1 Digital participation and content creation is confidential. The authors behind the indicator have instead supplied the box below and the interested reader is encouraged to consult the original article and contact the authors directly for further information. The contribution of the authors to the NRI is gratefully acknowledged.

### THE DIGITAL PARTICIPATION SUB-INDEX

The Digital Knowledge Economy Index (DKEI) is quantified by way of measuring content creation and participation through digital platforms, namely the code sharing platform GitHub, the crowdsourced encyclopaedia Wikipedia, and Internet domain registrations and estimating a fifth sub-index for the World Bank Knowledge Economy Index (KEI) (Ojanperä, Graham, & Zook, 2019). The data for the digital participation and content creation sub-index is obtained through bespoke methods that allow scraping information directly from websites and other online resources.

This approach complements conventional data sources such as national statistics and expert surveys and helps reflect the underlying digital content creation, capacities, and skills of the population. An index that combines traditional and novel digitally based data sources can provide a more revealing view of the status of the world's digital knowledge economy and highlight where the (un)availability of digital resources may actually reinforce inequalities in the age of data.

#### References:

Ojanperä, S., Graham, M., & Zook, M. (2019). The Digital Knowledge Economy Index: Mapping Content Production. *The Journal of Development Studies*, 55(12), 2626–2643. <https://doi.org/10.1080/00220388.2018.1554208>



## 1.2.2 Mobile apps development

Number of active mobile applications developed per person | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Singapore	97.24	100.00	62	Mongolia	70.14	62.55
2	Austria	95.02	96.93	63	Mauritius	69.70	61.94
3	Hong Kong (China)	94.35	96.00	64	Albania	68.27	59.96
4	Ireland	93.66	95.04	65	Jordan	67.94	59.51
5	Netherlands	93.31	94.57	66	South Africa	67.80	59.32
6	United States	92.86	93.95	67	Thailand	67.77	59.28
7	Denmark	91.13	91.56	68	China	67.52	58.93
8	Israel	90.69	90.94	69	Saudi Arabia	65.91	56.71
9	Switzerland	89.80	89.72	70	Moldova	65.89	56.67
10	Luxembourg	89.43	89.20	71	Mexico	64.50	54.76
11	Iceland	89.01	88.63	72	Oman	64.26	54.43
12	Cyprus	88.57	88.01	73	Kazakhstan	64.10	54.20
13	Sweden	88.19	87.49	74	Paraguay	63.81	53.81
14	United Kingdom	87.99	87.22	75	Tunisia	63.41	53.24
15	Malta	87.36	86.35	76	Peru	62.86	52.49
16	Australia	87.22	86.15	77	Azerbaijan	62.81	52.42
17	Norway	87.03	85.89	78	Ecuador	62.52	52.03
18	New Zealand	86.43	85.05	79	Trinidad and Tobago	62.19	51.56
19	Slovenia	85.77	84.15	80	El Salvador	62.07	51.39
20	Canada	85.77	84.15	81	India	61.85	51.10
21	Germany	85.76	84.14	82	Bosnia and Herzegovina	61.20	50.19
22	Estonia	85.72	84.08	83	Indonesia	60.90	49.79
23	Finland	85.10	83.22	84	Colombia	60.54	49.29
24	Lithuania	85.07	83.19	85	Sri Lanka	60.14	48.73
25	Spain	84.24	82.03	86	Morocco	60.08	48.65
26	Korea (Republic of)	83.99	81.69	87	Namibia	59.99	48.53
27	France	83.38	80.84	88	Dominican Republic	59.78	48.23
28	Bulgaria	82.85	80.12	89	Jamaica	59.70	48.12
29	Czech Republic	82.80	80.05	90	Nepal	58.81	46.89
30	Italy	82.07	79.04	91	Cambodia	58.56	46.55
31	Japan	81.52	78.28	92	Pakistan	57.58	45.19
32	United Arab Emirates	80.82	77.30	93	Kyrgyzstan	57.58	45.19
33	Belgium	80.31	76.60	94	Guatemala	56.53	43.74
34	Portugal	80.29	76.58	95	Egypt	55.04	41.69
35	Latvia	79.71	75.77	96	Honduras	54.24	40.58
36	Greece	79.61	75.63	97	Botswana	53.57	39.65
37	Slovakia	78.88	74.63	98	Philippines	53.05	38.93
38	Hungary	78.43	74.00	99	Kenya	52.77	38.55
39	Romania	77.64	72.91	100	Iran (Islamic Republic of)	52.42	38.06
40	Poland	77.58	72.83	101	Venezuela	52.22	37.79
41	Croatia	77.05	72.10	102	Lao People's Democratic Republic	50.46	35.36
42	Serbia	76.31	71.07	103	Eswatini	49.56	34.11
43	Russian Federation	75.81	70.39	104	Zimbabwe	48.80	33.06
44	Bahrain	75.04	69.32	105	Mali	48.67	32.88
45	Uruguay	74.52	68.60	106	Tajikistan	48.32	32.40
46	Lebanon	74.20	68.16	107	Bangladesh	46.65	30.09
47	Malaysia	74.03	67.93	108	Madagascar	45.96	29.14
48	Turkey	73.92	67.77	109	Ghana	45.46	28.45
49	Brazil	73.43	67.09	110	Nigeria	45.15	28.01
50	Costa Rica	72.87	66.32	111	Cameroon	43.50	25.74
51	Qatar	72.70	66.08	112	Senegal	43.03	25.08
52	Kuwait	72.56	65.90	113	Tanzania	41.88	23.50
53	Armenia	72.45	65.74	114	Uganda	40.78	21.98
54	North Macedonia (Republic of)	72.02	65.14	115	Yemen	37.48	17.42
55	Argentina	71.49	64.42	116	Algeria	37.39	17.30
56	Panama	71.30	64.16	117	Rwanda	37.19	17.02
57	Viet Nam	70.99	63.72	118	Mozambique	35.15	14.19
58	Belarus	70.78	63.44	119	Zambia	32.62	10.70
59	Georgia	70.70	63.32	120	Ethiopia	25.98	1.52
60	Chile	70.58	63.16	121	Malawi	24.87	0.00
61	Ukraine	70.38	62.88				

Source: GSM Association, The GSMA Mobile Connectivity Index 2019 (<http://www.mobileconnectivityindex.com>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 1.2.3 Intellectual property receipts

Charges for the use of intellectual property not included elsewhere, receipts (% of total trade) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Netherlands	5.78	100.00	62	Romania	0.08	0.48
2	United States	5.45	77.13	63	Lithuania	0.08	0.45
3	Switzerland	5.32	71.11	64	Kyrgyzstan	0.07	0.41
4	Japan	4.8	53.61	65	Estonia	0.07	0.41
5	Ireland	3.48	29.39	66	Chile	0.06	0.35
6	Finland	3.39	28.27	67	Latvia	0.04	0.25
7	Sweden	3.32	27.29	68	Panama	0.04	0.22
8	United Kingdom	2.51	18.43	69	Slovakia	0.04	0.22
9	Malta	2.02	14.03	70	Peru	0.04	0.20
10	Iceland	2.01	13.93	71	Thailand	0.03	0.20
11	France	1.99	13.76	72	Pakistan	0.03	0.19
12	Denmark	1.81	12.24	73	Zimbabwe	0.03	0.18
13	Luxembourg	1.81	12.24	74	Costa Rica	0.03	0.18
14	Israel	1.66	11.11	75	Indonesia	0.03	0.16
15	Singapore	1.48	9.66	76	Mauritius	0.03	0.15
16	Hungary	1.3	8.35	77	Philippines	0.02	0.13
17	Germany	1.17	7.40	78	Mongolia	0.02	0.12
18	Korea (Republic of)	1.09	6.90	79	Trinidad and Tobago	0.02	0.11
19	United Arab Emirates	0.95	5.93	80	Morocco	0.02	0.10
20	Canada	0.86	5.29	81	Cyprus	0.01	0.08
21	Italy	0.68	4.15	82	Iran (Islamic Republic of)	0.01	0.08
22	Kenya	0.66	4.02	83	Cameroon	0.01	0.07
23	New Zealand	0.66	4.01	84	Namibia	0.01	0.07
24	Belgium	0.61	3.68	85	Cambodia	0.01	0.06
25	El Salvador	0.57	3.44	86	Turkey	0.01	0.05
26	Austria	0.55	3.29	87	Georgia	0.01	0.04
27	Spain	0.49	2.95	88	Botswana	0.01	0.04
28	Norway	0.33	1.93	89	Guatemala	0	0.03
29	Australia	0.31	1.81	90	Tanzania	0	0.01
30	Argentina	0.29	1.73	91	Kazakhstan	0	0.01
31	Brazil	0.28	1.67	92	Mexico	0	0.01
32	Uruguay	0.27	1.60	93	Eswatini	0	0.01
33	Yemen	0.22	1.30	94	Mali	0	0.01
34	Czech Republic	0.22	1.27	95	Bangladesh	0	0.01
35	Serbia	0.22	1.26	96	Ethiopia	0	0.01
36	Bosnia and Herzegovina	0.21	1.19	97	Algeria	0	0.01
37	Poland	0.19	1.08	98	Armenia	0	0.00
38	Croatia	0.18	1.07	98	Dominican Republic	0	0.00
39	Jordan	0.18	1.06	98	Ecuador	0	0.00
40	Russian Federation	0.17	1.00	98	Mozambique	0	0.00
41	Albania	0.16	0.94	98	Nigeria	0	0.00
42	Bulgaria	0.16	0.93	98	Tajikistan	0	0.00
43	Slovenia	0.15	0.89	98	Zambia	0	0.00
44	China	0.15	0.86		Azerbaijan	n/a	n/a
45	Moldova	0.15	0.85		Bahrain	n/a	n/a
46	Ukraine	0.14	0.81		Egypt	n/a	n/a
47	Colombia	0.14	0.80		Ghana	n/a	n/a
48	India	0.14	0.79		Honduras	n/a	n/a
49	Portugal	0.13	0.78		Kuwait	n/a	n/a
50	North Macedonia (Republic of)	0.13	0.75		Lao People's Democratic Republic	n/a	n/a
51	Tunisia	0.13	0.73		Malawi	n/a	n/a
52	Senegal	0.12	0.68		Nepal	n/a	n/a
53	Greece	0.12	0.67		Oman	n/a	n/a
54	South Africa	0.11	0.66		Paraguay	n/a	n/a
55	Belarus	0.11	0.65		Qatar	n/a	n/a
56	Hong Kong (China)	0.11	0.63		Rwanda	n/a	n/a
57	Jamaica	0.1	0.58		Saudi Arabia	n/a	n/a
58	Uganda	0.09	0.53		Sri Lanka	n/a	n/a
59	Lebanon	0.09	0.53		Venezuela	n/a	n/a
60	Madagascar	0.09	0.51		Viet Nam	n/a	n/a
61	Malaysia	0.08	0.49				

Source: World Trade Organization, Trade in Commercial Services database (<https://data.wto.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 1.3.1 Availability of latest technologies

Average answer to the question: In your country, to what extent are the latest technologies available? [1 = not at all; 7 = to a great extent] | 2016–17

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Finland	6.61	100.00	62	Poland	4.81	53.66
2	Norway	6.55	98.38	63	Croatia	4.78	53.04
3	Switzerland	6.52	97.52	64	Cyprus	4.76	52.61
4	Israel	6.49	96.93	65	Indonesia	4.76	52.56
5	Sweden	6.47	96.45	66	Bulgaria	4.73	51.66
6	United States	6.46	96.12	67	Dominican Republic	4.73	51.65
7	Netherlands	6.41	94.73	68	Pakistan	4.72	51.59
8	Iceland	6.30	91.98	69	Romania	4.68	50.55
9	United Kingdom	6.30	91.85	70	India	4.68	50.48
10	Luxembourg	6.29	91.76	71	Philippines	4.65	49.66
11	Japan	6.27	91.13	72	Tunisia	4.58	47.84
12	Belgium	6.19	89.19	73	Armenia	4.53	46.68
13	United Arab Emirates	6.14	87.97	74	Brazil	4.52	46.23
14	Canada	6.13	87.70	75	China	4.47	44.95
15	Singapore	6.11	87.11	76	Bosnia and Herzegovina	4.47	44.95
16	Germany	6.07	85.98	77	Russian Federation	4.41	43.63
17	New Zealand	6.05	85.53	78	Colombia	4.41	43.45
18	Denmark	6.04	85.34	79	Honduras	4.40	43.24
19	France	6.03	85.05	80	Serbia	4.39	43.11
20	Portugal	6.00	84.35	81	Moldova	4.36	42.28
21	Austria	5.92	82.24	82	Albania	4.36	42.22
22	Qatar	5.89	81.54	83	Sri Lanka	4.35	41.95
23	Korea (Republic of)	5.81	79.32	84	Egypt	4.33	41.56
24	Malta	5.74	77.65	85	Tajikistan	4.33	41.51
25	Estonia	5.73	77.27	86	Cambodia	4.33	41.39
26	Slovenia	5.72	76.99	87	Peru	4.31	40.84
27	Australia	5.68	76.11	88	Botswana	4.30	40.72
28	Chile	5.63	74.88	89	Mongolia	4.30	40.66
29	Hong Kong (China)	5.63	74.85	90	Ecuador	4.26	39.67
30	Lithuania	5.62	74.54	91	Nigeria	4.26	39.57
31	Czech Republic	5.61	74.25	92	Argentina	4.19	37.86
32	Ireland	5.58	73.58	93	El Salvador	4.16	37.24
33	Bahrain	5.56	72.94	94	Mali	4.14	36.53
34	Malaysia	5.46	70.39	95	Ghana	4.13	36.44
35	Spain	5.43	69.69	96	Kazakhstan	4.13	36.37
36	Panama	5.40	68.87	97	Iran (Islamic Republic of)	4.12	36.16
37	Jordan	5.38	68.30	98	Bangladesh	4.09	35.28
38	Slovakia	5.38	68.28	99	Ukraine	4.08	35.19
39	Saudi Arabia	5.37	68.01	100	Lebanon	4.08	35.18
40	Latvia	5.35	67.62	101	Uganda	4.08	35.12
41	Jamaica	5.30	66.30	102	Zambia	3.98	32.42
42	Hungary	5.23	64.54	103	Georgia	3.97	32.35
43	Azerbaijan	5.21	64.03	104	Viet Nam	3.96	32.00
44	South Africa	5.16	62.75	105	Lao People's Democratic Republic	3.87	29.70
45	Costa Rica	5.14	62.32	106	Zimbabwe	3.87	29.57
46	Italy	5.14	62.26	107	Madagascar	3.84	28.84
47	Kenya	5.10	61.27	108	Tanzania	3.83	28.58
48	Rwanda	5.07	60.49	109	Cameroon	3.82	28.41
49	Morocco	5.07	60.43	110	Paraguay	3.80	27.96
50	Guatemala	5.04	59.60	111	Algeria	3.78	27.35
51	Mexico	5.01	58.81	112	Nepal	3.77	27.20
52	Trinidad and Tobago	4.98	58.16	113	Mozambique	3.71	25.69
53	Kuwait	4.93	56.83	114	Ethiopia	3.56	21.72
54	Thailand	4.92	56.50	115	Malawi	3.50	20.21
55	Turkey	4.91	56.45	116	Kyrgyzstan	3.46	19.19
56	Namibia	4.89	55.76	117	Eswatini	3.38	17.13
57	Senegal	4.87	55.21	118	Venezuela	3.09	9.62
58	Mauritius	4.86	55.07	119	Yemen	2.71	0.00
59	Oman	4.86	55.03		Belarus	n/a	n/a
60	Greece	4.85	54.91		North Macedonia (Republic of)	n/a	n/a
61	Uruguay	4.85	54.83				

Source: World Economic Forum, Executive Opinion Survey 2016–2017 (<http://reports.weforum.org>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 1.3.2 Company investment in emerging technology

Average answer to the question: In your country, to what extent do companies invest in emerging technologies (e.g. Internet of Things, advanced analytics and artificial intelligence, augmented virtual reality and wearables, advanced robotics, 3D printing)? [1 = not at all; 7 = to a great extent] | 2017–18

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	United States	6.00	100.00	62	Ukraine	3.62	35.52
2	Israel	5.85	95.89	63	Panama	3.61	35.34
3	Sweden	5.68	91.30	64	Mexico	3.59	34.63
4	Switzerland	5.57	88.54	65	Brazil	3.56	33.79
5	Netherlands	5.51	86.93	66	Colombia	3.55	33.67
6	Finland	5.51	86.85	67	Viet Nam	3.54	33.37
7	Germany	5.47	85.74	68	Chile	3.54	33.21
8	United Kingdom	5.29	80.94	69	Sri Lanka	3.53	33.14
9	Japan	5.20	78.30	70	Jamaica	3.52	32.83
10	Luxembourg	5.18	77.85	71	Guatemala	3.50	32.25
11	United Arab Emirates	5.18	77.84	72	Poland	3.49	31.90
12	Malaysia	5.15	77.10	73	Egypt	3.48	31.72
13	Singapore	5.14	76.79	74	Kazakhstan	3.48	31.71
14	Denmark	5.07	74.95	75	Uganda	3.44	30.61
15	Hong Kong (China)	4.99	72.70	76	Honduras	3.43	30.48
16	Norway	4.94	71.31	77	Tunisia	3.42	30.18
17	Qatar	4.84	68.74	78	Mauritius	3.40	29.46
18	Ireland	4.82	68.03	79	Morocco	3.40	29.43
19	New Zealand	4.74	65.84	80	Argentina	3.38	29.12
20	Canada	4.73	65.56	81	Algeria	3.36	28.33
21	Belgium	4.70	64.75	82	Madagascar	3.35	28.28
22	France	4.69	64.53	83	Cameroon	3.33	27.59
23	Azerbaijan	4.68	64.40	84	Mali	3.33	27.52
24	Australia	4.63	62.87	85	Mongolia	3.32	27.26
25	Iceland	4.63	62.79	86	Zambia	3.25	25.58
26	Austria	4.57	61.41	87	Cyprus	3.25	25.56
27	India	4.57	61.27	88	Serbia	3.25	25.53
28	Indonesia	4.51	59.63	89	Romania	3.25	25.33
29	Lithuania	4.47	58.52	90	Botswana	3.23	24.99
30	Saudi Arabia	4.46	58.27	91	Georgia	3.20	23.97
31	Philippines	4.44	57.80	92	Dominican Republic	3.16	23.14
32	Kenya	4.40	56.74	93	Bangladesh	3.16	23.06
33	China	4.39	56.31	94	Hungary	3.13	22.27
34	Korea (Republic of)	4.38	56.05	95	Ethiopia	3.13	22.20
35	Estonia	4.35	55.43	96	Iran (Islamic Republic of)	3.11	21.65
36	Czech Republic	4.20	51.38	97	Turkey	3.10	21.50
37	Thailand	4.18	50.58	98	Uruguay	3.08	20.79
38	Malta	4.14	49.75	99	Nepal	3.05	20.06
39	Portugal	4.11	48.89	100	Mozambique	3.04	19.74
40	South Africa	4.07	47.75	101	Croatia	3.01	19.02
41	Slovenia	4.06	47.52	102	Peru	3.01	18.81
42	Rwanda	4.00	45.79	103	Greece	2.94	17.06
43	Oman	4.00	45.78	104	Ecuador	2.93	16.84
44	Slovakia	3.97	45.13	105	Nigeria	2.91	16.34
45	Ghana	3.97	45.11	106	Trinidad and Tobago	2.89	15.74
46	Jordan	3.97	44.91	107	Albania	2.87	15.27
47	Russian Federation	3.95	44.57	108	Malawi	2.79	13.00
48	Costa Rica	3.93	44.01	109	Moldova	2.78	12.70
49	Pakistan	3.93	43.86	110	Kyrgyzstan	2.77	12.49
50	Bulgaria	3.86	42.09	111	Paraguay	2.76	12.24
51	Lao People's Democratic Republic	3.85	41.87	112	El Salvador	2.76	12.04
52	Armenia	3.85	41.71	113	North Macedonia (Republic of)	2.70	10.46
53	Latvia	3.79	40.19	114	Bosnia and Herzegovina	2.68	9.96
54	Cambodia	3.75	39.10	115	Zimbabwe	2.49	4.79
55	Spain	3.72	38.19	116	Eswatini	2.47	4.30
56	Kuwait	3.70	37.71	117	Venezuela	2.43	3.23
57	Tajikistan	3.67	36.96	118	Yemen	2.31	0.00
58	Tanzania	3.66	36.70		Bahrain	n/a	n/a
59	Senegal	3.65	36.23		Belarus	n/a	n/a
60	Italy	3.64	36.10		Namibia	n/a	n/a
61	Lebanon	3.63	35.91				

Source: World Economic Forum, Executive Opinion Survey 2017–2018 (<http://reports.weforum.org>)

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### 1.3.3 Government procurement of advanced technology products

Average answer to the question: In your country, to what extent do government purchasing decisions foster innovation? [1 = not at all; 7 = to a great extent] | 2016–17

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	United Arab Emirates	5.47	100.00	62	Sri Lanka	3.31	40.97
2	United States	5.09	89.56	63	Australia	3.29	40.36
3	Qatar	5.09	89.48	64	Eswatini	3.28	40.21
4	Malaysia	4.96	86.00	65	Kazakhstan	3.28	40.08
5	Singapore	4.92	84.99	66	Morocco	3.25	39.45
6	Germany	4.89	84.20	67	Georgia	3.22	38.46
7	Rwanda	4.71	79.18	68	Slovakia	3.20	37.98
8	India	4.68	78.31	69	Armenia	3.20	37.96
9	Luxembourg	4.68	78.29	70	Colombia	3.20	37.93
10	China	4.53	74.25	71	Cameroon	3.16	36.99
11	Israel	4.44	71.91	72	Cambodia	3.16	36.85
12	Indonesia	4.37	69.87	73	Kuwait	3.14	36.41
13	Azerbaijan	4.27	67.26	74	Spain	3.10	35.23
14	Saudi Arabia	4.23	66.04	75	Cyprus	3.08	34.67
15	Hong Kong (China)	4.20	65.26	76	Poland	3.07	34.59
16	Sweden	4.19	65.09	77	Mexico	3.07	34.46
17	Norway	4.12	63.02	78	Philippines	3.05	33.81
18	Netherlands	4.10	62.55	79	Bangladesh	3.04	33.77
19	Finland	4.04	60.98	80	Jamaica	3.02	33.08
20	Kenya	4.04	60.93	81	Algeria	3.01	32.97
21	Bahrain	4.00	59.95	82	Italy	2.99	32.38
22	Japan	3.97	59.11	83	Ukraine	2.98	31.96
23	United Kingdom	3.91	57.31	84	Czech Republic	2.97	31.71
24	Albania	3.90	57.09	85	Paraguay	2.94	30.94
25	Tajikistan	3.89	56.87	86	Mozambique	2.94	30.86
26	Malta	3.81	54.64	87	Nigeria	2.93	30.63
27	Botswana	3.80	54.54	88	Lithuania	2.93	30.56
28	New Zealand	3.80	54.36	89	Kyrgyzstan	2.90	29.72
29	Korea (Republic of)	3.80	54.28	90	Argentina	2.85	28.40
30	Pakistan	3.78	53.93	91	Serbia	2.84	28.32
31	Ghana	3.73	52.61	92	Madagascar	2.84	28.29
32	Switzerland	3.69	51.54	93	Uruguay	2.84	28.24
33	Oman	3.69	51.32	94	Nepal	2.84	28.14
34	Denmark	3.65	50.29	95	Hungary	2.84	28.13
35	Viet Nam	3.64	49.94	96	Chile	2.82	27.74
36	France	3.62	49.51	97	Mongolia	2.81	27.35
37	Iceland	3.62	49.50	98	Honduras	2.81	27.33
38	Belgium	3.57	48.06	99	Ecuador	2.81	27.32
39	Ethiopia	3.55	47.67	100	Lebanon	2.80	27.11
40	Portugal	3.52	46.78	101	Costa Rica	2.77	26.18
41	Mali	3.52	46.74	102	Peru	2.75	25.61
42	Senegal	3.51	46.43	103	Malawi	2.72	24.81
43	Uganda	3.50	46.20	104	Brazil	2.70	24.24
44	Iran (Islamic Republic of)	3.50	46.10	105	Latvia	2.67	23.56
45	Panama	3.49	46.05	106	Slovenia	2.64	22.86
46	Tanzania	3.49	45.93	107	Tunisia	2.63	22.36
47	Jordan	3.49	45.90	108	Bosnia and Herzegovina	2.61	21.98
48	Estonia	3.49	45.81	109	Dominican Republic	2.60	21.70
49	Zambia	3.48	45.68	110	Yemen	2.60	21.65
50	Thailand	3.44	44.49	111	Guatemala	2.60	21.52
51	South Africa	3.43	44.37	112	Trinidad and Tobago	2.54	19.94
52	Lao People's Democratic Republic	3.41	43.75	113	Moldova	2.49	18.77
53	Mauritius	3.40	43.54	114	Greece	2.49	18.55
54	Ireland	3.40	43.45	115	El Salvador	2.35	14.94
55	Egypt	3.39	43.15	116	Romania	2.31	13.77
56	Russian Federation	3.38	42.91	117	Croatia	2.28	12.92
57	Turkey	3.35	42.19	118	Zimbabwe	1.98	4.81
58	Namibia	3.35	42.08	119	Venezuela	1.81	0.00
59	Bulgaria	3.35	42.07		Belarus	n/a	n/a
60	Austria	3.34	41.71		North Macedonia (Republic of)	n/a	n/a
61	Canada	3.32	41.43				

Source: World Economic Forum, Executive Opinion Survey 2016–2017 (<http://reports.weforum.org>)

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## 1.3.4 ICT PCT patent applications

Number of applications for information and communication technology–related patents filed under the Patent Cooperation Treaty (PCT) (per million population) | 2016

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Norway	220.90	100.00	62	Philippines	0.16	2.75
2	Sweden	145.69	92.33	63	Tunisia	0.15	2.66
3	Korea (Republic of)	96.76	84.81	64	Trinidad and Tobago	0.15	2.50
4	Finland	89.27	83.34	65	Colombia	0.13	2.20
5	Israel	86.78	82.82	66	Thailand	0.11	1.87
6	Japan	77.65	80.79	67	Bosnia and Herzegovina	0.10	1.73
7	United States	53.10	73.85	68	Iran (Islamic Republic of)	0.10	1.71
8	Luxembourg	43.96	70.42	69	Peru	0.09	1.53
9	Switzerland	41.20	69.25	70	Mongolia	0.08	1.45
10	Singapore	40.55	68.96	71	Egypt	0.07	1.24
11	Ireland	36.20	66.92	72	Argentina	0.06	1.16
12	Netherlands	32.73	65.10	73	Kenya	0.06	1.09
13	Germany	32.18	64.79	74	Armenia	0.06	1.02
14	Hong Kong (China)	29.01	62.94	75	Kazakhstan	0.06	1.01
15	Canada	25.46	60.60	76	Jordan	0.03	0.63
16	Denmark	24.01	59.56	77	Nigeria	0.02	0.30
17	United Kingdom	21.54	57.63	78	Pakistan	0.02	0.28
18	Austria	19.82	56.16	79	Indonesia	0.01	0.16
19	France	19.48	55.86	80	Algeria	0.00	0.00
20	Belgium	17.25	53.72	80	Ecuador	0.00	0.00
21	Australia	16.54	52.99	80	El Salvador	0.00	0.00
22	China	16.01	52.42	80	Guatemala	0.00	0.00
23	Hungary	7.66	39.93	80	Iceland	0.00	0.00
24	Estonia	7.41	39.38	80	Jamaica	0.00	0.00
25	New Zealand	6.54	37.37	80	Kuwait	0.00	0.00
26	Italy	5.25	33.87	80	Venezuela	0.00	0.00
27	Spain	4.50	31.52	80	Zimbabwe	0.00	0.00
28	Malta	4.39	31.15		Albania	n/a	n/a
29	Slovenia	4.22	30.55		Azerbaijan	n/a	n/a
30	Portugal	3.67	28.47		Bahrain	n/a	n/a
31	Malaysia	3.31	27.00		Bangladesh	n/a	n/a
32	Cyprus	2.14	21.12		Botswana	n/a	n/a
33	Poland	2.05	20.62		Cambodia	n/a	n/a
34	Greece	1.94	19.90		Cameroon	n/a	n/a
35	United Arab Emirates	1.93	19.83		Dominican Republic	n/a	n/a
36	Russian Federation	1.89	19.61		Eswatini	n/a	n/a
37	Czech Republic	1.85	19.35		Ethiopia	n/a	n/a
38	Turkey	1.73	18.58		Ghana	n/a	n/a
39	Slovakia	1.73	18.53		Honduras	n/a	n/a
40	Croatia	1.60	17.65		Kyrgyzstan	n/a	n/a
41	Saudi Arabia	1.49	16.83		Lao People's Democratic Republic	n/a	n/a
42	Lithuania	1.48	16.79		Madagascar	n/a	n/a
43	Romania	1.08	13.53		Malawi	n/a	n/a
44	Panama	0.99	12.71		Mali	n/a	n/a
45	Moldova	0.99	12.66		Mauritius	n/a	n/a
46	South Africa	0.80	10.85		Mozambique	n/a	n/a
47	Ukraine	0.77	10.55		Namibia	n/a	n/a
48	Bulgaria	0.70	9.81		Nepal	n/a	n/a
49	Chile	0.65	9.24		Oman	n/a	n/a
50	Georgia	0.58	8.46		Paraguay	n/a	n/a
51	Uruguay	0.55	8.06		Qatar	n/a	n/a
52	India	0.51	7.63		Rwanda	n/a	n/a
53	Latvia	0.51	7.61		Senegal	n/a	n/a
54	Brazil	0.45	6.90		Serbia	n/a	n/a
55	Lebanon	0.38	6.01		Tajikistan	n/a	n/a
56	Sri Lanka	0.38	5.93		Tanzania	n/a	n/a
57	Mexico	0.35	5.56		Uganda	n/a	n/a
58	Morocco	0.32	5.17		Viet Nam	n/a	n/a
59	Belarus	0.32	5.11		Yemen	n/a	n/a
60	North Macedonia (Republic of)	0.21	3.46		Zambia	n/a	n/a
61	Costa Rica	0.19	3.16				

**Source:** World Intellectual Property Organization (WIPO) PCT Data, sourced from Organisation for Economic Co-operation and Development (OECD), Patent Database (<http://www.oecd.org/sti/inno/intellectual-property-statistics-and-analysis.htm>). Population data sourced from World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>). The IPC classification is discussed in Inaba, T. and M. Squicciarini (2017), "ICT: A new taxonomy based on the international patent classification", OECD Science, Technology and Industry Working Papers, No. 2017/01, OECD Publishing, Paris (<https://doi.org/10.1787/ab16c396-en>).

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## 1.3.5 Computer software spending

Total computer software spending (% of GDP) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	United States	1.10	100.00	59	Cameroon	0.20	18.18
2	Ireland	0.80	72.73	59	Colombia	0.20	18.18
2	Switzerland	0.80	72.73	59	Cyprus	0.20	18.18
4	Belgium	0.70	63.64	59	Ecuador	0.20	18.18
4	Canada	0.70	63.64	59	India	0.20	18.18
4	Spain	0.70	63.64	59	Kenya	0.20	18.18
4	United Kingdom	0.70	63.64	59	Korea (Republic of)	0.20	18.18
8	Austria	0.60	54.55	59	Luxembourg	0.20	18.18
8	Denmark	0.60	54.55	59	Mauritius	0.20	18.18
8	Finland	0.60	54.55	59	Mexico	0.20	18.18
8	France	0.60	54.55	59	Panama	0.20	18.18
8	Germany	0.60	54.55	59	Peru	0.20	18.18
8	Greece	0.60	54.55	59	Russian Federation	0.20	18.18
8	Italy	0.60	54.55	59	Thailand	0.20	18.18
8	Netherlands	0.60	54.55	59	Uruguay	0.20	18.18
8	Norway	0.60	54.55	77	Albania	0.10	9.09
8	Portugal	0.60	54.55	77	Armenia	0.10	9.09
8	Sweden	0.60	54.55	77	Azerbaijan	0.10	9.09
19	Turkey	0.50	45.45	77	Bosnia and Herzegovina	0.10	9.09
19	Ukraine	0.50	45.45	77	Botswana	0.10	9.09
21	China	0.40	36.36	77	Croatia	0.10	9.09
21	Egypt	0.40	36.36	77	Estonia	0.10	9.09
21	Hong Kong (China)	0.40	36.36	77	Georgia	0.10	9.09
21	Jamaica	0.40	36.36	77	Kyrgyzstan	0.10	9.09
21	Kuwait	0.40	36.36	77	Latvia	0.10	9.09
21	Malaysia	0.40	36.36	77	Lebanon	0.10	9.09
21	Malta	0.40	36.36	77	Lithuania	0.10	9.09
21	Saudi Arabia	0.40	36.36	77	Moldova	0.10	9.09
21	Zimbabwe	0.40	36.36	77	Mongolia	0.10	9.09
30	Australia	0.30	27.27	77	Namibia	0.10	9.09
30	Bahrain	0.30	27.27	77	Nigeria	0.10	9.09
30	Bulgaria	0.30	27.27	77	North Macedonia (Republic of)	0.10	9.09
30	Chile	0.30	27.27	77	Oman	0.10	9.09
30	Costa Rica	0.30	27.27	77	Slovenia	0.10	9.09
30	Czech Republic	0.30	27.27	77	Tajikistan	0.10	9.09
30	Honduras	0.30	27.27	97	Algeria	0.00	0.00
30	Hungary	0.30	27.27	97	Belarus	0.00	0.00
30	Iceland	0.30	27.27	97	Cambodia	0.00	0.00
30	Indonesia	0.30	27.27	97	Dominican Republic	0.00	0.00
30	Iran (Islamic Republic of)	0.30	27.27	97	El Salvador	0.00	0.00
30	Israel	0.30	27.27	97	Ethiopia	0.00	0.00
30	Japan	0.30	27.27	97	Ghana	0.00	0.00
30	Jordan	0.30	27.27	97	Guatemala	0.00	0.00
30	Morocco	0.30	27.27	97	Kazakhstan	0.00	0.00
30	New Zealand	0.30	27.27	97	Madagascar	0.00	0.00
30	Pakistan	0.30	27.27	97	Malawi	0.00	0.00
30	Philippines	0.30	27.27	97	Mali	0.00	0.00
30	Poland	0.30	27.27	97	Mozambique	0.00	0.00
30	Qatar	0.30	27.27	97	Nepal	0.00	0.00
30	Romania	0.30	27.27	97	Paraguay	0.00	0.00
30	Senegal	0.30	27.27	97	Rwanda	0.00	0.00
30	Singapore	0.30	27.27	97	Serbia	0.00	0.00
30	Slovakia	0.30	27.27	97	Tanzania	0.00	0.00
30	South Africa	0.30	27.27	97	Uganda	0.00	0.00
30	Sri Lanka	0.30	27.27	97	Yemen	0.00	0.00
30	Tunisia	0.30	27.27	97	Zambia	0.00	0.00
30	United Arab Emirates	0.30	27.27		Eswatini	n/a	n/a
30	Viet Nam	0.30	27.27		Lao People's Democratic Republic	n/a	n/a
59	Argentina	0.20	18.18		Trinidad and Tobago	n/a	n/a
59	Bangladesh	0.20	18.18		Venezuela	n/a	n/a
59	Brazil	0.20	18.18				

Source: IHS Markit, Information and Communication Technology Database (<https://www.ihsmarkit.com/index.html>). Sourced from INSEAD, Cornell University, and World Intellectual Property Organization, The Global Innovation Index 2019 (<https://www.globalinnovationindex.org>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 1.3.6 Robot density

Number of robots in operation per 10,000 employees in the manufacturing industry | 2019

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Germany	–	100.00	62	Colombia	–	0.19
1	Korea (Republic of)	–	100.00	63	Peru	–	0.19
1	Singapore	–	100.00	64	Oman	–	0.14
4	Japan	–	96.78	65	Iran (Islamic Republic of)	–	0.12
5	Sweden	–	72.93	66	Moldova	–	0.10
6	Hong Kong (China)	–	72.54	67	Qatar	–	0.10
7	Denmark	–	70.85	68	Kuwait	–	0.04
8	United States	–	64.06	69	Venezuela	–	0.03
9	Italy	–	59.11	70	Pakistan	–	0.00
10	Belgium	–	55.75		Albania	n/a	n/a
11	Netherlands	–	53.69		Algeria	n/a	n/a
12	Austria	–	51.73		Armenia	n/a	n/a
13	Slovenia	–	51.53		Azerbaijan	n/a	n/a
14	Canada	–	50.86		Bahrain	n/a	n/a
15	Spain	–	49.72		Bangladesh	n/a	n/a
16	Slovakia	–	48.76		Botswana	n/a	n/a
17	France	–	45.52		Cambodia	n/a	n/a
18	Switzerland	–	43.32		Cameroon	n/a	n/a
19	Finland	–	41.52		Costa Rica	n/a	n/a
20	Czech Republic	–	40.05		Cyprus	n/a	n/a
21	China	–	39.65		Dominican Republic	n/a	n/a
22	United Kingdom	–	26.94		Ecuador	n/a	n/a
23	Hungary	–	24.95		El Salvador	n/a	n/a
24	Australia	–	21.92		Eswatini	n/a	n/a
25	Portugal	–	20.21		Ethiopia	n/a	n/a
26	Norway	–	16.47		Georgia	n/a	n/a
27	Malaysia	–	15.32		Ghana	n/a	n/a
28	Thailand	–	15.19		Guatemala	n/a	n/a
29	New Zealand	–	14.42		Honduras	n/a	n/a
30	Israel	–	13.65		Jamaica	n/a	n/a
31	Poland	–	12.54		Jordan	n/a	n/a
32	Ireland	–	12.16		Kazakhstan	n/a	n/a
33	Mexico	–	12.04		Kenya	n/a	n/a
34	Malta	–	11.58		Kyrgyzstan	n/a	n/a
35	Turkey	–	8.83		Lao People's Democratic Republic	n/a	n/a
36	South Africa	–	7.36		Lebanon	n/a	n/a
37	Greece	–	6.74		Luxembourg	n/a	n/a
38	Romania	–	6.25		Madagascar	n/a	n/a
39	Iceland	–	6.06		Malawi	n/a	n/a
40	Estonia	–	5.63		Mali	n/a	n/a
41	Argentina	–	5.17		Mauritius	n/a	n/a
42	Viet Nam	–	4.36		Mongolia	n/a	n/a
43	Brazil	–	4.01		Mozambique	n/a	n/a
44	Lithuania	–	3.88		Namibia	n/a	n/a
45	Bulgaria	–	2.34		Nepal	n/a	n/a
46	Croatia	–	2.01		Nigeria	n/a	n/a
47	Indonesia	–	1.56		North Macedonia (Republic of)	n/a	n/a
48	Latvia	–	1.45		Panama	n/a	n/a
49	Russian Federation	–	1.42		Paraguay	n/a	n/a
50	Morocco	–	1.40		Rwanda	n/a	n/a
51	Philippines	–	1.18		Senegal	n/a	n/a
52	India	–	1.09		Sri Lanka	n/a	n/a
53	Serbia	–	0.99		Tajikistan	n/a	n/a
54	Tunisia	–	0.95		Tanzania	n/a	n/a
55	United Arab Emirates	–	0.90		Trinidad and Tobago	n/a	n/a
56	Ukraine	–	0.74		Uganda	n/a	n/a
57	Chile	–	0.70		Uruguay	n/a	n/a
58	Belarus	–	0.56		Yemen	n/a	n/a
59	Bosnia and Herzegovina	–	0.55		Zambia	n/a	n/a
60	Saudi Arabia	–	0.47		Zimbabwe	n/a	n/a
61	Egypt	–	0.22				

**Source:** Data on robot density and operational stock of industrial robots for 2019 kindly provided by the International Federation of Robotics (IFR, <https://ifr.org>). Data on employment in manufacturing in the countries for which IFR has not computed robot densities are sourced from the International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

\* Confidential data.







2nd pillar:

**People**



## 2.1.1 Internet users

Individuals using the internet (%) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Qatar	99.65	100.00	62	Romania	70.68	67.76
2	Kuwait	99.60	99.94	63	Viet Nam	70.35	67.39
3	Iceland	99.01	99.29	64	Bosnia and Herzegovina	70.12	67.13
4	Bahrain	98.64	98.88	65	Iran (Islamic Republic of)	70.00	67.00
5	United Arab Emirates	98.45	98.66	66	Uruguay	68.28	65.08
6	Denmark	97.64	97.76	67	Brazil	67.47	64.18
7	Luxembourg	97.06	97.12	68	Jordan	66.79	63.43
8	Norway	96.49	96.48	69	Mexico	65.77	62.29
9	Korea (Republic of)	95.90	95.82	70	Guatemala	65.00	61.43
10	United Kingdom	94.90	94.71	71	Paraguay	64.99	61.43
11	Netherlands	94.71	94.50	72	Morocco	64.80	61.22
12	Saudi Arabia	93.31	92.94	73	Bulgaria	64.78	61.19
13	Sweden	92.14	91.64	74	Armenia	64.74	61.15
14	Canada	91.00	90.37	75	Tunisia	64.19	60.53
15	New Zealand	90.81	90.16	76	Georgia	63.97	60.29
16	Germany	89.74	88.97	77	Colombia	62.26	58.38
17	Switzerland	89.69	88.91	78	Philippines	60.05	55.93
18	Hong Kong (China)	89.42	88.61	79	Algeria	59.58	55.40
19	Estonia	89.36	88.54	80	Ukraine	58.89	54.63
20	Finland	88.89	88.02	81	Mauritius	58.60	54.31
21	Belgium	88.66	87.76	82	Panama	57.87	53.49
22	Singapore	88.17	87.22	83	Ecuador	57.27	52.83
23	Austria	87.71	86.71	84	Thailand	56.82	52.33
24	United States	87.27	86.21	85	South Africa	56.17	51.60
25	Australia	86.55	85.41	86	Jamaica	55.07	50.38
26	Spain	86.11	84.92	87	China	54.30	49.53
27	Japan	84.59	83.23	88	Peru	52.54	47.57
28	Ireland	84.52	83.16	89	Namibia	51.00	45.85
29	Cyprus	84.43	83.06	90	Botswana	47.00	41.40
30	Latvia	83.58	82.11	90	Eswatini	47.00	41.40
31	Chile	82.33	80.72	92	Egypt	46.92	41.32
32	France	82.04	80.40	93	Senegal	46.00	40.29
33	Israel	81.58	79.89	94	Nigeria	42.00	35.84
34	Malta	81.40	79.69	95	Cambodia	40.00	33.61
35	Malaysia	81.20	79.47	96	Indonesia	39.79	33.37
36	Russian Federation	80.86	79.09	97	Ghana	39.00	32.50
37	Czech Republic	80.69	78.89	98	Kyrgyzstan	38.00	31.38
38	Slovakia	80.66	78.86	99	India	34.45	27.43
39	Oman	80.19	78.33	100	Sri Lanka	34.11	27.06
40	Azerbaijan	79.80	77.91	101	Nepal	34.00	26.93
41	Slovenia	79.75	77.85	102	El Salvador	33.82	26.73
42	Lithuania	79.72	77.82	103	Honduras	31.70	24.37
43	North Macedonia (Republic of)	79.17	77.20	104	Zimbabwe	27.06	19.20
44	Belarus	79.13	77.16	105	Yemen	26.72	18.83
45	Kazakhstan	78.90	76.91	106	Lao People's Democratic Republic	25.51	17.48
46	Lebanon	78.18	76.10	107	Tanzania	25.00	16.92
47	Poland	77.54	75.39	108	Mongolia	23.71	15.49
48	Trinidad and Tobago	77.33	75.15	109	Uganda	23.71	15.48
49	Moldova	76.12	73.81	110	Cameroon	23.20	14.92
50	Hungary	76.07	73.76	111	Tajikistan	21.96	13.53
51	Dominican Republic	74.82	72.37	112	Rwanda	21.77	13.32
52	Portugal	74.66	72.19	113	Ethiopia	18.62	9.81
53	Italy	74.39	71.88	114	Kenya	17.83	8.93
54	Argentina	74.29	71.78	115	Pakistan	15.51	6.35
55	Costa Rica	74.09	71.55	116	Bangladesh	15.00	5.79
56	Serbia	73.36	70.74	117	Zambia	14.30	5.01
57	Greece	72.95	70.28	118	Malawi	13.78	4.43
58	Croatia	72.69	69.99	119	Mali	13.00	3.56
59	Venezuela	72.00	69.22	120	Mozambique	10.00	0.22
60	Albania	71.85	69.05	121	Madagascar	9.80	0.00
61	Turkey	71.04	68.16				

**Source:** International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2019 (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)  
For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 2.1.2 Active mobile-broadband subscriptions

Active mobile-broadband subscriptions (per 100 inhabitants) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	United Arab Emirates	250.04	100.00	62	Kazakhstan	77.57	29.33
2	Japan	188.92	74.96	63	Canada	76.72	28.98
3	Poland	171.70	67.90	64	Tunisia	76.08	28.72
4	Finland	156.45	61.65	65	South Africa	75.98	28.68
5	Estonia	146.72	57.66	66	Armenia	75.87	28.63
6	Singapore	145.71	57.25	67	Belgium	75.74	28.58
7	United States	142.48	55.93	68	Turkey	74.20	27.95
8	Hong Kong (China)	137.33	53.82	69	Portugal	73.84	27.80
9	Australia	136.96	53.66	70	Moldova	72.76	27.36
10	Denmark	136.71	53.56	71	Viet Nam	71.89	27.00
11	Kuwait	130.86	51.17	72	Panama	70.35	26.37
12	Latvia	130.23	50.91	73	Mexico	69.96	26.21
13	Bahrain	126.01	49.18	74	Philippines	68.44	25.59
14	Qatar	125.94	49.15	75	Iran (Islamic Republic of)	68.21	25.49
15	Iceland	125.46	48.95	76	Hungary	67.81	25.33
16	Uruguay	123.85	48.29	77	North Macedonia (Republic of)	67.42	25.17
17	Sweden	123.03	47.96	78	Serbia	67.02	25.01
18	Malaysia	116.70	45.37	79	Peru	65.66	24.45
19	New Zealand	114.46	44.45	80	Mauritius	65.29	24.30
20	Korea (Republic of)	113.62	44.10	81	Albania	62.79	23.27
21	Cyprus	111.20	43.11	82	Dominican Republic	60.82	22.47
22	Saudi Arabia	111.09	43.07	83	Azerbaijan	59.59	21.96
23	Malta	110.53	42.84	84	Morocco	59.09	21.76
24	Israel	106.14	41.04	85	Sri Lanka	58.77	21.63
25	Thailand	104.67	40.43	86	Paraguay	57.67	21.17
26	Ireland	103.75	40.06	87	Zambia	56.63	20.75
27	Bulgaria	102.31	39.47	88	El Salvador	55.80	20.41
28	Lithuania	100.60	38.77	89	Bosnia and Herzegovina	55.38	20.24
29	Norway	99.75	38.42	90	Ecuador	54.69	19.95
30	Spain	98.48	37.90	91	Venezuela	54.53	19.89
31	Switzerland	98.23	37.80	92	Egypt	53.92	19.64
32	Costa Rica	97.19	37.37	93	Colombia	52.32	18.98
33	United Kingdom	96.87	37.24	94	Zimbabwe	52.29	18.97
34	Algeria	96.66	37.15	95	Jamaica	51.19	18.52
35	China	95.41	36.64	96	Nepal	47.52	17.02
36	Italy	94.53	36.28	97	Ukraine	47.16	16.87
37	Kyrgyzstan	94.03	36.07	98	Trinidad and Tobago	46.15	16.46
38	Luxembourg	94.00	36.06	99	Georgia	45.26	16.09
39	Ghana	91.75	35.14	100	Lebanon	45.25	16.09
40	France	91.62	35.09	101	Lao People's Democratic Republic	42.01	14.76
41	Chile	91.58	35.07	102	Kenya	41.92	14.72
42	Namibia	91.55	35.06	103	Senegal	41.48	14.54
43	Netherlands	90.85	34.77	104	Rwanda	39.01	13.53
44	Brazil	88.11	33.65	105	Bangladesh	37.55	12.93
45	Czech Republic	88.10	33.64	106	India	37.54	12.93
46	Romania	87.97	33.59	107	Uganda	33.61	11.32
47	Austria	87.95	33.58	108	Honduras	32.12	10.71
48	Jordan	87.62	33.45	109	Nigeria	30.68	10.12
49	Russian Federation	87.28	33.31	110	Mali	30.28	9.95
50	Indonesia	87.25	33.30	111	Pakistan	29.19	9.51
51	Belarus	86.34	32.92	112	Malawi	27.21	8.69
52	Slovakia	85.98	32.78	113	Cameroon	23.66	7.24
53	Oman	85.17	32.45	114	Tajikistan	22.83	6.90
54	Mongolia	83.72	31.85	115	Ethiopia	17.84	4.86
55	Cambodia	82.82	31.48	116	Guatemala	16.45	4.29
56	Greece	81.99	31.14	117	Eswatini	15.91	4.07
57	Germany	81.56	30.97	118	Madagascar	15.60	3.94
58	Argentina	80.65	30.59	119	Mozambique	15.08	3.73
59	Croatia	79.45	30.10	120	Tanzania	9.10	1.27
60	Slovenia	77.67	29.37	121	Yemen	5.99	0.00
61	Botswana	77.60	29.34				

Source: International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2019 (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)  
 For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 2.1.3 Use of virtual social networks

Number of active social media users (% of population) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Qatar	99.00	100.00	61	Bulgaria	54.00	53.22
1	United Arab Emirates	99.00	100.00	61	Czech Republic	54.00	53.22
3	Kuwait	92.00	92.72	61	Greece	54.00	53.22
4	Malta	88.00	88.57	65	North Macedonia (Republic of)	53.00	52.18
5	Korea (Republic of)	85.00	85.45	65	Paraguay	53.00	52.18
6	Cyprus	84.00	84.41	65	Slovenia	53.00	52.18
7	Iceland	83.00	83.37	68	Panama	52.00	51.14
8	Bahrain	81.00	81.29	69	Albania	51.00	50.10
9	Singapore	79.00	79.21	69	Cambodia	51.00	50.10
10	Hong Kong (China)	78.00	78.17	69	Latvia	51.00	50.10
10	Malaysia	78.00	78.17	69	Oman	51.00	50.10
10	Uruguay	78.00	78.17	69	Switzerland	51.00	50.10
13	Chile	77.00	77.13	74	Austria	50.00	49.06
14	Argentina	76.00	76.09	74	Slovakia	50.00	49.06
15	Israel	75.00	75.05	76	Bosnia and Herzegovina	49.00	48.02
16	Thailand	74.00	74.01	76	Russian Federationn Federation	49.00	48.02
17	Peru	73.00	72.97	78	Armenia	48.00	46.99
18	Australia	72.00	71.93	78	Croatia	48.00	46.99
18	Costa Rica	72.00	71.93	80	Morocco	47.00	45.95
18	Sweden	72.00	71.93	80	Poland	47.00	45.95
21	China	71.00	70.89	82	Germany	46.00	44.91
21	Denmark	71.00	70.89	83	Guatemala	45.00	43.87
21	Ecuador	71.00	70.89	84	Serbia	43.00	41.79
21	New Zealand	71.00	70.89	85	Botswana	42.00	40.75
21	Norway	71.00	70.89	86	Jamaica	41.00	39.71
21	Philippines	71.00	70.89	87	Belarus	40.00	38.67
27	Mongolia	70.00	69.85	87	Egypt	40.00	38.67
27	United States	70.00	69.85	87	Honduras	40.00	38.67
29	Georgia	69.00	68.81	87	South Africa	40.00	38.67
30	Colombia	68.00	67.78	87	Venezuela	40.00	38.67
30	Saudi Arabia	68.00	67.78	92	Kazakhstan	39.00	37.63
32	Canada	67.00	66.74	92	Lao People's Democratic Republic	39.00	37.63
32	Mexico	67.00	66.74	92	Ukraine	39.00	37.63
32	United Kingdom	67.00	66.74	95	Nepal	33.00	31.39
35	Brazil	66.00	65.70	96	Azerbaijan	31.00	29.31
35	Ireland	66.00	65.70	97	Moldova	30.00	28.27
35	Lebanon	66.00	65.70	97	Sri Lanka	30.00	28.27
38	Belgium	65.00	64.66	99	Kyrgyzstan	29.00	27.23
38	Mauritius	65.00	64.66	100	Namibia	26.00	24.12
38	Portugal	65.00	64.66	101	India	23.00	21.00
41	Netherlands	64.00	63.62	102	Senegal	21.00	18.92
41	Tunisia	64.00	63.62	103	Bangladesh	20.00	17.88
41	Viet Nam	64.00	63.62	104	Ghana	19.00	16.84
44	Turkey	63.00	62.58	105	Pakistan	18.00	15.80
45	Hungary	62.00	61.54	106	Eswatini	16.00	13.72
45	Luxembourg	62.00	61.54	106	Kenya	16.00	13.72
47	Japan	61.00	60.50	108	Cameroon	14.00	11.64
48	Spain	60.00	59.46	109	Nigeria	12.00	9.56
49	El Salvador	59.00	58.42	109	Zambia	12.00	9.56
49	Finland	59.00	58.42	111	Madagascar	9.00	6.44
49	Italy	59.00	58.42	112	Mali	8.20	5.61
49	Lithuania	59.00	58.42	112	Tanzania	8.20	5.61
49	Trinidad and Tobago	59.00	58.42	114	Mozambique	8.10	5.51
54	France	58.00	57.38	115	Yemen	7.90	5.30
54	Jordan	58.00	57.38	116	Zimbabwe	7.00	4.37
56	Estonia	57.00	56.34	117	Ethiopia	5.60	2.91
56	Iran (Islamic Republic of)	57.00	56.34	117	Uganda	5.60	2.91
58	Indonesia	56.00	55.30	119	Rwanda	4.90	2.18
58	Romania	56.00	55.30	120	Tajikistan	4.80	2.08
60	Dominican Republic	55.00	54.26	121	Malawi	2.80	0.00
61	Algeria	54.00	53.22				

Source: We Are Social and Hootsuite (2019) Global Digital Report 2019 (<https://wearesocial.com/global-digital-report-2019>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 2.1.4 Tertiary enrollment

Gross enrollment ratio, tertiary education (%) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Greece	136.60	100.00	62	Romania	48.24	34.92
2	Australia	113.14	82.72	63	Panama	47.80	34.60
3	Korea (Republic of)	94.35	68.88	64	Slovakia	46.63	33.74
4	Argentina	89.96	65.65	65	Malaysia	45.13	32.63
5	Spain	88.85	64.83	66	Ecuador	44.89	32.46
6	Chile	88.46	64.55	67	Kyrgyzstan	41.27	29.79
7	Finland	88.20	64.35	68	North Macedonia (Republic of)	41.14	29.69
8	United States	88.17	64.33	69	Mauritius	40.60	29.29
9	Latvia	88.06	64.25	70	Mexico	40.23	29.02
10	Belarus	87.43	63.78	71	Moldova	39.82	28.72
11	Austria	85.06	62.04	72	Oman	38.04	27.41
12	Netherlands	84.98	61.98	73	Indonesia	36.31	26.14
13	Singapore	84.79	61.84	74	Morocco	35.94	25.86
14	Ukraine	82.67	60.28	75	Philippines	35.48	25.52
15	New Zealand	82.03	59.81	76	Egypt	35.16	25.29
16	Norway	81.99	59.78	77	Paraguay	34.63	24.90
17	Russian Federation	81.91	59.72	78	Jordan	34.42	24.74
18	Denmark	80.62	58.77	79	Tunisia	32.15	23.07
19	Belgium	79.66	58.06	80	Tajikistan	31.26	22.41
20	Venezuela	79.30	57.80	81	El Salvador	28.59	20.45
21	Slovenia	78.59	57.27	82	Viet Nam	28.54	20.42
22	Ireland	77.78	56.68	83	India	28.06	20.06
23	Hong Kong (China)	76.92	56.05	84	Azerbaijan	27.71	19.80
24	Lithuania	72.42	52.73	85	Jamaica	27.13	19.37
25	Iceland	71.85	52.31	86	Honduras	26.16	18.66
26	Bulgaria	71.25	51.87	87	Botswana	24.86	17.70
27	Peru	70.74	51.49	88	Namibia	22.89	16.25
28	Germany	70.25	51.13	89	South Africa	22.37	15.87
29	Iran (Islamic Republic of)	69.64	50.68	90	Guatemala	21.78	15.44
30	Estonia	69.64	50.68	91	Bangladesh	20.57	14.54
31	Canada	68.92	50.15	92	Sri Lanka	19.63	13.85
32	Saudi Arabia	68.04	49.50	93	Luxembourg	19.15	13.50
33	Poland	67.83	49.35	94	Qatar	17.87	12.55
34	Serbia	67.16	48.86	95	Ghana	15.69	10.95
35	Sweden	66.99	48.73	96	Lao People's Democratic Republic	14.97	10.42
36	Croatia	66.53	48.39	97	Cambodia	13.13	9.07
37	France	65.63	47.73	98	Senegal	12.76	8.79
38	Mongolia	65.60	47.70	99	Cameroon	12.76	8.79
39	Czech Republic	64.08	46.59	100	Nepal	12.41	8.53
40	Portugal	63.94	46.48	101	Kenya	11.46	7.84
41	Israel	63.35	46.05	102	Nigeria	10.17	6.89
42	Uruguay	63.13	45.88	103	Yemen	10.15	6.87
43	Italy	61.93	45.01	104	Zimbabwe	10.01	6.76
44	Georgia	60.33	43.83	105	Pakistan	9.08	6.08
45	Cyprus	60.10	43.66	106	Ethiopia	8.11	5.36
46	United Kingdom	60.00	43.58	107	Mozambique	7.31	4.78
47	Dominican Republic	59.92	43.52	108	Eswatini	6.75	4.36
48	Switzerland	59.56	43.26	109	Rwanda	6.73	4.35
49	Colombia	55.33	40.14	110	Mali	5.50	3.45
50	Costa Rica	55.21	40.05	111	Madagascar	5.28	3.28
51	Albania	54.96	39.87	112	Uganda	4.84	2.96
52	Armenia	54.57	39.58	113	Zambia	4.12	2.42
53	Kuwait	54.36	39.43	114	Tanzania	4.01	2.35
54	Kazakhstan	53.99	39.16	115	Malawi	0.82	0.00
55	Algeria	51.37	37.22		Bosnia and Herzegovina	n/a	n/a
56	Brazil	51.34	37.21		Japan	n/a	n/a
57	China	50.60	36.66		Lebanon	n/a	n/a
58	Bahrain	50.48	36.57		Trinidad and Tobago	n/a	n/a
59	Thailand	49.29	35.69		Turkey	n/a	n/a
60	Malta	48.60	35.19		United Arab Emirates	n/a	n/a
61	Hungary	48.50	35.11				

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

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## 2.1.5 Adult literacy rate

Adult literacy rate (%)

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Ukraine	99.97	100.00	62	Mauritius	91.33	86.59
2	Latvia	99.90	99.88	63	Zimbabwe	88.69	82.51
3	Estonia	99.89	99.86	64	El Salvador	88.48	82.18
4	Lithuania	99.82	99.75	65	Eswatini	88.42	82.09
5	Tajikistan	99.80	99.73	66	Jamaica	88.10	81.59
6	Azerbaijan	99.79	99.72	67	Botswana	87.70	80.97
7	Kazakhstan	99.78	99.70	68	Honduras	87.21	80.20
8	Belarus	99.76	99.66	69	South Africa	87.05	79.96
9	Armenia	99.74	99.63	70	Zambia	86.75	79.49
10	Russian Federation	99.73	99.62	71	Iran (Islamic Republic of)	85.54	77.63
11	Slovenia	99.70	99.57	72	Lao People's Democratic Republic	84.66	76.26
12	Kyrgyzstan	99.59	99.40	73	Kenya	81.53	71.41
13	Georgia	99.36	99.05	74	Algeria	81.41	71.21
14	Moldova	99.36	99.05	75	Guatemala	81.29	71.03
15	Italy	99.16	98.73	76	Cambodia	80.53	69.85
16	Croatia	99.13	98.68	77	Ghana	79.04	67.54
17	Hungary	99.10	98.64	78	Tunisia	79.04	67.54
18	Argentina	99.00	98.50	79	Tanzania	77.89	65.76
19	Romania	98.84	98.25	80	Cameroon	77.07	64.49
20	Poland	98.74	98.09	81	Uganda	76.53	63.65
21	Uruguay	98.70	98.03	82	Madagascar	74.80	60.98
22	Trinidad and Tobago	98.70	98.02	83	India	74.37	60.31
23	Cyprus	98.68	97.99	84	Bangladesh	73.91	59.59
24	Spain	98.44	97.62	85	Morocco	73.75	59.34
25	Mongolia	98.42	97.60	86	Rwanda	73.22	58.51
26	Bulgaria	98.35	97.49	87	Egypt	71.17	55.34
27	Serbia	98.29	97.39	88	Nepal	67.91	50.29
28	Jordan	98.23	97.29	89	Malawi	62.14	41.35
29	Philippines	98.18	97.22	90	Nigeria	62.02	41.15
30	Albania	98.14	97.16	91	Mozambique	60.66	39.04
31	Costa Rica	97.86	96.73	92	Pakistan	59.13	36.68
32	North Macedonia (Republic of)	97.80	96.63	93	Senegal	51.90	25.47
33	Bahrain	97.46	96.11	94	Ethiopia	51.77	25.27
34	Greece	97.37	95.96	95	Mali	35.47	0.00
35	Singapore	97.34	95.92		Australia	n/a	n/a
36	Venezuela	97.13	95.59		Austria	n/a	n/a
37	Bosnia and Herzegovina	96.99	95.38		Belgium	n/a	n/a
38	China	96.84	95.14		Canada	n/a	n/a
39	Chile	96.40	94.46		Czech Republic	n/a	n/a
40	Turkey	96.15	94.07		Denmark	n/a	n/a
41	Portugal	96.14	94.05		Finland	n/a	n/a
42	Kuwait	96.06	93.93		France	n/a	n/a
43	Indonesia	95.66	93.31		Germany	n/a	n/a
44	Oman	95.65	93.30		Hong Kong (China)	n/a	n/a
45	Panama	95.41	92.93		Iceland	n/a	n/a
46	Mexico	95.38	92.88		Ireland	n/a	n/a
47	Saudi Arabia	95.33	92.80		Israel	n/a	n/a
48	Colombia	95.09	92.43		Japan	n/a	n/a
49	Lebanon	95.07	92.40		Korea (Republic of)	n/a	n/a
50	Viet Nam	95.00	92.29		Luxembourg	n/a	n/a
51	Malta	94.50	91.52		Netherlands	n/a	n/a
52	Peru	94.41	91.37		New Zealand	n/a	n/a
53	Paraguay	94.02	90.77		Norway	n/a	n/a
54	Dominican Republic	93.78	90.39		Slovakia	n/a	n/a
55	Malaysia	93.73	90.33		Sweden	n/a	n/a
56	Qatar	93.46	89.91		Switzerland	n/a	n/a
57	Brazil	93.23	89.54		United Arab Emirates	n/a	n/a
58	Thailand	92.87	88.98		United Kingdom	n/a	n/a
59	Ecuador	92.83	88.92		United States	n/a	n/a
60	Sri Lanka	91.90	87.48		Yemen	n/a	n/a
61	Namibia	91.53	86.90				

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

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## 2.1.6 ICT skills

Proportion of youth and adults with ICT skills (%) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Iceland	52.70	100.00	62	Zimbabwe	1.87	0.00
1	Jordan	52.70 (est.)	100.00		Albania	n/a	n/a
3	Luxembourg	52.60	99.80		Algeria	n/a	n/a
4	Norway	51.60	97.84		Argentina	n/a	n/a
5	Denmark	47.57	89.90		Armenia	n/a	n/a
6	Germany	47.33	89.44		Australia	n/a	n/a
7	Bahrain	47.10	88.98		Bangladesh	n/a	n/a
8	Netherlands	46.27	87.34		Belarus	n/a	n/a
9	Sweden	45.83	86.49		Cameroon	n/a	n/a
10	Finland	43.80	82.49		Canada	n/a	n/a
11	Spain	43.70	82.30		China	n/a	n/a
12	Switzerland	43.07	81.05		Costa Rica	n/a	n/a
13	Austria	42.27	79.48		Ecuador	n/a	n/a
14	United Kingdom	41.63	78.23		El Salvador	n/a	n/a
15	Estonia	37.27	69.64		Eswatini	n/a	n/a
16	Belgium	35.90	66.95		Ethiopia	n/a	n/a
17	Korea (Republic of)	35.03	65.25		Ghana	n/a	n/a
18	France	34.97	65.11		Guatemala	n/a	n/a
19	Malta	34.07	63.34		Honduras	n/a	n/a
20	Latvia	34.00	63.21		Hong Kong (China)	n/a	n/a
21	Czech Republic	33.37	61.97		India	n/a	n/a
22	Lithuania	32.67	60.59		Israel	n/a	n/a
23	Cyprus	32.00	59.28		Japan	n/a	n/a
24	Slovakia	31.97	59.21		Kenya	n/a	n/a
25	Saudi Arabia	31.43	58.16		Kuwait	n/a	n/a
26	Singapore	31.23	57.77		Kyrgyzstan	n/a	n/a
27	Hungary	30.60	56.52		Lao People's Democratic Republic	n/a	n/a
28	Portugal	30.53	56.39		Lebanon	n/a	n/a
29	Chile	29.83	55.02		Madagascar	n/a	n/a
30	Slovenia	29.80	54.95		Malawi	n/a	n/a
31	Croatia	29.63	54.62		Mali	n/a	n/a
32	Ireland	29.57	54.49		Mauritius	n/a	n/a
33	United Arab Emirates	29.17	53.70		Mexico	n/a	n/a
34	Poland	28.73	52.85		Moldova	n/a	n/a
35	Romania	28.07	51.54		Mongolia	n/a	n/a
36	Bosnia and Herzegovina	28.03	51.48		Mozambique	n/a	n/a
37	Malaysia	27.87	51.15		Namibia	n/a	n/a
38	Italy	27.47	50.36		Nepal	n/a	n/a
39	Greece	26.77	48.98		New Zealand	n/a	n/a
40	Serbia	26.27	48.00		Nigeria	n/a	n/a
41	Uruguay	26.03	47.54		Oman	n/a	n/a
42	Qatar	25.77	47.02		Panama	n/a	n/a
43	Morocco	22.00	39.61		Paraguay	n/a	n/a
44	Bulgaria	21.83	39.28		Peru	n/a	n/a
45	Turkey	21.53	38.69		Philippines	n/a	n/a
46	North Macedonia (Republic of)	20.23	36.13		Rwanda	n/a	n/a
47	Egypt	19.13	33.97		Senegal	n/a	n/a
48	Colombia	18.70	33.11		South Africa	n/a	n/a
49	Dominican Republic	13.87	23.61		Sri Lanka	n/a	n/a
50	Kazakhstan	12.60	21.11		Tajikistan	n/a	n/a
51	Brazil	12.40	20.72		Tanzania	n/a	n/a
51	Georgia	12.40	20.72		Thailand	n/a	n/a
53	Indonesia	12.07	20.07		Trinidad and Tobago	n/a	n/a
54	Russian Federation	11.53	19.02		Uganda	n/a	n/a
55	Botswana	10.13	16.26		Ukraine	n/a	n/a
56	Iran (Islamic Republic of)	10.00	16.00		United States	n/a	n/a
57	Cambodia	7.10	10.30		Venezuela	n/a	n/a
58	Jamaica	5.33	6.82		Viet Nam	n/a	n/a
59	Azerbaijan	4.30	4.79		Yemen	n/a	n/a
60	Tunisia	2.77	1.77		Zambia	n/a	n/a
61	Pakistan	2.43	1.11				

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

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## 2.2.1 Firms with website

Firms with website (% of total) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Finland	95.64	100.00	62	Bulgaria	55.10	47.38
2	Denmark	95.58	99.93	63	Brazil	54.00	45.95
3	Netherlands	93.64	97.40	63	Costa Rica	54.00	45.95
4	Sweden	92.44	95.85	65	Philippines	52.40	43.88
5	Switzerland	91.74	94.95	66	Egypt	51.70	42.97
6	Japan	89.69	92.28	67	Venezuela	51.50	42.71
7	Austria	87.92	89.99	68	Georgia	49.40	39.98
8	Germany	87.39	89.30	69	India	48.90	39.33
9	Slovenia	84.03	84.94	70	Viet Nam	48.60	38.94
10	Belgium	84.03	84.93	71	Kenya	47.30	37.26
11	Luxembourg	83.38	84.09	72	Pakistan	46.90	36.74
12	Malta	83.30	83.99	73	Thailand	45.50	34.92
13	Czech Republic	82.79	83.33	74	Jordan	45.20	34.53
14	United Kingdom	81.99	82.28	75	Malawi	44.90	34.14
15	Iceland	81.22	81.28	76	Kazakhstan	43.90	32.84
16	New Zealand	81.05	81.06	77	Honduras	43.50	32.32
17	Ireland	78.85	78.21	78	El Salvador	42.50	31.02
18	Chile	78.70	78.02	79	Mali	42.20	30.64
19	Canada	78.50	77.76	80	Dominican Republic	42.00	30.38
20	Estonia	78.36	77.58	81	Mexico	41.45	29.66
21	Ecuador	78.30	77.50	82	Panama	40.50	28.43
22	Lithuania	78.15	77.30	83	Mozambique	40.30	28.17
23	Norway	77.87	76.94	84	Namibia	39.40	27.00
24	Australia	77.37	76.29	85	Zimbabwe	38.70	26.09
25	Slovakia	76.05	74.57	86	Mongolia	37.50	24.53
26	Armenia	75.60	73.99	87	Tajikistan	37.20	24.14
27	Spain	75.53	73.91	88	Botswana	36.60	23.37
28	Serbia	74.00	71.91	89	Jamaica	36.40	23.11
29	Belarus	73.50	71.27	90	South Africa	36.00	22.59
30	United States	72.85	70.42	91	Mauritius	35.90	22.46
31	Paraguay	71.60	68.80	92	Ethiopia	34.80	21.03
32	Cyprus	71.50	68.67	93	Senegal	34.60	20.77
33	Italy	71.38	68.51	94	Rwanda	34.20	20.25
34	Croatia	70.20	66.98	95	Ghana	33.20	18.95
35	France	69.41	65.95	96	Azerbaijan	33.00	18.69
36	Morocco	69.40	65.94	97	Malaysia	31.50	16.75
37	Argentina	69.30	65.81	98	Lao People's Democratic Republic	30.90	15.97
38	Peru	69.20	65.68	99	Trinidad and Tobago	30.80	15.84
39	Uruguay	69.10	65.55	100	Madagascar	29.50	14.15
40	Romania	67.80	63.87	101	Bangladesh	26.30	10.00
41	Israel	67.20	63.09	102	Nepal	26.10	9.74
42	Colombia	67.17	63.04	103	Cambodia	24.20	7.27
43	Poland	66.82	62.60	104	Cameroon	22.60	5.19
44	Tunisia	66.30	61.92	104	Tanzania	22.60	5.19
45	China	66.10	61.66	106	Nigeria	22.30	4.80
46	Turkey	66.07	61.63	107	Yemen	21.00	3.12
47	Hungary	65.72	61.16	108	Indonesia	20.50	2.47
48	Greece	64.80	59.98	109	Zambia	20.30	2.21
49	Russian Federation	64.60	59.71	110	Uganda	19.20	0.78
50	Lebanon	64.00	58.93	111	Sri Lanka	18.60	0.00
51	Bosnia and Herzegovina	63.40	58.15		Algeria	n/a	n/a
52	Latvia	63.00	57.64		Bahrain	n/a	n/a
53	Portugal	62.68	57.22		Hong Kong (China)	n/a	n/a
54	Eswatini	62.50	56.99		Iran (Islamic Republic of)	n/a	n/a
55	Korea (Republic of)	61.72	55.97		Kuwait	n/a	n/a
56	Albania	59.80	53.48		Oman	n/a	n/a
57	North Macedonia (Republic of)	58.70	52.05		Qatar	n/a	n/a
58	Moldova	58.60	51.92		Saudi Arabia	n/a	n/a
59	Guatemala	58.00	51.15		Singapore	n/a	n/a
60	Kyrgyzstan	57.20	50.11		United Arab Emirates	n/a	n/a
61	Ukraine	55.30	47.64				

Source: OECD (2019) ICT Access and Use by Businesses, OECD Telecommunications and Internet Statistics (database) (<https://doi.org/10.1787/9d2cb97b-en>); World Bank, Enterprise Surveys ([www.enterprisesurveys.org](http://www.enterprisesurveys.org))

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## 2.2.2 Internet shopping

People who used the Internet to buy something online in the past year (%) | 2017

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Denmark	77.97	100.00	62	Mauritius	14.42	18.46
2	Netherlands	75.72	97.11	63	Brazil	14.21	18.19
3	Norway	75.63	96.99	64	Lebanon	13.78	17.64
4	United Kingdom	74.74	95.86	65	Venezuela	12.91	16.52
5	Korea (Republic of)	72.47	92.94	66	Namibia	12.14	15.54
6	Sweden	71.65	91.90	67	Bosnia and Herzegovina	11.77	15.07
7	United States	70.43	90.33	68	Indonesia	9.88	12.64
8	New Zealand	69.11	88.63	69	Kenya	9.25	11.83
9	Canada	68.57	87.95	70	Philippines	9.09	11.62
10	Australia	67.69	86.81	71	Armenia	8.51	10.88
11	Germany	66.84	85.73	72	Colombia	8.43	10.78
12	Finland	60.76	77.92	73	South Africa	7.86	10.05
13	Ireland	59.49	76.29	74	Tajikistan	7.55	9.65
14	Belgium	57.27	73.44	75	Dominican Republic	7.44	9.51
15	Switzerland	56.02	71.84	76	Mongolia	7.40	9.46
16	France	55.51	71.18	77	Jordan	7.10	9.08
17	Italy	54.94	70.45	78	Mexico	6.99	8.94
18	Spain	54.18	69.47	79	Albania	6.67	8.51
19	Czech Republic	54.05	69.31	80	Panama	6.12	7.81
20	Luxembourg	51.12	65.55	81	Ecuador	6.03	7.70
21	United Arab Emirates	49.62	63.63	82	Lao People's Democratic Republic	5.57	7.11
22	Singapore	48.03	61.58	83	Tanzania	5.35	6.82
23	Poland	47.79	61.28	84	Zambia	5.09	6.50
24	Estonia	46.69	59.87	85	Guatemala	5.07	6.47
25	Malta	46.59	59.74	86	Azerbaijan	4.82	6.15
26	Japan	45.90	58.85	87	Tunisia	4.67	5.96
27	Slovenia	45.50	58.35	88	Peru	4.36	5.56
28	China	45.28	58.06	89	Georgia	4.34	5.54
29	Austria	44.14	56.59	90	Mozambique	4.30	5.48
30	Hong Kong (China)	42.55	54.55	91	Ghana	4.24	5.41
31	Slovakia	41.74	53.52	92	Nigeria	4.09	5.21
32	Lithuania	41.24	52.88	93	Uganda	3.85	4.91
33	Israel	40.22	51.57	94	Zimbabwe	3.79	4.83
34	Latvia	34.51	44.25	95	Botswana	3.61	4.60
35	Malaysia	33.90	43.46	96	Honduras	3.56	4.53
36	Cyprus	32.33	41.45	97	El Salvador	3.08	3.91
37	Belarus	30.03	38.49	98	Cambodia	3.05	3.88
38	Croatia	29.62	37.96	99	India	2.86	3.63
39	Hungary	28.76	36.86	100	Kyrgyzstan	2.85	3.62
40	Russian Federation	26.90	34.47	101	Algeria	2.80	3.56
41	Iran (Islamic Republic of)	25.71	32.95	102	Cameroon	2.76	3.51
42	Portugal	25.15	32.24	103	Sri Lanka	2.72	3.45
43	Bahrain	25.04	32.09	104	Mali	2.62	3.32
44	Saudi Arabia	24.93	31.95	105	Senegal	2.55	3.24
45	Uruguay	24.27	31.10	106	Paraguay	2.54	3.22
46	Chile	22.92	29.38	107	Egypt	2.43	3.09
47	Greece	22.16	28.40	108	Malawi	2.31	2.93
48	Bulgaria	21.78	27.91	109	Nepal	1.75	2.20
49	Ukraine	21.70	27.80	110	Morocco	1.62	2.04
50	Turkey	21.31	27.31	111	Bangladesh	1.27	1.59
51	Kuwait	20.21	25.89	112	Madagascar	0.99	1.24
52	Serbia	19.64	25.17	113	Rwanda	0.99	1.23
53	Viet Nam	18.74	24.00	114	Pakistan	0.85	1.05
54	Moldova	18.37	23.53	115	Ethiopia	0.03	0.00
55	Costa Rica	18.06	23.13		Eswatini	n/a	n/a
56	North Macedonia (Republic of)	16.85	21.59		Iceland	n/a	n/a
57	Thailand	16.82	21.54		Jamaica	n/a	n/a
58	Trinidad and Tobago	16.47	21.09		Oman	n/a	n/a
59	Romania	15.61	19.99		Qatar	n/a	n/a
60	Kazakhstan	14.68	18.79		Yemen	n/a	n/a
61	Argentina	14.46	18.52				

Source: World Bank, Global Findex database (<https://globalfindex.worldbank.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 2.2.3 Professionals

Professionals (%) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Luxembourg	37.87	100.00	62	Iran (Islamic Republic of)	10.96	27.32
2	Sweden	28.74	75.32	63	Panama	10.85	27.03
3	Norway	27.27	71.36	64	Kuwait	10.45	25.94
4	Denmark	26.90	70.36	65	Turkey	10.44	25.91
5	Netherlands	26.51	69.31	66	Argentina	10.01	24.76
6	Iceland	25.76	67.28	67	Algeria	9.93	24.53
7	Israel	25.67	67.04	68	Mauritius	9.77	24.11
8	Switzerland	25.35	66.19	69	Mexico	9.57	23.57
9	United Kingdom	25.28	65.98	70	Kyrgyzstan	9.38	23.05
10	Finland	25.25	65.92	71	Qatar	9.07	22.21
11	Belgium	25.10	65.50	72	Jamaica	8.91	21.78
12	Russian Federationonn Federation	24.57	64.06	73	Nepal	8.18	19.81
13	Lithuania	23.40	60.92	74	Lao People's Democratic Republic	7.87	18.97
14	Ireland	23.38	60.87	75	Zambia	7.81	18.82
15	United States	22.38	58.16	76	Dominican Republic	7.79	18.75
16	Slovenia	22.22	57.72	77	Namibia	7.64	18.34
17	Australia	22.12	57.45	78	Bahrain	7.61	18.27
18	Belarus	20.98	54.38	79	Hong Kong (China)	7.58	18.19
19	Estonia	20.84	53.98	80	Tajikistan	7.58	18.18
20	Korea (Republic of)	20.50	53.08	81	Ghana	7.46	17.86
21	Singapore	20.03	51.81	82	Ecuador	7.43	17.78
22	Austria	19.96	51.62	83	Oman	7.37	17.62
23	Poland	19.93	51.54	84	Yemen	7.25	17.30
24	Greece	19.26	49.72	85	Viet Nam	7.11	16.91
25	Cyprus	18.91	48.79	86	El Salvador	6.88	16.29
26	Portugal	18.88	48.70	87	Sri Lanka	6.80	16.08
27	Canada	18.73	48.30	88	Botswana	6.77	16.00
28	France	18.45	47.55	89	Tunisia	6.75	15.95
29	Ukraine	18.41	47.44	90	Paraguay	6.50	15.26
30	Malta	18.19	46.85	91	Nigeria	6.14	14.30
31	Germany	17.90	46.06	92	Trinidad and Tobago	6.10	14.20
32	Spain	17.90	46.05	93	Uganda	5.90	13.65
33	Croatia	17.75	45.65	94	Guatemala	5.61	12.87
34	Kazakhstan	17.02	43.68	95	Thailand	5.56	12.73
35	Latvia	16.99	43.60	96	South Africa	5.52	12.62
36	New Zealand	16.81	43.11	97	Philippines	5.45	12.43
37	Bulgaria	16.65	42.67	98	Rwanda	5.37	12.23
38	Mongolia	16.37	41.92	99	Pakistan	5.26	11.91
39	Czech Republic	16.08	41.15	100	Cameroon	5.04	11.32
40	Romania	15.37	39.23	101	Bangladesh	4.82	10.74
41	Hungary	15.36	39.19	102	Honduras	4.23	9.15
42	Italy	15.04	38.34	103	India	4.15	8.93
43	Venezuela	15.01	38.25	104	Senegal	4.06	8.67
44	North Macedonia (Republic of)	14.91	37.98	105	Zimbabwe	3.48	7.12
45	Armenia	14.49	36.86	106	Cambodia	3.42	6.95
46	Moldova	14.23	36.14	107	Mali	3.12	6.14
47	Serbia	13.91	35.28	108	Malawi	2.96	5.71
48	United Arab Emirates	13.60	34.44	109	Saudi Arabia	2.73	5.09
49	Costa Rica	12.68	31.96	110	Ethiopia	2.56	4.62
50	Azerbaijan	12.64	31.85	111	Colombia	2.19	3.63
51	Slovakia	12.53	31.56	112	Madagascar	2.05	3.26
52	Chile	12.48	31.42	113	Mozambique	2.04	3.23
53	Malaysia	12.39	31.18	114	Morocco	1.80	2.58
54	Georgia	12.28	30.88	115	Indonesia	1.27	1.14
55	Uruguay	12.12	30.45	116	Tanzania	0.85	0.00
56	Eswatini	11.94	29.95		China	n/a	n/a
57	Bosnia and Herzegovina	11.46	28.66		Japan	n/a	n/a
58	Albania	11.31	28.26		Jordan	n/a	n/a
59	Egypt	11.27	28.16		Kenya	n/a	n/a
60	Peru	11.15	27.82		Lebanon	n/a	n/a
61	Brazil	11.00	27.43				

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

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## 2.2.4 Technicians and associate professionals

Technicians and associate professionals (%) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Japan	22.82	100.00	62	Botswana	7.80	33.51
2	Germany	22.57	98.91	63	Panama	7.73	33.22
3	Nigeria	21.09	92.32	64	Brazil	7.63	32.73
4	Singapore	20.73	90.75	65	Tunisia	7.57	32.49
5	France	19.91	87.12	66	Paraguay	7.54	32.37
6	Hong Kong (China)	19.75	86.41	67	Kuwait	7.49	32.13
7	Finland	19.22	84.06	68	Georgia	7.44	31.93
8	Switzerland	19.05	83.33	69	Oman	7.43	31.87
9	Sweden	18.55	81.09	70	Uruguay	7.43	31.85
10	Luxembourg	17.67	77.19	71	Egypt	7.23	30.97
11	Italy	17.61	76.96	72	Mexico	7.11	30.46
12	Denmark	17.45	76.22	73	Qatar	6.81	29.12
13	Korea (Republic of)	17.39	75.96	74	Sri Lanka	6.76	28.90
14	Czech Republic	17.28	75.49	75	Bahrain	6.20	26.42
15	Austria	17.25	75.32	76	Dominican Republic	6.07	25.84
16	Canada	16.84	73.53	77	Indonesia	6.04	25.70
17	Norway	16.10	70.26	78	Romania	6.04	25.69
18	Netherlands	15.98	69.74	79	Moldova	6.00	25.53
19	Slovakia	15.68	68.37	80	Turkey	5.97	25.42
20	Malta	15.13	65.94	81	Honduras	5.85	24.88
21	Hungary	14.64	63.78	82	Tajikistan	5.77	24.53
22	Croatia	14.39	62.68	83	Iran (Islamic Republic of)	5.63	23.90
23	Belgium	14.25	62.05	84	Jamaica	5.61	23.81
24	United States	14.21	61.88	85	Namibia	5.46	23.13
25	Iceland	13.93	60.65	86	Albania	4.94	20.84
26	Estonia	13.71	59.68	87	Ecuador	4.78	20.11
27	Latvia	13.71	59.66	88	Algeria	4.76	20.05
28	Poland	13.36	58.11	89	Thailand	4.58	19.23
29	Trinidad and Tobago	13.30	57.87	90	Nepal	4.44	18.63
30	Slovenia	13.07	56.82	91	Morocco	4.40	18.45
31	Australia	12.98	56.44	92	El Salvador	4.22	17.64
32	Russian Federation	12.95	56.29	93	India	4.06	16.96
33	Israel	12.86	55.91	94	Eswatini	4.06	16.96
34	Cyprus	12.79	55.60	95	Philippines	4.04	16.86
35	United Kingdom	12.61	54.81	96	Pakistan	3.97	16.55
36	Peru	12.53	54.45	97	Zambia	3.58	14.83
37	New Zealand	12.44	54.05	98	Yemen	3.47	14.34
38	Saudi Arabia	12.19	52.94	99	Viet Nam	3.40	14.02
39	Kazakhstan	12.00	52.10	100	Uganda	2.89	11.77
40	Serbia	11.66	50.60	101	Cameroon	2.89	11.76
41	Chile	11.59	50.30	102	Guatemala	2.64	10.67
42	Ireland	11.38	49.37	103	Lao People's Democratic Republic	2.63	10.60
43	Portugal	11.36	49.29	104	Ghana	2.55	10.24
44	Spain	11.24	48.72	105	Mongolia	2.51	10.10
45	Ukraine	11.20	48.57	106	Tanzania	2.08	8.17
46	Mauritius	11.11	48.15	107	Bangladesh	1.86	7.21
47	Malaysia	10.26	44.40	108	Zimbabwe	1.60	6.06
48	Belarus	10.22	44.22	109	Senegal	1.49	5.56
49	United Arab Emirates	10.21	44.19	110	Rwanda	1.47	5.48
50	North Macedonia (Republic of)	9.87	42.65	111	Mozambique	1.47	5.47
51	Costa Rica	9.79	42.30	112	Ethiopia	1.30	4.71
52	Lithuania	9.59	41.41	113	Mali	1.17	4.15
53	Bulgaria	9.42	40.67	114	Cambodia	0.97	3.28
54	Azerbaijan	9.35	40.37	115	Madagascar	0.86	2.77
55	Bosnia and Herzegovina	9.23	39.83	116	Malawi	0.23	0.00
56	Argentina	9.10	39.26		China	n/a	n/a
57	Armenia	8.80	37.95		Jordan	n/a	n/a
58	Colombia	8.80	37.93		Kenya	n/a	n/a
59	South Africa	8.76	37.77		Lebanon	n/a	n/a
60	Greece	7.94	34.12		Venezuela	n/a	n/a
61	Kyrgyzstan	7.84	33.68				

Source: International Labour Organization, ILOSTAT (<https://ilostat.ilo.org/>)

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## 2.2.5 Extent of staff training

Average answer to the question: In your country, to what extent do companies invest in training and employee development? [1 = not at all; 7 = to a great extent] | 2017–18

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Switzerland	5.86	100.00	62	Sri Lanka	3.85	37.77
2	United States	5.76	97.05	63	Kuwait	3.85	37.69
3	Luxembourg	5.54	90.11	64	Spain	3.83	37.04
4	Malaysia	5.36	84.46	65	Cambodia	3.81	36.44
5	Netherlands	5.36	84.45	66	Dominican Republic	3.81	36.42
6	Singapore	5.35	84.23	67	Ukraine	3.80	36.06
7	Sweden	5.32	83.35	68	Brazil	3.79	35.81
8	Denmark	5.28	82.06	69	Kazakhstan	3.79	35.73
9	Finland	5.23	80.65	70	Rwanda	3.78	35.64
10	Germany	5.19	79.37	71	Mexico	3.78	35.57
11	Japan	5.15	78.21	72	Tunisia	3.77	35.40
12	Hong Kong (China)	5.11	76.81	73	Viet Nam	3.75	34.54
13	Norway	5.09	76.33	74	Lao People's Democratic Republic	3.74	34.42
14	Australia	5.03	74.48	75	Panama	3.73	33.97
15	Ireland	5.02	74.04	76	Lebanon	3.72	33.78
16	Austria	5.02	74.00	77	Uganda	3.69	32.91
17	Belgium	4.99	73.24	78	Zimbabwe	3.69	32.80
18	Iceland	4.95	71.79	79	Argentina	3.69	32.76
19	Canada	4.90	70.38	80	Mali	3.69	32.75
20	United Arab Emirates	4.89	70.09	81	Colombia	3.66	31.98
21	New Zealand	4.87	69.43	82	Nigeria	3.65	31.63
22	Israel	4.81	67.48	83	Serbia	3.65	31.60
23	United Kingdom	4.81	67.38	84	Uruguay	3.64	31.30
24	France	4.80	67.34	85	Morocco	3.64	31.10
25	Philippines	4.80	67.20	86	Mongolia	3.63	30.82
26	Qatar	4.75	65.61	87	Tanzania	3.62	30.65
27	Bahrain	4.71	64.45	88	Armenia	3.62	30.59
28	Indonesia	4.71	64.35	89	Malawi	3.62	30.57
29	Lithuania	4.61	61.41	90	Greece	3.61	30.27
30	Estonia	4.58	60.46	91	Hungary	3.58	29.28
31	India	4.56	59.90	92	Ethiopia	3.57	29.00
32	Czech Republic	4.53	58.74	93	Cameroon	3.56	28.79
33	China	4.50	57.78	94	Senegal	3.56	28.61
34	Korea (Republic of)	4.49	57.47	95	Italy	3.55	28.53
35	Oman	4.45	56.31	96	Egypt	3.54	28.26
36	Costa Rica	4.42	55.38	97	Zambia	3.53	27.68
37	Trinidad and Tobago	4.40	54.77	98	Madagascar	3.51	27.09
38	Mauritius	4.40	54.68	99	Turkey	3.50	26.87
39	Jamaica	4.31	52.11	100	Paraguay	3.47	26.07
40	Slovenia	4.30	51.79	101	Ecuador	3.47	25.92
41	Malta	4.29	51.36	102	Georgia	3.47	25.90
42	Kenya	4.28	51.06	103	Tajikistan	3.47	25.90
43	Saudi Arabia	4.26	50.40	104	El Salvador	3.44	25.01
44	Thailand	4.26	50.35	105	Venezuela	3.42	24.51
45	Guatemala	4.25	50.05	106	Moldova	3.41	24.07
46	Cyprus	4.22	49.32	107	Bulgaria	3.41	24.01
47	Chile	4.22	49.15	108	Algeria	3.41	23.94
48	Ghana	4.21	49.01	109	Romania	3.40	23.73
49	Latvia	4.21	48.79	110	Iran (Islamic Republic of)	3.39	23.33
50	Slovakia	4.19	48.40	111	Nepal	3.36	22.45
51	South Africa	4.17	47.68	112	Peru	3.30	20.77
52	Azerbaijan	4.15	47.06	113	Bangladesh	3.29	20.44
53	Honduras	4.13	46.34	114	Kyrgyzstan	3.27	19.79
54	Portugal	4.10	45.37	115	Croatia	3.08	13.81
55	Jordan	4.10	45.34	116	Bosnia and Herzegovina	3.03	12.19
56	Albania	3.97	41.39	117	North Macedonia (Republic of)	2.98	10.88
57	Eswatini	3.96	41.16	118	Mozambique	2.90	8.20
58	Pakistan	3.96	41.09	119	Yemen	2.63	0.00
59	Poland	3.94	40.54		Belarus	n/a	n/a
60	Russian Federation	3.92	40.02		Namibia	n/a	n/a
61	Botswana	3.91	39.54				

Source: World Economic Forum, Executive Opinion Survey 2017–2018 (<http://reports.weforum.org>)

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## 2.2.6 R&D expenditure by businesses

Gross domestic expenditure on R&D performed by business enterprise (% of GDP) | 2017

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Israel	3.94	100.00	62	North Macedonia (Republic of)	0.09	2.36
2	Korea (Republic of)	3.62	91.77	63	Qatar	0.09	2.22
3	Japan	2.53	64.09	64	Oman	0.08	2.13
4	Switzerland	2.40	60.80	65	Iran (Islamic Republic of)	0.07	1.74
5	Sweden	2.34	59.34	66	Kenya	0.07	1.72
6	Austria	2.22	56.30	67	Bosnia and Herzegovina	0.07	1.71
7	Germany	2.10	53.39	68	El Salvador	0.06	1.48
8	United States	2.05	51.98	69	Moldova	0.06	1.45
9	Denmark	2.00	50.75	70	Kazakhstan	0.06	1.40
10	Finland	1.80	45.74	71	Philippines	0.05	1.25
11	Belgium	1.76	44.77	72	Namibia	0.04	0.98
12	China	1.65	41.92	73	Sri Lanka	0.04	0.92
13	France	1.42	36.08	74	Algeria	0.04	0.90
14	Iceland	1.41	35.78	75	Egypt	0.03	0.83
15	Slovenia	1.38	35.10	76	Kyrgyzstan	0.03	0.80
16	Singapore	1.34	34.00	77	Indonesia	0.02	0.54
17	Netherlands	1.18	29.86	78	Bahrain	0.02	0.52
18	United Kingdom	1.13	28.70	79	Uruguay	0.02	0.48
19	Czech Republic	1.13	28.59	80	Mauritius	0.02	0.43
20	Norway	1.12	28.46	81	Cambodia	0.02	0.40
21	Australia	1.03	26.08	82	Azerbaijan	0.01	0.35
22	Hungary	0.99	25.14	83	Uganda	0.01	0.18
23	Italy	0.84	21.21	84	Ethiopia	0.01	0.18
24	Canada	0.82	20.82	85	Zambia	0.01	0.14
25	Malaysia	0.81	20.64	86	Mongolia	0.00	0.10
26	United Arab Emirates	0.74	18.73	87	Eswatini	0.00	0.05
27	Ireland	0.74	18.72	88	Senegal	0.00	0.04
28	Luxembourg	0.68	17.18	89	Mozambique	0.00	0.04
29	Portugal	0.67	17.02	90	Trinidad and Tobago	0.00	0.03
30	Poland	0.67	16.99	91	Panama	0.00	0.02
31	Russian Federation	0.67	16.90	92	Ghana	0.00	0.01
32	Spain	0.66	16.83	93	Paraguay	0.00	0.01
33	New Zealand	0.63	15.96	94	Guatemala	0.00	0.00
34	Estonia	0.62	15.84		Albania	n/a	n/a
35	Thailand	0.57	14.46		Armenia	n/a	n/a
36	Greece	0.56	14.15		Bangladesh	n/a	n/a
37	Turkey	0.55	13.88		Brazil	n/a	n/a
38	Bulgaria	0.54	13.74		Cameroon	n/a	n/a
39	Slovakia	0.48	12.10		Dominican Republic	n/a	n/a
40	Croatia	0.42	10.68		Georgia	n/a	n/a
41	Belarus	0.40	10.08		Honduras	n/a	n/a
42	Viet Nam	0.38	9.76		Jamaica	n/a	n/a
43	Hong Kong (China)	0.35	8.97		Jordan	n/a	n/a
44	Malta	0.34	8.70		Kuwait	n/a	n/a
45	Serbia	0.34	8.65		Lao People's Democratic Republic	n/a	n/a
46	South Africa	0.34	8.62		Lebanon	n/a	n/a
47	Lithuania	0.32	8.13		Madagascar	n/a	n/a
48	Romania	0.29	7.24		Malawi	n/a	n/a
49	India	0.27	6.85		Mali	n/a	n/a
50	Ukraine	0.26	6.62		Nepal	n/a	n/a
51	Morocco	0.21	5.43		Nigeria	n/a	n/a
52	Cyprus	0.21	5.24		Pakistan	n/a	n/a
53	Ecuador	0.19	4.75		Peru	n/a	n/a
54	Costa Rica	0.15	3.81		Rwanda	n/a	n/a
55	Mexico	0.15	3.77		Saudi Arabia	n/a	n/a
56	Latvia	0.14	3.54		Tajikistan	n/a	n/a
57	Chile	0.14	3.54		Tanzania	n/a	n/a
58	Argentina	0.13	3.23		Venezuela	n/a	n/a
59	Tunisia	0.12	3.07		Yemen	n/a	n/a
60	Colombia	0.12	3.05		Zimbabwe	n/a	n/a
61	Botswana	0.10	2.41				

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.



## 2.3.1 Government online services

Government Online Service Index | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Denmark	1.00	100.00	57	Viet Nam	0.74	70.77
2	Singapore	0.99	98.46	63	Azerbaijan	0.73	70.00
2	United States	0.99	98.46	63	Ecuador	0.73	70.00
4	France	0.98	97.70	63	Iceland	0.73	70.00
4	Korea (Republic of)	0.98	97.70	63	Mauritius	0.73	70.00
4	United Kingdom	0.98	97.70	67	Rwanda	0.72	69.23
7	Australia	0.97	96.92	68	North Macedonia (Republic of)	0.72	68.46
8	Finland	0.97	96.16	69	Georgia	0.69	66.15
9	India	0.95	94.62	69	Ghana	0.69	66.15
9	Italy	0.95	94.62	71	Nepal	0.69	65.39
9	Japan	0.95	94.62	72	Croatia	0.68	64.62
9	New Zealand	0.95	94.62	73	Costa Rica	0.67	63.85
9	Norway	0.95	94.62	74	Latvia	0.67	63.08
14	Sweden	0.94	93.84	74	Morocco	0.67	63.08
14	United Arab Emirates	0.94	93.84	74	Sri Lanka	0.67	63.08
16	Spain	0.94	93.08	77	Dominican Republic	0.66	62.31
17	Canada	0.93	92.31	77	Panama	0.66	62.31
17	Germany	0.93	92.31	77	Romania	0.66	62.31
17	Netherlands	0.93	92.31	80	Czech Republic	0.65	61.54
17	Poland	0.93	92.31	81	Guatemala	0.65	60.77
17	Portugal	0.93	92.31	81	Kyrgyzstan	0.65	60.77
22	Brazil	0.92	91.54	83	Thailand	0.64	60.00
22	Luxembourg	0.92	91.54	83	Trinidad and Tobago	0.64	60.00
22	Mexico	0.92	91.54	85	Ethiopia	0.63	59.23
25	Russian Federation	0.92	90.77	85	Iran (Islamic Republic of)	0.63	59.23
26	Estonia	0.90	89.23	87	El Salvador	0.62	58.46
27	Malaysia	0.89	87.69	87	Kenya	0.62	58.46
27	Turkey	0.89	87.69	89	Mongolia	0.60	55.38
27	Uruguay	0.89	87.69	90	Indonesia	0.57	52.30
30	Colombia	0.88	86.92	90	Uganda	0.57	52.30
30	Philippines	0.88	86.92	90	Ukraine	0.57	52.30
32	Austria	0.87	85.39	93	Armenia	0.56	51.54
32	Kazakhstan	0.87	85.39	93	Tanzania	0.56	51.54
34	China	0.86	84.61	95	Paraguay	0.56	50.78
35	Switzerland	0.85	83.07	96	Pakistan	0.55	50.00
36	Malta	0.84	82.31	97	Egypt	0.53	48.46
37	Chile	0.83	81.54	98	Nigeria	0.53	47.70
37	South Africa	0.83	81.54	99	Honduras	0.51	46.16
39	Ireland	0.83	80.77	100	Jordan	0.49	43.85
39	Israel	0.83	80.77	101	Senegal	0.48	42.31
41	Greece	0.82	80.00	101	Zambia	0.48	42.31
41	Peru	0.82	80.00	103	Lebanon	0.47	41.54
43	Oman	0.81	79.23	104	Cameroon	0.46	40.00
44	Tunisia	0.81	78.47	105	Namibia	0.45	39.23
45	Bahrain	0.80	77.69	106	Bosnia and Herzegovina	0.43	36.93
45	Lithuania	0.80	77.69	107	Mozambique	0.42	36.15
45	Slovenia	0.80	77.69	108	Venezuela	0.41	34.61
48	Kuwait	0.79	76.93	109	Eswatini	0.38	30.77
48	Qatar	0.79	76.93	110	Tajikistan	0.34	26.93
48	Saudi Arabia	0.79	76.93	111	Zimbabwe	0.33	25.39
51	Bangladesh	0.78	76.15	112	Jamaica	0.32	24.61
51	Cyprus	0.78	76.15	113	Madagascar	0.31	23.08
53	Moldova	0.77	74.61	114	Mali	0.26	18.46
54	Bulgaria	0.76	73.85	115	Malawi	0.26	17.69
55	Belgium	0.76	73.07	116	Cambodia	0.25	16.93
56	Argentina	0.75	72.31	117	Algeria	0.22	13.08
57	Albania	0.74	70.77	118	Botswana	0.21	12.31
57	Belarus	0.74	70.77	119	Lao People's Democratic Republic	0.17	7.70
57	Hungary	0.74	70.77	120	Yemen	0.10	0.00
57	Serbia	0.74	70.77		Hong Kong (China)	n/a	n/a
57	Slovakia	0.74	70.77				

**Source:** United Nations Department of Economic and Social Affairs (UNDESA), UN E-Government Knowledgebase (<https://publicadministration.un.org/egovkb/en-us/>)  
For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 2.3.2 Publication and use of open data

Open Data Barometer | 2016

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	United Kingdom	100.00	100.00	62	Guatemala	23.72	23.72
2	Canada	89.54	89.54	63	Hungary	23.30	23.30
3	France	85.13	85.13	64	Serbia	22.77	22.77
4	United States	81.62	81.62	65	Tanzania	21.73	21.73
5	Korea (Republic of)	81.16	81.16	66	Ecuador	21.62	21.62
6	Australia	81.15	81.15	67	Nigeria	20.97	20.97
7	New Zealand	79.38	79.38	68	Costa Rica	19.87	19.87
8	Japan	75.16	75.16	69	China	19.64	19.64
9	Netherlands	74.95	74.95	70	Rwanda	19.62	19.62
10	Norway	73.81	73.81	71	Qatar	19.26	19.26
11	Mexico	73.45	73.45	72	Bahrain	18.91	18.91
12	Spain	73.36	73.36	73	Saudi Arabia	18.66	18.66
13	Denmark	70.52	70.52	74	Trinidad and Tobago	17.99	17.99
14	Austria	70.22	70.22	75	Panama	17.90	17.90
15	Sweden	69.84	69.84	76	Morocco	16.86	16.86
16	Germany	69.52	69.52	77	Viet Nam	16.79	16.79
17	Uruguay	60.85	60.85	78	Ethiopia	16.14	16.14
18	Brazil	58.86	58.86	79	Nepal	15.49	15.49
19	Switzerland	57.46	57.46	80	Egypt	13.89	13.89
20	Italy	55.93	55.93	81	El Salvador	13.88	13.88
21	Finland	55.89	55.89	82	Kyrgyzstan	13.24	13.24
22	Philippines	54.70	54.70	83	Jordan	12.58	12.58
23	Singapore	52.69	52.69	84	Venezuela	11.62	11.62
24	Colombia	51.65	51.65	85	Uganda	11.59	11.59
25	Russian Federation	48.53	48.53	86	Belarus	10.95	10.95
26	Ireland	47.44	47.44	87	Bangladesh	10.57	10.57
27	Chile	47.41	47.41	88	Malawi	10.51	10.51
28	Israel	46.26	46.26	89	Tajikistan	9.70	9.70
29	Belgium	45.28	45.28	90	Namibia	9.08	9.08
30	Slovakia	44.90	44.90	91	Senegal	8.74	8.74
31	Czech Republic	44.44	44.44	92	Bosnia and Herzegovina	8.02	8.02
32	Moldova	43.68	43.68	93	Botswana	5.89	5.89
33	India	42.80	42.80	94	Lebanon	5.82	5.82
34	Portugal	41.89	41.89	95	Cameroon	5.15	5.15
35	Kenya	40.42	40.42	96	Zambia	3.82	3.82
36	Greece	38.94	38.94	97	Pakistan	3.59	3.59
37	Iceland	38.87	38.87	98	Mozambique	3.46	3.46
38	Indonesia	38.35	38.35	99	Mali	2.46	2.46
39	Argentina	37.51	37.51	100	Zimbabwe	1.87	1.87
40	Georgia	37.44	37.44	101	Eswatini	0.28	0.28
41	Bulgaria	37.14	37.14	102	Yemen	0.00	0.00
42	Jamaica	36.95	36.95		Algeria	n/a	n/a
43	Turkey	36.88	36.88		Armenia	n/a	n/a
44	Estonia	36.31	36.31		Azerbaijan	n/a	n/a
45	Ukraine	35.96	35.96		Cambodia	n/a	n/a
46	South Africa	34.43	34.43		Cyprus	n/a	n/a
47	Poland	33.95	33.95		Honduras	n/a	n/a
48	Peru	33.33	33.33		Hong Kong (China)	n/a	n/a
49	North Macedonia (Republic of)	32.58	32.58		Iran (Islamic Republic of)	n/a	n/a
50	Albania	32.43	32.43		Kuwait	n/a	n/a
51	Dominican Republic	32.21	32.21		Lao People's Democratic Republic	n/a	n/a
52	Tunisia	32.17	32.17		Lithuania	n/a	n/a
53	Paraguay	28.07	28.07		Luxembourg	n/a	n/a
54	Malaysia	28.06	28.06		Madagascar	n/a	n/a
55	Latvia	27.89	27.89		Malta	n/a	n/a
56	Thailand	27.55	27.55		Mongolia	n/a	n/a
57	Croatia	26.75	26.75		Oman	n/a	n/a
58	Mauritius	26.30	26.30		Romania	n/a	n/a
59	United Arab Emirates	26.17	26.17		Slovenia	n/a	n/a
60	Kazakhstan	26.10	26.10		Sri Lanka	n/a	n/a
61	Ghana	25.96	25.96				

Source: World Wide Web Foundation (2017), Open Data Barometer 4th Edition – Global Report (<https://opendatabarometer.org/4thedition/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 2.3.3 ICT use and government efficiency

Average answer to the question: In your country, to what extent does the use of ICTs by the government improve the quality of government services to the population? [1 = Not at all; 7 = To a great extent] | 2016–17

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Singapore	6.18	100.00	62	Bangladesh	3.88	43.04
2	Estonia	5.74	89.01	63	Pakistan	3.85	42.47
3	Rwanda	5.67	87.40	64	Tanzania	3.84	42.19
4	Qatar	5.66	87.01	65	Ukraine	3.83	42.01
5	Sweden	5.51	83.35	66	Argentina	3.83	41.97
6	Malaysia	5.50	83.22	67	Tajikistan	3.82	41.58
7	Saudi Arabia	5.50	83.17	68	Serbia	3.82	41.57
8	Luxembourg	5.50	83.08	69	Mali	3.81	41.38
9	United States	5.46	82.23	70	Botswana	3.79	40.98
10	Norway	5.45	81.97	71	Cyprus	3.78	40.77
11	Finland	5.33	78.93	72	Latvia	3.75	40.05
12	Bahrain	5.31	78.34	73	Mongolia	3.75	40.04
13	Portugal	5.30	78.14	74	Uganda	3.74	39.76
14	Germany	5.30	78.12	75	Hungary	3.72	39.24
15	Netherlands	5.29	78.01	76	Cambodia	3.72	39.19
16	New Zealand	5.25	76.96	77	Ghana	3.71	39.02
17	Azerbaijan	5.16	74.79	78	Zambia	3.65	37.58
18	United Kingdom	5.16	74.65	79	Poland	3.65	37.46
19	Iceland	5.11	73.43	80	Moldova	3.64	37.30
20	Malta	5.04	71.88	81	Slovakia	3.61	36.61
21	Israel	4.96	69.73	82	Sri Lanka	3.60	36.32
22	Switzerland	4.90	68.26	83	Italy	3.60	36.24
23	Kenya	4.88	67.71	84	Peru	3.59	35.99
24	Denmark	4.87	67.70	85	Philippines	3.59	35.93
25	Canada	4.84	66.81	86	Czech Republic	3.57	35.57
26	Kazakhstan	4.81	66.13	87	Croatia	3.53	34.63
27	Hong Kong (China)	4.81	66.01	88	Tunisia	3.51	34.04
28	Indonesia	4.70	63.27	89	Ethiopia	3.49	33.44
29	France	4.67	62.55	90	Algeria	3.48	33.27
30	Austria	4.65	62.26	91	South Africa	3.46	32.70
31	Lithuania	4.62	61.39	92	Honduras	3.43	31.97
32	Armenia	4.59	60.67	93	Guatemala	3.37	30.64
33	Ireland	4.54	59.51	94	Namibia	3.36	30.30
34	Georgia	4.51	58.79	95	Brazil	3.36	30.23
35	Australia	4.51	58.60	96	Romania	3.35	30.00
36	India	4.49	58.16	97	Paraguay	3.19	26.16
37	Jordan	4.48	57.90	98	Madagascar	3.17	25.57
38	Belgium	4.46	57.43	99	Kyrgyzstan	3.13	24.54
39	Japan	4.45	57.17	100	Cameroon	3.09	23.67
40	Spain	4.38	55.51	101	Nepal	2.91	19.32
41	Oman	4.38	55.47	102	Mozambique	2.91	19.31
42	Russian Federation	4.34	54.50	103	Eswatini	2.90	18.94
43	Chile	4.31	53.66	104	Malawi	2.83	17.21
44	Thailand	4.28	53.11	105	El Salvador	2.77	15.73
45	Uruguay	4.22	51.50	106	Lebanon	2.73	14.71
46	Bulgaria	4.20	51.15	107	Venezuela	2.60	11.59
47	Panama	4.16	50.00	108	Zimbabwe	2.45	8.00
48	Mauritius	4.16	49.98	109	Yemen	2.13	0.00
49	Iran (Islamic Republic of)	4.15	49.77		Belarus	n/a	n/a
50	Morocco	4.13	49.41		Bosnia and Herzegovina	n/a	n/a
51	Colombia	4.11	48.83		China	n/a	n/a
52	Senegal	4.08	48.10		Dominican Republic	n/a	n/a
53	Jamaica	4.07	47.83		Greece	n/a	n/a
54	Mexico	4.03	46.90		Korea (Republic of)	n/a	n/a
55	Lao People's Democratic Republic	4.00	46.12		Kuwait	n/a	n/a
56	Albania	4.00	46.09		Nigeria	n/a	n/a
57	Egypt	3.98	45.62		North Macedonia (Republic of)	n/a	n/a
58	Costa Rica	3.97	45.34		Trinidad and Tobago	n/a	n/a
59	Slovenia	3.96	45.21		Turkey	n/a	n/a
60	Viet Nam	3.93	44.41		United Arab Emirates	n/a	n/a
61	Ecuador	3.90	43.65				

Source: World Economic Forum, Executive Opinion Survey 2016–2017 (<http://reports.weforum.org>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 2.3.4 R&D expenditure by governments and higher education

Gross domestic expenditure on R&D performed by government and higher education institutions (% of GDP) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Denmark	1.09	100.00	62	Mauritius	0.29	25.26
2	Norway	0.99	90.68	63	Namibia	0.28	24.17
3	Sweden	0.97	89.05	64	Mozambique	0.27	23.84
4	Finland	0.94	85.59	65	North Macedonia (Republic of)	0.26	22.32
5	Germany	0.93	85.11	66	Ecuador	0.25	21.76
6	Switzerland	0.93	84.92	67	Moldova	0.24	21.35
7	Austria	0.93	84.55	68	Pakistan	0.24	20.54
8	Singapore	0.88	80.74	69	Armenia	0.23	19.77
9	Korea (Republic of)	0.87	79.68	70	United Arab Emirates	0.23	19.57
10	Australia	0.85	77.80	71	Bulgaria	0.22	19.31
11	Belgium	0.83	75.59	72	Romania	0.22	18.71
12	Netherlands	0.83	75.21	73	Thailand	0.21	17.96
13	Iceland	0.77	70.00	74	Malta	0.21	17.80
14	Canada	0.76	69.02	75	Indonesia	0.21	17.79
15	France	0.73	66.46	76	Chile	0.20	17.14
16	Senegal	0.72	65.26	77	Eswatini	0.19	16.56
17	Estonia	0.68	61.74	78	Belarus	0.19	16.27
18	Czech Republic	0.66	59.96	79	Ukraine	0.19	16.04
19	United States	0.64	57.85	80	Georgia	0.18	15.80
20	Portugal	0.64	57.63	81	Azerbaijan	0.17	14.47
21	Japan	0.64	57.60	82	Morocco	0.16	13.94
22	Malaysia	0.62	56.49	83	Uganda	0.16	13.37
23	New Zealand	0.60	54.42	84	Mali	0.16	13.35
24	Ethiopia	0.60	53.97	85	Viet Nam	0.14	11.64
25	Israel	0.59	53.69	86	Oman	0.14	11.38
26	Serbia	0.59	53.24	87	Bosnia and Herzegovina	0.13	10.78
27	Luxembourg	0.58	52.21	88	Mongolia	0.13	10.71
28	Greece	0.58	52.20	89	Paraguay	0.12	9.62
29	Egypt	0.57	51.83	90	Tajikistan	0.12	9.37
30	Lithuania	0.57	51.73	91	Trinidad and Tobago	0.09	7.16
31	Spain	0.54	48.91	92	El Salvador	0.09	6.81
32	Tunisia	0.53	48.17	93	Philippines	0.09	6.77
33	Tanzania	0.53	47.75	94	Albania	0.08	6.10
34	United Kingdom	0.51	45.59	95	Bahrain	0.08	6.06
35	Italy	0.50	45.19	96	Kyrgyzstan	0.08	5.80
36	Algeria	0.50	44.83	97	Colombia	0.08	5.78
37	China	0.48	42.91	98	Peru	0.08	5.66
38	Slovenia	0.46	41.65	99	Sri Lanka	0.07	5.30
39	South Africa	0.46	41.08	100	Kazakhstan	0.07	4.74
40	Croatia	0.45	40.31	101	Cambodia	0.06	4.07
41	Hong Kong (China)	0.45	40.03	102	Zambia	0.05	3.63
42	Russian Federation	0.44	39.17	103	Panama	0.04	1.98
43	Qatar	0.42	37.79	104	Guatemala	0.02	0.70
44	Turkey	0.41	37.12	105	Madagascar	0.01	0.00
45	Argentina	0.40	35.89		Bangladesh	n/a	n/a
46	Slovakia	0.40	35.83		Brazil	n/a	n/a
47	Uruguay	0.38	34.30		Cameroon	n/a	n/a
48	Latvia	0.37	33.33		Dominican Republic	n/a	n/a
49	Kuwait	0.37	32.85		Honduras	n/a	n/a
50	Poland	0.36	32.51		Jamaica	n/a	n/a
51	Iran (Islamic Republic of)	0.36	32.28		Jordan	n/a	n/a
52	Ghana	0.36	32.20		Lao People's Democratic Republic	n/a	n/a
53	Hungary	0.35	31.14		Lebanon	n/a	n/a
54	India	0.35	31.10		Malawi	n/a	n/a
55	Botswana	0.34	30.40		Nigeria	n/a	n/a
56	Kenya	0.32	28.28		Rwanda	n/a	n/a
57	Mexico	0.31	27.18		Saudi Arabia	n/a	n/a
58	Costa Rica	0.31	27.07		Venezuela	n/a	n/a
59	Ireland	0.31	27.06		Yemen	n/a	n/a
60	Nepal	0.30	26.69		Zimbabwe	n/a	n/a
61	Cyprus	0.29	25.74				

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.





3rd pillar:

**Governance**





### 3.1.1 Rule of law

Rule of law indicator | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Finland	2.05	100.00	62	Bulgaria	-0.03	52.66
2	Norway	1.97	98.16	63	Panama	-0.06	51.98
3	Switzerland	1.93	97.38	64	South Africa	-0.10	51.00
4	Sweden	1.90	96.57	65	Trinidad and Tobago	-0.12	50.59
5	New Zealand	1.88	96.12	66	Morocco	-0.14	50.18
6	Austria	1.88	96.11	67	Serbia	-0.15	49.99
7	Singapore	1.84	95.41	68	Armenia	-0.15	49.91
8	Denmark	1.83	95.14	69	China	-0.20	48.74
9	Netherlands	1.82	94.76	70	Senegal	-0.21	48.59
10	Luxembourg	1.81	94.63	71	Bosnia and Herzegovina	-0.23	48.02
11	Hong Kong (China)	1.77	93.73	72	Jamaica	-0.24	47.95
12	Canada	1.77	93.72	73	Argentina	-0.24	47.86
13	Iceland	1.72	92.55	74	Eswatini	-0.25	47.67
14	Australia	1.72	92.45	75	Mongolia	-0.27	47.26
15	United Kingdom	1.64	90.70	76	Brazil	-0.28	47.00
16	Germany	1.63	90.52	77	North Macedonia (Republic of)	-0.28	46.86
17	Japan	1.53	88.32	78	Uganda	-0.29	46.61
18	Ireland	1.46	86.73	79	Indonesia	-0.31	46.15
19	United States	1.45	86.48	80	Turkey	-0.32	46.05
20	France	1.44	86.18	81	Zambia	-0.34	45.47
21	Belgium	1.37	84.53	82	Malawi	-0.38	44.66
22	Estonia	1.24	81.63	83	Albania	-0.39	44.39
23	Korea (Republic of)	1.24	81.53	84	Dominican Republic	-0.40	44.30
24	Portugal	1.14	79.35	85	Colombia	-0.41	44.03
25	Chile	1.12	78.77	86	Kenya	-0.41	43.96
26	Slovenia	1.06	77.47	87	Egypt	-0.41	43.93
27	Malta	1.05	77.37	88	Moldova	-0.41	43.90
28	Czech Republic	1.05	77.27	89	Ethiopia	-0.43	43.57
29	Israel	0.99	76.00	90	Kazakhstan	-0.43	43.49
30	Spain	0.97	75.43	91	Philippines	-0.48	42.44
31	Lithuania	0.96	75.17	92	Nepal	-0.48	42.43
32	Latvia	0.96	75.16	93	Peru	-0.52	41.54
33	United Arab Emirates	0.81	71.72	94	Paraguay	-0.54	40.99
34	Mauritius	0.78	71.11	95	Tanzania	-0.55	40.68
35	Cyprus	0.75	70.52	96	Azerbaijan	-0.60	39.65
36	Qatar	0.73	70.09	97	Ecuador	-0.63	38.96
37	Malaysia	0.62	67.55	98	Bangladesh	-0.64	38.73
38	Uruguay	0.60	67.00	99	Pakistan	-0.67	37.98
39	Hungary	0.56	66.00	100	Mexico	-0.67	37.97
40	Slovakia	0.53	65.40	101	Iran (Islamic Republic of)	-0.69	37.52
41	Costa Rica	0.48	64.25	102	Ukraine	-0.72	36.96
42	Botswana	0.47	63.97	103	Lebanon	-0.76	35.90
43	Oman	0.46	63.93	104	Algeria	-0.78	35.65
44	Poland	0.43	63.09	105	Mali	-0.80	35.14
45	Bahrain	0.41	62.75	106	Madagascar	-0.81	34.77
46	Georgia	0.33	60.81	107	Russian Federation	-0.82	34.74
47	Romania	0.33	60.76	108	El Salvador	-0.82	34.52
48	Croatia	0.32	60.74	109	Belarus	-0.83	34.34
49	Italy	0.25	58.96	110	Lao People's Democratic Republic	-0.84	34.12
50	Namibia	0.24	58.92	111	Nigeria	-0.88	33.24
51	Jordan	0.23	58.67	112	Kyrgyzstan	-0.91	32.63
52	Kuwait	0.21	58.14	113	Honduras	-1.02	30.00
53	Greece	0.15	56.82	114	Mozambique	-1.04	29.53
54	Saudi Arabia	0.14	56.57	115	Guatemala	-1.05	29.37
55	Rwanda	0.12	56.03	116	Cameroon	-1.08	28.71
56	Ghana	0.07	54.97	117	Cambodia	-1.11	27.91
57	Tunisia	0.04	54.23	118	Zimbabwe	-1.27	24.29
58	Sri Lanka	0.03	53.93	119	Tajikistan	-1.28	24.08
59	India	0.03	53.93	120	Yemen	-1.79	12.50
60	Thailand	0.02	53.86	121	Venezuela	-2.34	0.00
61	Viet Nam	0.00	53.26				

Source: World Bank, Worldwide Governance Indicators 2019 Update ([www.govindicators.org](http://www.govindicators.org))

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 3.1.2 Software piracy rate

Unlicensed software units (% of total software units installed) | 2017

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	United States	15.00	100.00	62	North Macedonia (Republic of)	63.00	35.14
2	Japan	16.00	98.65	63	Morocco	64.00	33.78
2	New Zealand	16.00	98.65	63	Philippines	64.00	33.78
4	Luxembourg	17.00	97.30	65	China	66.00	31.08
5	Australia	18.00	95.95	65	Serbia	66.00	31.08
6	Austria	19.00	94.59	65	Thailand	66.00	31.08
6	Sweden	19.00	94.59	68	Argentina	67.00	29.73
8	Denmark	20.00	93.24	68	Uruguay	67.00	29.73
8	Germany	20.00	93.24	70	Ecuador	68.00	28.38
10	Norway	21.00	91.89	71	Lebanon	69.00	27.03
10	Switzerland	21.00	91.89	72	Panama	71.00	24.32
10	United Kingdom	21.00	91.89	73	Tunisia	73.00	21.62
13	Belgium	22.00	90.54	74	Albania	74.00	20.27
13	Canada	22.00	90.54	74	Kazakhstan	74.00	20.27
13	Finland	22.00	90.54	74	Kenya	74.00	20.27
13	Netherlands	22.00	90.54	74	Senegal	74.00	20.27
17	Israel	27.00	83.78	74	Viet Nam	74.00	20.27
17	Singapore	27.00	83.78	79	Dominican Republic	75.00	18.92
19	Ireland	29.00	81.08	79	Honduras	75.00	18.92
20	Czech Republic	32.00	77.03	81	Sri Lanka	77.00	16.22
20	France	32.00	77.03	82	Guatemala	78.00	14.86
20	Korea (Republic of)	32.00	77.03	83	Botswana	80.00	12.16
20	South Africa	32.00	77.03	83	Cameroon	80.00	12.16
20	United Arab Emirates	32.00	77.03	83	El Salvador	80.00	12.16
25	Slovakia	35.00	72.97	83	Nigeria	80.00	12.16
26	Hungary	36.00	71.62	83	Ukraine	80.00	12.16
27	Hong Kong (China)	38.00	68.92	83	Zambia	80.00	12.16
27	Portugal	38.00	68.92	89	Azerbaijan	81.00	10.81
29	Estonia	41.00	64.86	89	Georgia	81.00	10.81
29	Slovenia	41.00	64.86	91	Algeria	82.00	9.46
31	Spain	42.00	63.51	91	Belarus	82.00	9.46
32	Italy	43.00	62.16	93	Indonesia	83.00	8.11
32	Malta	43.00	62.16	93	Moldova	83.00	8.11
34	Cyprus	44.00	60.81	93	Pakistan	83.00	8.11
34	Iceland	44.00	60.81	93	Paraguay	83.00	8.11
36	Brazil	46.00	58.11	97	Bangladesh	84.00	6.76
36	Poland	46.00	58.11	98	Armenia	85.00	5.41
38	Qatar	47.00	56.76	99	Yemen	88.00	1.35
38	Saudi Arabia	47.00	56.76	100	Venezuela	89.00	0.00
40	Colombia	48.00	55.41	100	Zimbabwe	89.00	0.00
40	Latvia	48.00	55.41		Cambodia	n/a	n/a
42	Mexico	49.00	54.05		Eswatini	n/a	n/a
43	Croatia	50.00	52.70		Ethiopia	n/a	n/a
43	Lithuania	50.00	52.70		Ghana	n/a	n/a
45	Malaysia	51.00	51.35		Iran (Islamic Republic of)	n/a	n/a
46	Bahrain	52.00	50.00		Jamaica	n/a	n/a
46	Mauritius	52.00	50.00		Kyrgyzstan	n/a	n/a
48	Chile	55.00	45.95		Lao People's Democratic Republic	n/a	n/a
48	Jordan	55.00	45.95		Madagascar	n/a	n/a
50	India	56.00	44.59		Malawi	n/a	n/a
50	Turkey	56.00	44.59		Mali	n/a	n/a
52	Bulgaria	57.00	43.24		Mongolia	n/a	n/a
52	Kuwait	57.00	43.24		Mozambique	n/a	n/a
54	Costa Rica	58.00	41.89		Namibia	n/a	n/a
55	Egypt	59.00	40.54		Nepal	n/a	n/a
55	Romania	59.00	40.54		Rwanda	n/a	n/a
57	Oman	60.00	39.19		Tajikistan	n/a	n/a
58	Bosnia and Herzegovina	61.00	37.84		Tanzania	n/a	n/a
58	Greece	61.00	37.84		Trinidad and Tobago	n/a	n/a
60	Peru	62.00	36.49		Uganda	n/a	n/a
60	Russian Federation	62.00	36.49				

Source: BSA | The Software Alliance (2018) Software Management: Security Imperative, Business Opportunity. BSA Global Software Survey ([https://gss.bsa.org/wp-content/uploads/2018/05/2018\\_BSA\\_GSS\\_Report\\_en.pdf](https://gss.bsa.org/wp-content/uploads/2018/05/2018_BSA_GSS_Report_en.pdf))

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 3.1.3 Secure Internet servers

Secure Internet servers (per million population) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Denmark	123073.51	100.00	62	Costa Rica	1205.93	60.53
2	Netherlands	100585.07	98.28	63	Thailand	953.86	58.53
3	Singapore	84713.86	96.81	64	Colombia	651.34	55.27
4	Ireland	69791.61	95.16	65	Albania	526.10	53.45
5	Switzerland	68137.04	94.96	66	Iran (Islamic Republic of)	494.59	52.92
6	United States	65767.56	94.65	67	North Macedonia (Republic of)	464.72	52.39
7	Iceland	64605.99	94.50	68	China	446.71	52.05
8	Germany	56391.56	93.34	69	Sri Lanka	412.41	51.37
9	Estonia	48933.90	92.13	70	Kuwait	412.10	51.36
10	Luxembourg	43167.34	91.06	71	Qatar	396.52	51.03
11	Czech Republic	42361.46	90.90	72	Bahrain	370.83	50.46
12	Bulgaria	38228.32	90.02	73	Armenia	335.05	49.60
13	Finland	33983.56	89.02	74	Azerbaijan	329.30	49.45
14	Slovenia	33122.24	88.80	75	Tunisia	316.21	49.10
15	Australia	32890.84	88.74	76	Morocco	295.73	48.53
16	Canada	30952.30	88.22	77	Trinidad and Tobago	281.32	48.10
17	United Kingdom	27250.08	87.14	78	Venezuela	275.58	47.93
18	Norway	20876.74	84.86	79	Ecuador	265.62	47.61
19	France	20414.95	84.67	80	Peru	257.34	47.34
20	Croatia	19547.37	84.30	81	Paraguay	248.42	47.04
21	Hong Kong (China)	19403.57	84.24	82	Mexico	225.75	46.22
22	Hungary	19257.26	84.17	83	Kenya	217.23	45.89
23	Sweden	18593.91	83.87	84	India	187.81	44.65
24	Lithuania	18345.72	83.76	85	Nigeria	184.21	44.48
25	New Zealand	17672.50	83.44	86	Nepal	182.50	44.40
26	Austria	16692.71	82.95	87	Lebanon	174.48	44.02
27	Poland	16225.45	82.71	88	Kyrgyzstan	170.21	43.81
28	Portugal	15980.53	82.58	89	Saudi Arabia	161.57	43.36
29	Romania	15938.12	82.56	90	Oman	156.75	43.10
30	Latvia	14508.90	81.76	91	Jamaica	153.67	42.93
31	Malta	14447.91	81.72	92	Namibia	149.49	42.70
32	Belgium	13979.34	81.44	93	Botswana	133.53	41.73
33	Slovakia	12992.81	80.82	94	Dominican Republic	121.67	40.93
34	Italy	12256.04	80.32	95	Bangladesh	115.97	40.52
35	South Africa	12034.28	80.16	96	Pakistan	109.14	40.00
36	Japan	11670.80	79.90	97	Jordan	102.95	39.50
37	Spain	11320.67	79.64	98	Philippines	92.85	38.62
38	Israel	9610.86	78.24	99	El Salvador	90.64	38.41
39	Chile	8073.29	76.76	100	Cambodia	81.11	37.46
40	Mauritius	7844.76	76.51	101	Honduras	74.78	36.76
41	Serbia	6900.23	75.42	102	Guatemala	74.56	36.73
42	Cyprus	6372.00	74.74	103	Algeria	67.61	35.89
43	Ukraine	6027.81	74.26	104	Eswatini	53.69	33.91
44	Malaysia	5713.04	73.81	105	Zimbabwe	46.61	32.69
45	Russian Federation	5190.62	72.99	106	Zambia	41.21	31.63
46	Greece	5037.81	72.73	107	Rwanda	36.50	30.58
47	Turkey	4335.13	71.45	108	Egypt	35.11	30.25
48	Belarus	3420.00	69.43	109	Tajikistan	27.36	28.09
49	Moldova	2992.20	68.29	110	Tanzania	27.29	28.07
50	Georgia	2179.58	65.58	111	Ghana	21.80	26.11
51	Panama	2141.55	65.43	112	Lao People's Democratic Republic	20.39	25.53
52	Korea (Republic of)	2063.98	65.12	113	Uganda	20.22	25.46
53	Brazil	2036.38	65.00	114	Senegal	17.16	24.02
54	Bosnia and Herzegovina	1934.76	64.57	115	Malawi	15.38	23.06
55	Argentina	1872.59	64.29	116	Mozambique	11.83	20.74
56	Viet Nam	1769.47	63.80	117	Mali	10.54	19.71
57	Mongolia	1689.79	63.41	118	Madagascar	5.45	13.70
58	Uruguay	1574.81	62.81	119	Cameroon	5.43	13.68
59	United Arab Emirates	1483.96	62.30	120	Yemen	3.75	10.16
60	Kazakhstan	1374.17	61.65	121	Ethiopia	1.46	0.00
61	Indonesia	1283.00	61.06				

Source: World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 3.1.4 Cybersecurity

Global Cybersecurity Index | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	United Kingdom	0.93	100.00	62	Tanzania	0.64	68.31
2	United States	0.93	99.45	63	Iran (Islamic Republic of)	0.64	68.20
3	France	0.92	98.57	64	Albania	0.63	67.11
4	Lithuania	0.91	97.48	65	Mexico	0.63	66.89
5	Estonia	0.90	97.15	66	Uganda	0.62	66.01
6	Singapore	0.90	96.38	67	Paraguay	0.60	64.04
7	Spain	0.90	96.16	68	Kuwait	0.60	63.71
8	Malaysia	0.89	95.83	69	Bahrain	0.58	62.06
9	Canada	0.89	95.72	70	Belarus	0.58	61.29
9	Norway	0.89	95.72	71	Brazil	0.58	61.18
11	Australia	0.89	95.50	72	Czech Republic	0.57	60.31
12	Luxembourg	0.89	95.07	73	Romania	0.57	60.20
13	Netherlands	0.88	94.96	74	Colombia	0.56	59.87
14	Saudi Arabia	0.88	94.52	75	Jordan	0.56	58.88
15	Japan	0.88	94.41	76	Tunisia	0.54	56.69
15	Mauritius	0.88	94.41	77	Greece	0.53	55.70
17	Korea (Republic of)	0.87	93.64	78	Bangladesh	0.52	55.48
18	Oman	0.87	93.09	79	Armenia	0.50	52.19
19	Qatar	0.86	92.21	80	Malta	0.48	50.44
20	Georgia	0.86	91.89	81	Chile	0.47	49.45
21	Finland	0.86	91.78	82	Sri Lanka	0.47	49.01
22	Turkey	0.85	91.45	83	Mongolia	0.46	48.90
23	Denmark	0.85	91.34	84	Iceland	0.45	47.15
24	Germany	0.85	91.01	85	Botswana	0.44	46.16
25	Egypt	0.84	90.24	86	Ghana	0.44	45.83
26	Croatia	0.84	90.02	87	Zambia	0.44	45.72
27	Italy	0.84	89.69	88	Cameroon	0.43	45.29
28	Russian Federation	0.84	89.58	89	Dominican Republic	0.43	45.07
29	China	0.83	88.71	90	Morocco	0.43	44.96
30	Austria	0.83	88.49	91	Argentina	0.41	42.54
31	Poland	0.82	87.28	91	Jamaica	0.41	42.54
32	Belgium	0.81	87.17	91	Pakistan	0.41	42.54
33	Hungary	0.81	86.95	94	Peru	0.40	41.89
34	Sweden	0.81	86.73	95	Panama	0.37	38.38
35	United Arab Emirates	0.81	86.40	96	Ecuador	0.37	38.16
36	North Macedonia (Republic of)	0.80	85.64	97	Venezuela	0.35	36.73
37	Thailand	0.80	85.20	98	Senegal	0.30	31.36
38	New Zealand	0.79	84.43	99	Ethiopia	0.28	28.40
39	Switzerland	0.79	84.32	100	Malawi	0.28	28.07
40	Ireland	0.78	83.88	101	Tajikistan	0.26	26.75
41	Israel	0.78	83.77	102	Algeria	0.26	26.64
42	Kazakhstan	0.78	83.22	103	Nepal	0.26	26.43
43	Indonesia	0.78	83.00	104	Kyrgyzstan	0.25	25.77
44	Portugal	0.76	81.03	105	Guatemala	0.25	25.44
45	Kenya	0.75	79.93	106	Costa Rica	0.22	22.15
45	Latvia	0.75	79.93	107	Bosnia and Herzegovina	0.20	20.29
47	Slovakia	0.73	77.85	108	Madagascar	0.20	19.41
48	Bulgaria	0.72	76.97	109	Lao People's Democratic Republic	0.20	19.30
49	India	0.72	76.75	110	Trinidad and Tobago	0.19	18.53
50	Slovenia	0.70	74.78	111	Lebanon	0.19	18.31
51	Rwanda	0.70	74.34	111	Zimbabwe	0.19	18.31
52	Viet Nam	0.69	73.90	113	Cambodia	0.16	15.57
53	Uruguay	0.68	72.59	114	Mozambique	0.16	15.24
54	Moldova	0.66	70.50	115	Eswatini	0.13	12.50
55	Ukraine	0.66	70.39	116	Namibia	0.13	11.84
56	Azerbaijan	0.65	69.52	117	El Salvador	0.12	11.51
57	Cyprus	0.65	69.41	118	Mali	0.08	7.24
57	South Africa	0.65	69.41	119	Honduras	0.04	2.74
59	Nigeria	0.65	69.19	120	Yemen	0.02	0.00
60	Philippines	0.64	68.42		Hong Kong (China)	n/a	n/a
60	Serbia	0.64	68.42				

Source: ITU (2019) Global Cybersecurity Index (GCI) 2018 ([https://www.itu.int/dms\\_pub/itu-d/obj/str/D-STR-GCI.01-2018-PDF-E.pdf](https://www.itu.int/dms_pub/itu-d/obj/str/D-STR-GCI.01-2018-PDF-E.pdf))

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 3.1.5 Online trust and safety

Trust &amp; Safety sub-index | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Viet Nam	83.40	100.00	62	Netherlands	53.20	54.03
2	Panama	80.00	94.82	63	Japan	52.20	52.51
3	Indonesia	78.80	93.00	64	Korea (Republic of)	51.50	51.45
4	France	78.50	92.54	65	Egypt	50.80	50.38
5	India	76.50	89.50	66	Bulgaria	49.90	49.01
6	Nepal	74.30	86.15	67	Guatemala	49.60	48.55
7	Romania	73.40	84.78	68	Austria	49.00	47.64
8	China	72.60	83.56	68	United States	49.00	47.64
9	Mozambique	72.40	83.26	70	Ecuador	48.90	47.49
10	Costa Rica	72.10	82.80	71	Tunisia	48.60	47.03
11	Chile	71.90	82.50	72	Czech Republic	47.10	44.75
12	Tanzania	71.80	82.34	72	Thailand	47.10	44.75
13	Peru	71.70	82.19	74	Bangladesh	46.80	44.29
14	Portugal	71.00	81.13	75	El Salvador	45.20	41.86
15	Mexico	70.80	80.82	76	Germany	44.50	40.79
16	Colombia	69.20	78.39	77	Nigeria	44.40	40.64
17	Pakistan	69.00	78.08	78	Italy	43.20	38.81
18	Morocco	68.60	77.47	79	Namibia	43.10	38.66
19	Brazil	68.40	77.17	80	Iran (Islamic Republic of)	42.70	38.05
19	Dominican Republic	68.40	77.17	80	Kazakhstan	42.70	38.05
21	Ethiopia	68.20	76.86	82	Hungary	41.70	36.53
21	Mali	68.20	76.86	83	Jamaica	38.80	32.12
23	Sri Lanka	68.00	76.56	84	Uganda	38.40	31.51
24	Qatar	67.70	76.10	85	Cameroon	36.20	28.16
25	United Arab Emirates	67.20	75.34	85	Kenya	36.20	28.16
26	Philippines	66.60	74.43	87	Mongolia	24.90	10.96
27	Kuwait	66.40	74.12	88	Cambodia	17.70	0.00
28	United Kingdom	66.10	73.67		Albania	n/a	n/a
29	Botswana	65.70	73.06		Armenia	n/a	n/a
30	Madagascar	64.90	71.84		Azerbaijan	n/a	n/a
30	Malaysia	64.90	71.84		Bahrain	n/a	n/a
32	Ukraine	64.50	71.23		Belarus	n/a	n/a
32	Uruguay	64.50	71.23		Bosnia and Herzegovina	n/a	n/a
34	Algeria	64.40	71.08		Croatia	n/a	n/a
34	Argentina	64.40	71.08		Cyprus	n/a	n/a
36	Ghana	64.20	70.78		Eswatini	n/a	n/a
37	Saudi Arabia	63.70	70.02		Georgia	n/a	n/a
38	Israel	63.30	69.41		Honduras	n/a	n/a
39	Turkey	63.10	69.10		Hong Kong (China)	n/a	n/a
40	South Africa	62.20	67.73		Iceland	n/a	n/a
41	Rwanda	62.10	67.58		Kyrgyzstan	n/a	n/a
42	Switzerland	61.80	67.12		Lao People's Democratic Republic	n/a	n/a
43	Malawi	61.70	66.97		Latvia	n/a	n/a
44	Finland	61.20	66.21		Lebanon	n/a	n/a
45	Spain	61.10	66.06		Lithuania	n/a	n/a
45	Sweden	61.10	66.06		Luxembourg	n/a	n/a
47	Zambia	61.00	65.91		Malta	n/a	n/a
48	Denmark	60.40	64.99		Mauritius	n/a	n/a
48	Ireland	60.40	64.99		Moldova	n/a	n/a
50	Oman	59.10	63.01		New Zealand	n/a	n/a
51	Jordan	58.70	62.40		North Macedonia (Republic of)	n/a	n/a
51	Senegal	58.70	62.40		Norway	n/a	n/a
53	Australia	58.00	61.34		Paraguay	n/a	n/a
54	Russian Federation	57.30	60.27		Serbia	n/a	n/a
55	Greece	56.00	58.30		Slovakia	n/a	n/a
56	Canada	54.90	56.62		Slovenia	n/a	n/a
57	Poland	54.50	56.01		Tajikistan	n/a	n/a
58	Belgium	54.40	55.86		Trinidad and Tobago	n/a	n/a
59	Estonia	54.20	55.56		Yemen	n/a	n/a
60	Singapore	54.10	55.40		Zimbabwe	n/a	n/a
60	Venezuela	54.10	55.40				

Source: The Economist Intelligence Unit, Inclusive Internet Index 2019 (<https://theinclusiveinternet.eiu.com/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 3.2.1 Regulatory quality

Regulatory quality indicator | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Hong Kong (China)	2.21	100.00	62	Thailand	0.11	53.87
2	Singapore	2.13	98.36	63	Rwanda	0.08	53.27
3	Netherlands	2.02	95.86	64	Jordan	0.08	53.25
4	New Zealand	1.98	95.00	65	Philippines	0.05	52.42
5	Australia	1.93	93.91	66	Serbia	0.01	51.58
6	Sweden	1.80	91.06	67	Trinidad and Tobago	-0.02	50.96
7	Finland	1.79	90.76	68	Mongolia	-0.03	50.76
8	Switzerland	1.78	90.63	69	Kuwait	-0.04	50.63
9	United Kingdom	1.76	90.22	70	El Salvador	-0.04	50.56
10	Norway	1.76	90.14	71	Saudi Arabia	-0.05	50.40
11	Luxembourg	1.76	90.12	72	Turkey	-0.05	50.37
12	Germany	1.75	89.94	73	Moldova	-0.05	50.33
13	Denmark	1.68	88.35	74	Namibia	-0.05	50.26
14	Canada	1.67	88.09	75	Indonesia	-0.07	49.84
15	Ireland	1.60	86.55	76	Dominican Republic	-0.08	49.71
16	United States	1.58	86.17	77	Ghana	-0.08	49.65
17	Estonia	1.56	85.83	78	Senegal	-0.11	49.04
18	Austria	1.54	85.44	79	Paraguay	-0.12	48.68
19	Iceland	1.42	82.64	80	China	-0.14	48.44
20	Chile	1.34	81.00	81	Sri Lanka	-0.15	48.06
21	Malta	1.34	80.86	82	India	-0.18	47.37
22	Japan	1.33	80.69	83	Guatemala	-0.20	47.11
23	Czech Republic	1.26	79.20	84	Bosnia and Herzegovina	-0.21	46.87
24	Israel	1.25	78.89	85	Ukraine	-0.22	46.57
25	Belgium	1.23	78.59	86	Kenya	-0.23	46.42
26	Latvia	1.19	77.62	87	Morocco	-0.24	46.06
27	France	1.17	77.25	88	Argentina	-0.24	46.06
28	Georgia	1.12	76.14	89	Uganda	-0.25	45.88
29	Lithuania	1.11	75.93	90	Brazil	-0.31	44.51
30	Korea (Republic of)	1.09	75.53	91	Lebanon	-0.34	43.89
31	Mauritius	1.03	74.04	92	Kyrgyzstan	-0.35	43.71
32	Cyprus	1.02	73.82	93	Azerbaijan	-0.38	43.03
33	Spain	0.95	72.23	94	Viet Nam	-0.39	42.92
34	United Arab Emirates	0.93	71.93	95	Tunisia	-0.41	42.36
35	Portugal	0.89	71.02	96	Zambia	-0.44	41.67
36	Poland	0.88	70.84	97	Honduras	-0.47	41.09
37	Slovakia	0.81	69.27	98	Cambodia	-0.50	40.29
38	Slovenia	0.69	66.72	99	Russian Federationonn Federation	-0.54	39.51
39	Malaysia	0.68	66.44	100	Mali	-0.55	39.31
40	Italy	0.67	66.20	101	Eswatini	-0.60	38.11
41	Hungary	0.60	64.68	102	Tanzania	-0.61	37.92
42	Bulgaria	0.58	64.11	103	Pakistan	-0.64	37.22
43	North Macedonia (Republic of)	0.52	62.98	104	Belarus	-0.66	36.88
44	Peru	0.52	62.83	105	Malawi	-0.67	36.64
45	Qatar	0.52	62.76	106	Mozambique	-0.73	35.42
46	Uruguay	0.50	62.41	107	Madagascar	-0.73	35.26
47	Costa Rica	0.48	61.97	108	Nepal	-0.75	34.99
48	Botswana	0.45	61.43	109	Lao People's Democratic Republic	-0.79	33.97
49	Croatia	0.45	61.27	110	Cameroon	-0.80	33.81
50	Bahrain	0.45	61.24	111	Bangladesh	-0.83	33.22
51	Romania	0.45	61.22	112	Egypt	-0.87	32.32
52	Panama	0.40	60.26	113	Nigeria	-0.88	31.98
53	Colombia	0.33	58.63	114	Ecuador	-0.89	31.81
54	Oman	0.31	58.24	115	Ethiopia	-0.97	29.97
55	Greece	0.30	57.91	116	Tajikistan	-1.05	28.32
56	Albania	0.28	57.62	117	Algeria	-1.26	23.58
57	Jamaica	0.28	57.55	118	Iran (Islamic Republic of)	-1.30	22.86
58	Armenia	0.27	57.34	119	Yemen	-1.54	17.58
59	South Africa	0.17	55.20	120	Zimbabwe	-1.58	16.53
60	Mexico	0.15	54.74	121	Venezuela	-2.33	0.00
61	Kazakhstan	0.14	54.51				

Source: World Bank, Worldwide Governance Indicators 2019 Update ([www.govindicators.org](http://www.govindicators.org))

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## 3.2.2 Ease of doing business

Ease of doing business index | 2019

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	New Zealand	86.76	100.00	62	Oman	69.98	70.32
2	Singapore	86.20	99.00	63	Viet Nam	69.77	69.93
3	Hong Kong (China)	85.32	97.44	64	Jamaica	69.68	69.78
4	Denmark	85.29	97.39	65	Luxembourg	69.60	69.64
5	Korea (Republic of)	84.00	95.11	66	Indonesia	69.58	69.60
6	United States	84.00	95.10	67	Costa Rica	69.24	69.00
7	Georgia	83.73	94.64	68	Jordan	68.97	68.53
8	United Kingdom	83.55	94.31	69	Peru	68.70	68.04
9	Norway	82.63	92.68	70	Qatar	68.67	67.98
10	Sweden	81.99	91.56	71	Tunisia	68.66	67.97
11	Lithuania	81.62	90.90	72	Greece	68.42	67.55
12	Malaysia	81.47	90.64	73	Kyrgyzstan	67.82	66.49
13	Mauritius	81.47	90.63	74	Mongolia	67.77	66.40
14	Australia	81.22	90.18	75	Albania	67.75	66.36
15	United Arab Emirates	80.91	89.65	76	Kuwait	67.40	65.75
16	North Macedonia (Republic of)	80.75	89.36	77	South Africa	67.02	65.07
17	Estonia	80.62	89.12	78	Zambia	66.94	64.92
18	Latvia	80.28	88.53	79	Panama	66.56	64.26
19	Finland	80.18	88.35	80	Botswana	66.20	63.62
20	Thailand	80.09	88.20	81	Malta	66.14	63.51
21	Germany	79.71	87.52	82	Bosnia and Herzegovina	65.44	62.28
22	Canada	79.64	87.40	83	El Salvador	65.25	61.94
23	Ireland	79.58	87.28	84	Nepal	63.19	58.29
24	Kazakhstan	79.56	87.25	85	Philippines	62.83	57.66
25	Iceland	78.96	86.20	86	Guatemala	62.60	57.24
26	Austria	78.75	85.81	87	Sri Lanka	61.81	55.85
27	Russian Federation	78.16	84.78	88	Uruguay	61.54	55.38
28	Japan	78.00	84.49	89	Namibia	61.35	55.04
29	Spain	77.94	84.38	90	Trinidad and Tobago	61.29	54.94
30	China	77.93	84.37	91	Tajikistan	61.27	54.90
31	France	76.80	82.38	92	Pakistan	60.95	54.34
32	Turkey	76.79	82.36	93	Malawi	60.94	54.31
33	Azerbaijan	76.71	82.21	94	Egypt	60.05	52.75
34	Israel	76.68	82.15	95	Dominican Republic	59.99	52.63
35	Switzerland	76.62	82.05	96	Uganda	59.98	52.62
36	Slovenia	76.52	81.87	97	Ghana	59.96	52.58
37	Rwanda	76.48	81.81	98	Eswatini	59.49	51.76
38	Portugal	76.47	81.78	99	Senegal	59.27	51.37
39	Poland	76.38	81.63	100	Brazil	59.08	51.03
40	Czech Republic	76.34	81.56	101	Paraguay	59.05	50.98
41	Netherlands	76.10	81.14	102	Argentina	58.96	50.82
42	Bahrain	76.03	81.00	103	Iran (Islamic Republic of)	58.55	50.08
43	Serbia	75.65	80.34	104	Ecuador	57.72	48.62
44	Slovakia	75.59	80.22	105	Nigeria	56.88	47.13
45	Belgium	74.99	79.17	106	Honduras	56.27	46.05
46	Armenia	74.49	78.29	107	Mozambique	55.00	43.80
47	Moldova	74.39	78.11	108	Zimbabwe	54.47	42.87
48	Belarus	74.29	77.93	109	Tanzania	54.46	42.86
49	Croatia	73.62	76.75	110	Lebanon	54.33	42.63
50	Hungary	73.42	76.39	111	Cambodia	53.84	41.76
51	Morocco	73.38	76.32	112	Mali	52.94	40.17
52	Cyprus	73.35	76.27	113	Lao People's Democratic Republic	50.82	36.42
53	Kenya	73.22	76.03	114	Algeria	48.60	32.48
54	Italy	72.85	75.39	115	Ethiopia	47.98	31.38
55	Chile	72.58	74.91	116	Madagascar	47.73	30.94
56	Mexico	72.36	74.51	117	Cameroon	46.10	28.06
57	Bulgaria	71.97	73.84	118	Bangladesh	45.05	26.20
58	Saudi Arabia	71.56	73.10	119	Yemen	31.76	2.70
59	India	71.05	72.19	120	Venezuela	30.24	0.00
60	Ukraine	70.21	70.72		Romania	n/a	n/a
61	Colombia	70.06	70.45				

Source: World Bank, Doing Business 2020: Comparing Business Regulation in 190 Economies (<https://www.doingbusiness.org/en/reports/global-reports/doing-business-2020>)  
For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 3.2.3 Legal framework's adaptability to digital business models

Average answer to the question: In your country, how fast is the legal framework of your country adapting to digital business models (e.g. e-commerce, sharing economy, fintech, etc.)? (1 = Not fast at all; 7 = Very fast) | 2016–17

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	United States	5.84	100.00	62	Thailand	3.52	43.04
2	United Arab Emirates	5.74	97.74	63	Tanzania	3.51	42.91
3	Luxembourg	5.68	96.06	64	Serbia	3.51	42.84
4	Singapore	5.61	94.44	65	Costa Rica	3.50	42.59
5	Estonia	5.28	86.35	66	Cyprus	3.49	42.24
6	Sweden	5.23	85.14	67	Colombia	3.48	42.21
7	Malaysia	5.23	85.02	68	Namibia	3.43	40.99
8	Rwanda	5.19	84.09	69	Cambodia	3.43	40.83
9	Israel	5.18	83.93	70	Argentina	3.42	40.68
10	Netherlands	5.14	82.79	71	Mali	3.37	39.42
11	Finland	5.13	82.74	72	Bangladesh	3.35	39.01
12	Qatar	5.09	81.72	73	Bulgaria	3.35	38.90
13	Germany	5.09	81.62	74	Guatemala	3.34	38.59
14	New Zealand	5.06	81.05	75	Slovakia	3.33	38.41
15	United Kingdom	4.93	77.76	76	Botswana	3.33	38.34
16	Saudi Arabia	4.79	74.24	77	Cameroon	3.32	38.28
17	Norway	4.71	72.44	78	Egypt	3.32	38.16
18	Iceland	4.68	71.52	79	Honduras	3.29	37.49
19	Hong Kong (China)	4.66	71.08	80	Philippines	3.29	37.32
20	Azerbaijan	4.60	69.74	81	Moldova	3.22	35.83
21	Switzerland	4.60	69.73	82	Sri Lanka	3.22	35.64
22	Canada	4.57	68.98	83	Hungary	3.19	35.09
23	China	4.57	68.91	84	Paraguay	3.19	35.07
24	Denmark	4.39	64.53	85	Peru	3.17	34.45
25	Australia	4.38	64.14	86	Zambia	3.15	33.88
26	India	4.37	63.98	87	Italy	3.12	33.18
27	Indonesia	4.30	62.20	88	Tunisia	3.11	33.00
28	Lithuania	4.26	61.16	89	Uganda	3.10	32.70
29	Korea (Republic of)	4.25	61.03	90	Algeria	3.07	32.07
30	Austria	4.24	60.83	91	Kuwait	3.06	31.84
31	Malta	4.22	60.40	92	Ecuador	3.05	31.62
32	Kenya	4.18	59.21	93	Ukraine	3.04	31.40
33	Armenia	4.12	57.73	94	Ethiopia	3.04	31.35
34	Japan	4.10	57.30	95	Brazil	3.03	31.15
35	Ireland	4.08	56.89	96	Jamaica	3.02	30.68
36	Chile	4.03	55.61	97	Dominican Republic	3.00	30.30
37	Russian Federation	4.00	54.98	98	Nepal	2.98	29.72
38	Romania	3.99	54.63	99	Madagascar	2.97	29.52
39	Georgia	3.95	53.59	100	Latvia	2.96	29.23
40	France	3.93	53.22	101	Kyrgyzstan	2.91	27.97
41	Jordan	3.92	53.03	102	Lebanon	2.87	27.14
42	Senegal	3.91	52.65	103	Mongolia	2.83	26.15
43	Kazakhstan	3.90	52.42	104	Malawi	2.76	24.43
44	Slovenia	3.87	51.74	105	Trinidad and Tobago	2.75	24.15
45	Ghana	3.70	47.57	106	El Salvador	2.74	23.83
46	Uruguay	3.70	47.43	107	Croatia	2.72	23.45
47	Belgium	3.70	47.40	108	Greece	2.63	21.30
47	Spain	3.70	47.40	109	Mozambique	2.62	20.98
49	Viet Nam	3.69	47.16	110	Zimbabwe	2.60	20.47
50	Mexico	3.68	47.01	111	Bosnia and Herzegovina	2.53	18.80
51	South Africa	3.64	45.91	112	Nigeria	2.46	16.95
52	Pakistan	3.63	45.82	113	Eswatini	2.21	10.95
53	Panama	3.63	45.70	114	Venezuela	1.77	0.00
54	Mauritius	3.62	45.50		Bahrain	n/a	n/a
55	Albania	3.60	45.05		Belarus	n/a	n/a
56	Portugal	3.60	44.98		North Macedonia (Republic of)	n/a	n/a
57	Lao People's Democratic Republic	3.59	44.88		Oman	n/a	n/a
58	Czech Republic	3.59	44.87		Tajikistan	n/a	n/a
59	Iran (Islamic Republic of)	3.57	44.43		Turkey	n/a	n/a
60	Poland	3.55	43.83		Yemen	n/a	n/a
61	Morocco	3.54	43.51				

Source: World Economic Forum, Executive Opinion Survey 2016–2017 (<http://reports.weforum.org>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.



## 3.2.4 E-commerce legislation

Global Cyberlaw Tracker | 2019

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Albania	4.00	100.00	1	United States	4.00	100.00
1	Argentina	4.00	100.00	1	Uruguay	4.00	100.00
1	Australia	4.00	100.00	1	Viet Nam	4.00	100.00
1	Austria	4.00	100.00	1	Zambia	4.00	100.00
1	Belgium	4.00	100.00	66	Armenia	3.00	75.00
1	Bosnia and Herzegovina	4.00	100.00	66	Azerbaijan	3.00	75.00
1	Bulgaria	4.00	100.00	66	Bahrain	3.00	75.00
1	Canada	4.00	100.00	66	Bangladesh	3.00	75.00
1	Chile	4.00	100.00	66	Belarus	3.00	75.00
1	China	4.00	100.00	66	Botswana	3.00	75.00
1	Colombia	4.00	100.00	66	Brazil	3.00	75.00
1	Costa Rica	4.00	100.00	66	Cameroon	3.00	75.00
1	Croatia	4.00	100.00	66	Dominican Republic	3.00	75.00
1	Cyprus	4.00	100.00	66	Ecuador	3.00	75.00
1	Czech Republic	4.00	100.00	66	Georgia	3.00	75.00
1	Denmark	4.00	100.00	66	Iceland	3.00	75.00
1	Estonia	4.00	100.00	66	India	3.00	75.00
1	Finland	4.00	100.00	66	Jamaica	3.00	75.00
1	France	4.00	100.00	66	Japan	3.00	75.00
1	Germany	4.00	100.00	66	Kazakhstan	3.00	75.00
1	Ghana	4.00	100.00	66	Kenya	3.00	75.00
1	Greece	4.00	100.00	66	Kuwait	3.00	75.00
1	Hungary	4.00	100.00	66	Kyrgyzstan	3.00	75.00
1	Indonesia	4.00	100.00	66	Mauritius	3.00	75.00
1	Iran (Islamic Republic of)	4.00	100.00	66	Moldova	3.00	75.00
1	Ireland	4.00	100.00	66	Nepal	3.00	75.00
1	Israel	4.00	100.00	66	North Macedonia (Republic of)	3.00	75.00
1	Italy	4.00	100.00	66	Oman	3.00	75.00
1	Korea (Republic of)	4.00	100.00	66	Panama	3.00	75.00
1	Latvia	4.00	100.00	66	Russian Federation	3.00	75.00
1	Lithuania	4.00	100.00	66	Senegal	3.00	75.00
1	Luxembourg	4.00	100.00	66	Serbia	3.00	75.00
1	Madagascar	4.00	100.00	66	Sri Lanka	3.00	75.00
1	Malawi	4.00	100.00	66	Tajikistan	3.00	75.00
1	Malaysia	4.00	100.00	66	Thailand	3.00	75.00
1	Malta	4.00	100.00	66	Uganda	3.00	75.00
1	Mexico	4.00	100.00	66	United Arab Emirates	3.00	75.00
1	Morocco	4.00	100.00	66	Venezuela	3.00	75.00
1	Netherlands	4.00	100.00	100	Algeria	2.00	50.00
1	New Zealand	4.00	100.00	100	Egypt	2.00	50.00
1	Norway	4.00	100.00	100	El Salvador	2.00	50.00
1	Paraguay	4.00	100.00	100	Ethiopia	2.00	50.00
1	Peru	4.00	100.00	100	Honduras	2.00	50.00
1	Philippines	4.00	100.00	100	Jordan	2.00	50.00
1	Poland	4.00	100.00	100	Mali	2.00	50.00
1	Portugal	4.00	100.00	100	Pakistan	2.00	50.00
1	Qatar	4.00	100.00	100	Saudi Arabia	2.00	50.00
1	Romania	4.00	100.00	100	Yemen	2.00	50.00
1	Rwanda	4.00	100.00	110	Eswatini	1.00	25.00
1	Singapore	4.00	100.00	110	Guatemala	1.00	25.00
1	Slovakia	4.00	100.00	110	Lao People's Democratic Republic	1.00	25.00
1	Slovenia	4.00	100.00	110	Mongolia	1.00	25.00
1	South Africa	4.00	100.00	110	Nigeria	1.00	25.00
1	Spain	4.00	100.00	110	Tanzania	1.00	25.00
1	Sweden	4.00	100.00	110	Zimbabwe	1.00	25.00
1	Switzerland	4.00	100.00	117	Cambodia	0.00	0.00
1	Trinidad and Tobago	4.00	100.00	117	Lebanon	0.00	0.00
1	Tunisia	4.00	100.00	117	Mozambique	0.00	0.00
1	Turkey	4.00	100.00	117	Namibia	0.00	0.00
1	Ukraine	4.00	100.00		Hong Kong (China)	n/a	n/a
1	United Kingdom	4.00	100.00				

**Source:** United Nations Conference on Trade and Development (UNCTAD), Global Cyberlaw Tracker ([https://unctad.org/en/Pages/DTL/STI\\_and\\_ICTs/ICT4D-Legislation/eCom-Global-Legislation.aspx](https://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/eCom-Global-Legislation.aspx))  
For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 3.2.5 Social safety net protection

Average answer to the question: In your country, to what extent does a formal social safety net provide protection to the general population from economic insecurity in the event of job loss or disability? [1 = Not at all; 7 = Provides full protection] | 2017–18

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Norway	6.20	100.00	62	Ghana	3.82	43.23
2	Denmark	6.17	99.20	63	Viet Nam	3.82	43.22
3	Luxembourg	6.17	99.11	64	Colombia	3.80	42.74
4	Austria	6.16	99.05	65	Egypt	3.77	42.06
5	Belgium	6.15	98.78	66	Kenya	3.75	41.55
6	France	6.14	98.51	67	Kazakhstan	3.73	41.09
7	Finland	6.12	98.11	68	Algeria	3.72	40.86
8	Switzerland	6.01	95.40	69	Philippines	3.71	40.76
9	Netherlands	5.80	90.50	70	Pakistan	3.64	39.12
10	Iceland	5.71	88.25	71	Mali	3.63	38.69
11	United States	5.70	88.02	72	Sri Lanka	3.60	38.06
12	Australia	5.66	87.17	73	Mexico	3.59	37.82
13	Canada	5.61	85.80	74	Brazil	3.57	37.42
14	Sweden	5.59	85.34	75	Ukraine	3.56	37.24
15	Spain	5.56	84.78	76	South Africa	3.50	35.69
16	Oman	5.55	84.46	77	Ethiopia	3.46	34.79
17	New Zealand	5.54	84.19	78	Tunisia	3.42	33.76
18	Japan	5.35	79.77	79	Albania	3.40	33.21
19	Germany	5.24	76.98	80	Russian Federation	3.39	33.15
20	Uruguay	5.16	75.21	81	Bulgaria	3.38	32.80
21	Malaysia	5.15	74.93	82	Dominican Republic	3.34	31.96
22	United Kingdom	5.12	74.19	83	Mongolia	3.33	31.77
23	Ireland	5.09	73.64	84	Armenia	3.33	31.72
24	Malta	5.01	71.61	85	Zambia	3.31	31.21
25	Qatar	5.00	71.38	86	Lao People's Democratic Republic	3.30	30.98
26	Czech Republic	4.96	70.38	87	Kyrgyzstan	3.29	30.72
27	Slovenia	4.93	69.63	88	Serbia	3.28	30.47
28	Costa Rica	4.92	69.36	89	Honduras	3.28	30.36
29	Saudi Arabia	4.90	68.94	90	Lithuania	3.26	29.94
30	Bahrain	4.87	68.21	91	Eswatini	3.24	29.51
31	Kuwait	4.78	66.17	92	Croatia	3.23	29.21
32	Portugal	4.78	66.06	93	Guatemala	3.22	29.15
33	Romania	4.75	65.38	94	Peru	3.20	28.64
34	United Arab Emirates	4.63	62.57	95	Jamaica	3.19	28.30
35	Rwanda	4.59	61.55	96	Senegal	3.15	27.29
36	Israel	4.55	60.72	97	Morocco	3.11	26.38
37	Hong Kong (China)	4.54	60.55	98	Greece	3.09	25.97
38	Singapore	4.52	59.91	99	Paraguay	3.05	25.03
39	Azerbaijan	4.52	59.90	100	Mozambique	3.02	24.17
40	China	4.49	59.37	101	Cameroon	2.98	23.31
41	Indonesia	4.36	56.11	102	Hungary	2.95	22.61
42	Turkey	4.35	56.03	103	Uganda	2.92	21.83
43	India	4.29	54.42	104	Cambodia	2.91	21.71
44	Korea (Republic of)	4.27	54.00	105	Malawi	2.89	21.21
45	Cyprus	4.22	52.93	106	Poland	2.87	20.63
46	Estonia	4.20	52.28	107	Moldova	2.84	20.02
47	Italy	4.17	51.53	108	North Macedonia (Republic of)	2.78	18.48
48	Mauritius	4.15	51.14	109	Nepal	2.77	18.29
49	Chile	4.05	48.71	110	Georgia	2.75	17.82
50	Slovakia	4.04	48.48	111	Lebanon	2.70	16.63
51	Jordan	4.02	48.16	112	El Salvador	2.69	16.37
52	Thailand	3.98	47.02	113	Madagascar	2.56	13.24
53	Ecuador	3.96	46.66	114	Bangladesh	2.53	12.67
54	Panama	3.95	46.48	115	Bosnia and Herzegovina	2.50	11.87
55	Tajikistan	3.95	46.33	116	Zimbabwe	2.37	8.77
56	Latvia	3.94	46.20	117	Venezuela	2.27	6.51
57	Botswana	3.93	45.93	118	Nigeria	2.07	1.76
58	Argentina	3.91	45.54	119	Yemen	2.00	0.00
59	Trinidad and Tobago	3.88	44.70		Belarus	n/a	n/a
60	Tanzania	3.88	44.69		Namibia	n/a	n/a
61	Iran (Islamic Republic of)	3.86	44.31				

Source: World Economic Forum, Executive Opinion Survey 2017–2018 (<http://reports.weforum.org>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 3.2.6 ICT regulatory environment

ICT Regulatory Tracker | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Italy	97.33	100.00	60	Tanzania	85.00	85.72
2	Hungary	97.00	99.62	63	Jordan	84.50	85.14
2	Ireland	97.00	99.62	64	Hong Kong (China)	83.83	84.36
4	Norway	95.50	97.88	65	Albania	83.00	83.40
5	Lithuania	95.00	97.30	65	Luxembourg	83.00	83.40
5	Malta	95.00	97.30	65	United Arab Emirates	83.00	83.40
5	United Kingdom	95.00	97.30	68	Venezuela	82.50	82.82
8	Australia	94.50	96.72	69	Rwanda	82.33	82.62
8	Dominican Republic	94.50	96.72	70	Honduras	82.00	82.24
8	Turkey	94.50	96.72	70	Iran (Islamic Republic of)	82.00	82.24
11	Belgium	94.00	96.14	72	Korea (Republic of)	81.67	81.86
11	Croatia	94.00	96.14	73	Ukraine	81.50	81.66
11	France	94.00	96.14	74	Thailand	81.33	81.47
11	Portugal	94.00	96.14	75	Egypt	80.83	80.89
15	Germany	93.50	95.56	75	Mauritius	80.83	80.89
15	Slovenia	93.50	95.56	77	New Zealand	80.50	80.51
15	Switzerland	93.50	95.56	78	Mali	80.33	80.31
18	Bosnia and Herzegovina	93.00	94.98	79	Senegal	80.00	79.93
18	Netherlands	93.00	94.98	80	Chile	79.00	78.77
20	Georgia	92.50	94.41	80	Colombia	79.00	78.77
20	Serbia	92.50	94.41	82	Jamaica	78.50	78.19
22	Finland	92.00	93.83	83	Nigeria	78.33	77.99
22	Romania	92.00	93.83	84	India	75.50	74.71
22	Saudi Arabia	92.00	93.83	85	Bangladesh	74.67	73.75
25	Bulgaria	91.50	93.25	85	Tunisia	74.67	73.75
25	Singapore	91.50	93.25	87	Kyrgyzstan	74.50	73.55
27	Greece	91.33	93.05	88	Zimbabwe	74.00	72.98
28	Latvia	90.50	92.09	89	El Salvador	73.50	72.40
29	Oman	90.33	91.89	90	Indonesia	72.50	71.24
30	Mexico	90.00	91.51	90	Japan	72.50	71.24
31	Austria	89.50	90.93	92	Zambia	71.67	70.28
32	Czech Republic	89.00	90.35	93	Israel	71.50	70.08
32	Sweden	89.00	90.35	94	South Africa	71.33	69.88
34	Brazil	88.50	89.77	95	Namibia	70.67	69.12
34	Moldova	88.50	89.77	96	Azerbaijan	70.50	68.92
34	Morocco	88.50	89.77	97	Mongolia	69.67	67.96
34	Poland	88.50	89.77	97	Qatar	69.67	67.96
34	United States	88.50	89.77	99	Madagascar	69.50	67.76
39	Slovakia	88.17	89.39	100	Nepal	68.00	66.03
40	Ghana	88.00	89.19	101	Philippines	67.00	64.87
40	Pakistan	88.00	89.19	101	Uruguay	67.00	64.87
42	Denmark	87.67	88.81	103	Viet Nam	66.00	63.71
43	Kenya	87.50	88.61	104	Cambodia	65.33	62.93
44	Bahrain	87.33	88.42	105	Cameroon	64.00	61.39
45	Estonia	87.00	88.03	106	Kuwait	63.00	60.23
45	Malawi	87.00	88.03	107	Sri Lanka	62.33	59.46
45	Malaysia	87.00	88.03	108	Paraguay	61.83	58.88
45	North Macedonia (Republic of)	87.00	88.03	109	Algeria	61.50	58.50
45	Peru	87.00	88.03	110	Eswatini	59.33	55.98
50	Argentina	86.00	86.88	111	Mozambique	57.67	54.06
50	Iceland	86.00	86.88	112	Kazakhstan	54.00	49.81
50	Panama	86.00	86.88	113	Guatemala	53.17	48.85
50	Spain	86.00	86.88	114	China	49.00	44.02
50	Uganda	86.00	86.88	115	Belarus	44.50	38.80
55	Cyprus	85.67	86.49	116	Russian Federation	42.00	35.91
56	Armenia	85.50	86.30	117	Lao People's Democratic Republic	36.67	29.73
56	Canada	85.50	86.30	118	Lebanon	31.67	23.94
56	Ecuador	85.50	86.30	119	Ethiopia	29.00	20.85
59	Trinidad and Tobago	85.33	86.10	120	Tajikistan	14.00	3.48
60	Botswana	85.00	85.72	121	Yemen	11.00	0.00
60	Costa Rica	85.00	85.72				

Source: International Telecommunication Union (ITU), ICT Regulatory Tracker 2018 (<https://www.itu.int/net4/itu-d/irt/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 3.3.1 E-Participation

E-Participation Index | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Denmark	1.00	100.00	62	Mongolia	0.74	70.07
1	Finland	1.00	100.00	63	Panama	0.72	68.15
1	Korea (Republic of)	1.00	100.00	64	Qatar	0.71	67.52
4	Netherlands	0.99	98.73	64	Saudi Arabia	0.71	67.52
5	Australia	0.98	98.08	66	Hungary	0.71	66.88
5	Japan	0.98	98.08	66	Romania	0.71	66.88
5	New Zealand	0.98	98.08	68	North Macedonia (Republic of)	0.70	66.24
5	Spain	0.98	98.08	69	Kuwait	0.69	64.97
5	United Kingdom	0.98	98.08	69	Mauritius	0.69	64.97
5	United States	0.98	98.08	69	Viet Nam	0.69	64.97
11	Norway	0.98	97.45	72	Iceland	0.69	64.33
12	Brazil	0.97	96.81	72	Kyrgyzstan	0.69	64.33
13	France	0.97	96.18	72	Latvia	0.69	64.33
13	Singapore	0.97	96.18	72	Ukraine	0.69	64.33
15	India	0.96	94.91	76	Azerbaijan	0.68	63.70
15	Italy	0.96	94.91	76	Dominican Republic	0.68	63.70
17	Mexico	0.94	93.63	78	Ecuador	0.67	63.06
17	United Arab Emirates	0.94	93.63	79	El Salvador	0.65	60.51
19	Luxembourg	0.94	92.99	79	Thailand	0.65	60.51
19	Philippines	0.94	92.99	81	Ghana	0.63	57.96
19	Sweden	0.94	92.99	81	Sri Lanka	0.63	57.96
22	Ireland	0.93	92.36	83	Argentina	0.62	57.32
23	Colombia	0.92	91.08	83	Georgia	0.62	57.32
23	Germany	0.92	91.08	83	Uganda	0.62	57.32
23	Russian Federation	0.92	91.08	86	Czech Republic	0.62	56.69
26	Uruguay	0.92	90.44	86	Guatemala	0.62	56.69
27	Canada	0.91	89.81	86	Indonesia	0.62	56.69
27	Estonia	0.91	89.81	86	Tanzania	0.62	56.69
29	China	0.90	89.17	90	Trinidad and Tobago	0.58	52.23
30	Portugal	0.90	88.54	91	Ethiopia	0.57	51.59
31	Poland	0.89	87.90	91	Paraguay	0.57	51.59
32	Malaysia	0.89	87.26	93	Armenia	0.57	50.95
33	Belarus	0.88	86.62	94	Honduras	0.54	48.40
34	Greece	0.88	85.99	95	Egypt	0.54	47.77
35	Bulgaria	0.87	85.35	96	Kenya	0.53	47.13
36	Peru	0.87	84.72	97	Iran (Islamic Republic of)	0.53	46.50
37	Moldova	0.86	84.08	98	Senegal	0.51	43.95
37	Turkey	0.86	84.08	99	Pakistan	0.50	43.31
39	Malta	0.85	82.80	100	Jordan	0.48	41.39
39	South Africa	0.85	82.80	100	Nigeria	0.48	41.39
41	Switzerland	0.84	82.17	102	Lebanon	0.44	36.94
42	Kazakhstan	0.84	81.53	102	Mozambique	0.44	36.94
43	Israel	0.83	80.90	104	Bosnia and Herzegovina	0.43	35.67
43	Oman	0.83	80.90	105	Venezuela	0.40	32.48
45	Austria	0.83	80.25	106	Zambia	0.40	31.85
46	Chile	0.82	79.61	107	Namibia	0.39	31.21
46	Cyprus	0.82	79.61	108	Tajikistan	0.39	30.57
48	Serbia	0.81	78.98	109	Eswatini	0.33	24.21
48	Slovenia	0.81	78.98	110	Cameroon	0.33	23.56
50	Slovakia	0.81	78.34	110	Madagascar	0.33	23.56
51	Bangladesh	0.80	77.71	112	Jamaica	0.31	22.29
51	Lithuania	0.80	77.71	113	Zimbabwe	0.28	17.83
53	Bahrain	0.80	77.07	114	Mali	0.24	14.01
53	Tunisia	0.80	77.07	115	Algeria	0.20	9.55
55	Nepal	0.78	75.16	115	Malawi	0.20	9.55
56	Morocco	0.78	74.52	117	Botswana	0.20	8.91
57	Costa Rica	0.77	73.89	118	Cambodia	0.17	6.37
57	Croatia	0.77	73.89	118	Lao People's Democratic Republic	0.17	6.37
59	Albania	0.76	72.61	120	Yemen	0.12	0.00
59	Belgium	0.76	72.61		Hong Kong (China)	n/a	n/a
59	Rwanda	0.76	72.61				

Source: United Nations Department of Economic and Social Affairs (UNDESA), UN E-Government Knowledgebase (<https://publicadministration.un.org/egovkb/en-us/>)  
 For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 3.3.2 Socioeconomic gap in use of digital payments

Difference between rich and poor income groups that made or received digital payments in the past year (% age 15+) | 2017

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Norway	1.00	100.00	62	Kazakhstan	0.73	68.23
2	Denmark	1.00	99.79	63	Tajikistan	0.73	68.11
3	Canada	1.00	99.49	64	Tanzania	0.72	67.56
4	New Zealand	1.00	99.29	65	Uganda	0.70	65.42
5	Finland	0.99	98.64	66	Zimbabwe	0.70	65.03
6	Belgium	0.99	97.89	67	Paraguay	0.68	62.91
7	Sweden	0.98	97.28	68	North Macedonia (Republic of)	0.68	62.80
8	Luxembourg	0.98	97.26	69	Argentina	0.68	62.32
9	Spain	0.98	97.21	70	Bosnia and Herzegovina	0.67	62.05
10	Australia	0.98	96.86	71	Namibia	0.67	61.49
11	Netherlands	0.98	96.62	72	Bangladesh	0.67	61.43
12	France	0.97	96.36	73	Venezuela	0.66	60.92
13	Germany	0.97	96.12	74	Algeria	0.66	60.38
14	Japan	0.97	95.69	75	Madagascar	0.65	58.79
15	Switzerland	0.97	95.67	76	China	0.64	58.25
16	Estonia	0.97	95.47	77	Brazil	0.64	58.01
17	Slovenia	0.96	95.23	78	Jamaica	0.63	57.26
18	Iran (Islamic Republic of)	0.96	95.17	79	Colombia	0.62	55.86
19	Austria	0.96	95.06	80	Uruguay	0.61	54.89
20	United Kingdom	0.95	94.21	81	Jordan	0.61	54.62
21	Korea (Republic of)	0.94	93.01	82	Georgia	0.61	54.31
22	Italy	0.94	92.79	83	Guatemala	0.60	53.69
23	Poland	0.94	92.30	84	Cambodia	0.57	50.34
24	Ireland	0.92	90.83	85	India	0.57	50.15
25	Singapore	0.92	90.74	86	Bulgaria	0.57	50.14
26	Mongolia	0.91	89.54	87	Dominican Republic	0.57	49.80
27	Latvia	0.90	87.48	88	Zambia	0.57	49.51
28	Croatia	0.89	86.57	89	Moldova	0.56	49.27
29	Belarus	0.88	86.15	90	Nepal	0.55	47.57
30	Trinidad and Tobago	0.88	86.14	91	Honduras	0.55	47.39
31	United Arab Emirates	0.88	86.01	92	Armenia	0.54	46.09
32	Sri Lanka	0.87	83.98	93	Botswana	0.52	44.09
33	Russian Federation	0.86	83.18	94	Mexico	0.52	44.00
34	Malta	0.86	83.08	95	Pakistan	0.50	42.35
35	Lithuania	0.85	82.71	96	Romania	0.50	41.96
36	Portugal	0.85	82.32	97	Indonesia	0.49	41.34
37	Cyprus	0.85	82.14	98	Azerbaijan	0.49	41.30
38	Israel	0.84	81.31	99	Panama	0.49	41.27
39	Slovakia	0.83	80.38	100	El Salvador	0.49	41.00
40	United States	0.83	79.64	101	Cameroon	0.49	40.99
41	Hungary	0.83	79.36	102	Nigeria	0.49	40.81
42	Thailand	0.83	79.33	103	Rwanda	0.49	40.63
43	Saudi Arabia	0.82	79.32	104	Malawi	0.48	39.05
44	Hong Kong (China)	0.82	79.28	105	Peru	0.47	38.38
45	Greece	0.82	78.80	106	Egypt	0.46	37.66
46	Kuwait	0.82	78.29	107	Mozambique	0.45	35.96
47	Mali	0.82	78.28	108	Tunisia	0.44	35.33
48	Bahrain	0.81	77.50	109	Viet Nam	0.43	33.44
49	Malaysia	0.80	76.98	110	Ecuador	0.42	32.57
50	Czech Republic	0.80	76.14	111	Morocco	0.40	30.50
51	Chile	0.79	75.11	112	Lebanon	0.40	30.08
52	South Africa	0.79	74.94	113	Albania	0.33	22.80
53	Mauritius	0.78	73.97	114	Lao People's Democratic Republic	0.32	21.08
54	Serbia	0.77	73.24	115	Ethiopia	0.30	19.44
55	Kenya	0.76	71.74	116	Philippines	0.29	17.77
56	Ukraine	0.76	71.47	117	Yemen	0.14	0.00
57	Costa Rica	0.75	70.91		Eswatini	n/a	n/a
58	Ghana	0.75	70.42		Iceland	n/a	n/a
59	Kyrgyzstan	0.74	70.09		Oman	n/a	n/a
60	Senegal	0.74	70.00		Qatar	n/a	n/a
61	Turkey	0.73	68.25				

Source: World Bank, Global Findex database (<https://globalfindex.worldbank.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 3.3.3 Availability of local online content

Average answer to the question: In your country, to what extent are Internet content and services tailored to the local population (e.g. in the local language, meeting local demand)? (1 = Not at all; 7 = To a great extent) | 2016–17

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	United Kingdom	6.23	100.00	62	Mexico	4.41	53.30
2	Israel	6.15	98.05	63	Trinidad and Tobago	4.37	52.39
3	United States	6.15	97.91	64	Jamaica	4.36	52.02
4	Netherlands	6.07	95.87	65	Greece	4.35	51.74
5	Sweden	5.91	91.96	66	Morocco	4.33	51.41
6	Switzerland	5.90	91.59	67	Croatia	4.32	51.20
7	Singapore	5.87	90.82	68	Romania	4.32	51.08
8	United Arab Emirates	5.86	90.54	69	Kazakhstan	4.31	50.80
9	Germany	5.81	89.25	70	Mauritius	4.30	50.43
10	Japan	5.79	88.78	71	Georgia	4.25	49.27
11	Norway	5.75	87.74	72	Colombia	4.22	48.63
12	Qatar	5.75	87.69	73	Philippines	4.21	48.19
13	Czech Republic	5.73	87.28	74	Pakistan	4.15	46.78
14	Estonia	5.71	86.73	75	Viet Nam	4.08	44.86
15	Finland	5.69	86.14	76	Kenya	4.04	43.78
16	Canada	5.68	86.08	77	Cambodia	4.01	43.24
17	Hong Kong (China)	5.65	85.22	78	South Africa	3.99	42.56
18	Luxembourg	5.57	83.16	79	Sri Lanka	3.97	42.15
19	Belgium	5.57	83.09	80	Rwanda	3.94	41.41
20	Lithuania	5.54	82.46	81	Dominican Republic	3.92	40.85
21	France	5.54	82.44	82	Albania	3.90	40.33
22	New Zealand	5.53	82.13	83	Tunisia	3.87	39.46
23	Australia	5.49	81.16	84	Algeria	3.87	39.43
24	Austria	5.45	80.12	85	Honduras	3.79	37.49
25	Iceland	5.45	80.03	86	Tanzania	3.78	37.27
26	Malaysia	5.43	79.42	87	Lao People's Democratic Republic	3.78	37.20
27	Saudi Arabia	5.34	77.33	88	Senegal	3.73	35.87
28	Korea (Republic of)	5.29	75.84	89	Guatemala	3.72	35.61
29	Spain	5.27	75.35	90	Ecuador	3.71	35.46
30	Denmark	5.19	73.45	91	Peru	3.69	34.99
31	Latvia	5.17	72.78	92	Madagascar	3.69	34.85
32	Azerbaijan	5.11	71.30	93	Iran (Islamic Republic of)	3.68	34.54
33	Portugal	5.06	70.00	94	El Salvador	3.62	33.24
34	Jordan	4.95	67.34	95	Venezuela	3.62	33.04
35	Ireland	4.94	67.03	96	Bangladesh	3.59	32.41
36	Chile	4.94	66.95	96	Mongolia	3.59	32.41
37	Italy	4.91	66.30	98	Lebanon	3.56	31.68
38	Cyprus	4.89	65.70	99	Kyrgyzstan	3.47	29.24
39	Slovenia	4.88	65.30	100	Ghana	3.43	28.35
40	Costa Rica	4.86	65.01	101	Paraguay	3.36	26.48
41	Slovakia	4.86	64.98	102	Ethiopia	3.29	24.54
42	Brazil	4.80	63.28	103	Cameroon	3.28	24.45
42	Serbia	4.80	63.28	104	Mali	3.28	24.43
44	Russian Federation	4.79	63.11	105	Nepal	3.24	23.27
45	Indonesia	4.76	62.23	106	Namibia	3.22	22.91
46	Poland	4.72	61.39	107	Nigeria	3.20	22.47
47	Malta	4.72	61.31	108	Botswana	3.13	20.54
48	Hungary	4.68	60.28	109	Eswatini	2.77	11.34
49	China	4.67	60.03	110	Yemen	2.75	10.80
50	Kuwait	4.63	58.94	111	Zambia	2.60	6.96
51	Thailand	4.62	58.75	112	Zimbabwe	2.58	6.48
52	Ukraine	4.62	58.65	113	Mozambique	2.53	5.10
53	Argentina	4.61	58.41	114	Uganda	2.49	4.24
54	Egypt	4.57	57.52	115	Malawi	2.33	0.00
55	Bosnia and Herzegovina	4.52	56.21		Bahrain	n/a	n/a
56	Armenia	4.52	56.20		Belarus	n/a	n/a
57	Uruguay	4.49	55.32		North Macedonia (Republic of)	n/a	n/a
58	Moldova	4.48	55.30		Oman	n/a	n/a
59	Bulgaria	4.48	55.19		Tajikistan	n/a	n/a
60	India	4.48	55.11		Turkey	n/a	n/a
61	Panama	4.44	54.16				

Source: World Economic Forum, Executive Opinion Survey 2016–2017 (<http://reports.weforum.org>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 3.3.4 Gender gap in Internet use

Difference between female and male population in using the Internet | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Mongolia	1.19	100.00	62	Bosnia and Herzegovina	0.94	56.85
2	Jamaica	1.15	92.90	63	Malaysia	0.94	56.70
3	Panama	1.05	75.79	64	Germany	0.94	55.49
4	Sweden	1.03	72.47	65	Ukraine	0.93	55.03
5	Ireland	1.03	71.73	66	Oman	0.93	54.87
6	Paraguay	1.02	70.51	67	El Salvador	0.93	54.81
7	United Arab Emirates	1.02	69.76	68	Italy	0.93	54.74
8	Costa Rica	1.01	68.61	69	Mauritius	0.93	53.85
9	Latvia	1.01	68.60	70	Serbia	0.91	51.52
10	Norway	1.01	68.53	71	Azerbaijan	0.91	50.70
11	United Kingdom	1.01	68.19	72	Peru	0.90	50.00
12	Iceland	1.01	68.13	73	Iran (Islamic Republic of)	0.90	48.78
13	Dominican Republic	1.01	67.65	74	Morocco	0.89	47.90
14	Lithuania	1.01	67.59	75	Indonesia	0.89	46.91
15	Colombia	1.00	67.56	76	Moldova	0.88	45.86
16	Cyprus	1.00	67.33	77	Zambia	0.85	40.88
17	Kuwait	1.00	67.24	78	Botswana	0.83	37.91
17	Qatar	1.00	67.24	79	Turkey	0.82	34.87
19	Malta	1.00	67.14	80	Zimbabwe	0.80	31.51
20	Cambodia	1.00	66.71	81	Egypt	0.79	29.83
21	Estonia	1.00	66.52	82	Nigeria	0.74	22.17
22	Slovakia	1.00	66.50	83	Algeria	0.74	21.20
23	Bahrain	1.00	66.36	84	Cameroon	0.70	14.60
24	Denmark	1.00	66.18	85	Malawi	0.31	0.00
25	Netherlands	1.00	66.16	85	Pakistan	0.62	0.00
26	Belarus	1.00	66.06		Albania	n/a	n/a
27	Brazil	1.00	65.94		Bangladesh	n/a	n/a
28	Poland	0.99	65.60		Canada	n/a	n/a
29	Australia	0.99	64.91		China	n/a	n/a
30	Uruguay	0.99	64.84		Eswatini	n/a	n/a
31	Spain	0.99	64.70		Ethiopia	n/a	n/a
32	Singapore	0.99	64.36		Ghana	n/a	n/a
33	Ecuador	0.98	63.21		Guatemala	n/a	n/a
34	Russian Federation	0.98	63.10		Honduras	n/a	n/a
35	Luxembourg	0.98	62.99		India	n/a	n/a
36	Argentina	0.98	62.78		Jordan	n/a	n/a
37	Korea (Republic of)	0.97	62.23		Kenya	n/a	n/a
38	Kazakhstan	0.97	62.14		Kyrgyzstan	n/a	n/a
39	Switzerland	0.97	62.12		Lao People's Democratic Republic	n/a	n/a
40	Finland	0.97	61.70		Lebanon	n/a	n/a
41	Romania	0.97	61.38		Madagascar	n/a	n/a
42	Belgium	0.97	61.30		Mali	n/a	n/a
43	Thailand	0.97	60.99		Mozambique	n/a	n/a
44	Hong Kong (China)	0.97	60.97		Namibia	n/a	n/a
45	Hungary	0.97	60.87		Nepal	n/a	n/a
46	Israel	0.97	60.84		New Zealand	n/a	n/a
47	Saudi Arabia	0.97	60.82		Philippines	n/a	n/a
48	Chile	0.96	59.87		Rwanda	n/a	n/a
49	France	0.96	59.65		Senegal	n/a	n/a
50	Bulgaria	0.96	59.35		South Africa	n/a	n/a
51	Mexico	0.96	59.21		Sri Lanka	n/a	n/a
52	North Macedonia (Republic of)	0.96	59.18		Tajikistan	n/a	n/a
53	Armenia	0.96	59.10		Tanzania	n/a	n/a
54	Georgia	0.96	59.01		Trinidad and Tobago	n/a	n/a
55	Portugal	0.96	58.97		Tunisia	n/a	n/a
56	Japan	0.96	58.93		Uganda	n/a	n/a
57	Austria	0.95	58.76		United States	n/a	n/a
58	Czech Republic	0.95	58.09		Venezuela	n/a	n/a
59	Croatia	0.95	58.08		Viet Nam	n/a	n/a
60	Greece	0.95	57.88		Yemen	n/a	n/a
61	Slovenia	0.95	57.57				

**Source:** International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2019 (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)  
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### 3.3.5 Rural gap in use of digital payments

Difference between the rural population and the total population that made or received digital payments in the past year (% age 15+) | 2017

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Jordan	1.12	100.00	62	Namibia	0.95	67.03
2	Singapore	1.11	98.86	63	Australia	0.95	66.79
3	Algeria	1.07	89.99	64	Korea (Republic of)	0.95	66.67
4	Paraguay	1.03	81.99	65	Sri Lanka	0.95	66.10
5	Croatia	1.02	80.46	66	Israel	0.95	65.55
6	Bangladesh	1.02	79.95	67	China	0.94	64.25
7	Italy	1.02	79.77	68	Moldova	0.94	64.02
8	Jamaica	1.02	79.63	69	Guatemala	0.94	63.86
9	Austria	1.02	79.51	70	Greece	0.94	63.76
10	Lithuania	1.01	79.18	71	Malawi	0.94	63.63
11	Iran (Islamic Republic of)	1.01	78.75	72	Botswana	0.93	62.45
12	Mongolia	1.01	78.22	73	Serbia	0.93	62.00
13	Belgium	1.01	78.08	74	Turkey	0.92	59.78
14	Spain	1.01	77.36	75	North Macedonia (Republic of)	0.92	59.52
15	Canada	1.00	77.09	76	Chile	0.91	58.69
16	Finland	1.00	76.73	77	India	0.91	57.80
17	Estonia	1.00	76.59	78	Belarus	0.91	57.32
18	Denmark	1.00	76.53	79	Malaysia	0.91	57.10
19	Norway	1.00	76.50	80	Dominican Republic	0.91	57.03
20	Luxembourg	1.00	76.25	81	Bulgaria	0.90	55.45
21	France	1.00	76.15	82	Hungary	0.90	55.43
22	United Kingdom	1.00	76.06	83	Senegal	0.90	54.81
23	Sweden	1.00	75.98	84	Uruguay	0.89	54.37
24	Netherlands	1.00	75.85	85	Ghana	0.89	54.14
25	Portugal	1.00	75.82	86	Ukraine	0.89	53.97
26	Kenya	1.00	75.56	87	Mozambique	0.89	53.79
27	Switzerland	1.00	75.53	88	Egypt	0.89	53.11
28	Slovakia	1.00	75.42	89	Cambodia	0.89	52.97
29	Brazil	1.00	75.26	90	Zambia	0.89	52.80
30	Bahrain	1.00	75.26	91	Costa Rica	0.88	52.52
31	Germany	0.99	75.20	92	Ecuador	0.88	52.47
32	Bosnia and Herzegovina	0.99	75.01	93	United Arab Emirates	0.88	52.36
33	Malta	0.99	74.97	94	El Salvador	0.88	50.94
34	South Africa	0.99	74.94	95	Ethiopia	0.87	50.20
35	Slovenia	0.99	74.54	96	Romania	0.87	49.73
36	Ireland	0.99	74.48	97	Pakistan	0.86	48.25
37	Uganda	0.99	74.20	98	Zimbabwe	0.86	47.15
38	New Zealand	0.99	73.94	99	Georgia	0.86	47.13
39	Trinidad and Tobago	0.99	73.91	100	Colombia	0.85	45.66
40	United States	0.99	73.90	101	Mali	0.85	44.85
41	Poland	0.99	73.79	102	Nepal	0.85	44.73
42	Kazakhstan	0.98	73.16	103	Viet Nam	0.83	42.27
43	Tajikistan	0.98	73.04	104	Cameroon	0.83	41.37
44	Russian Federation	0.98	72.70	105	Honduras	0.82	39.05
45	Japan	0.98	71.73	106	Madagascar	0.82	38.73
46	Saudi Arabia	0.98	71.56	107	Yemen	0.82	38.40
47	Mauritius	0.98	71.42	108	Panama	0.81	37.42
48	Lebanon	0.98	71.37	109	Nigeria	0.77	28.59
49	Latvia	0.98	71.31	110	Tunisia	0.76	27.44
50	Venezuela	0.97	70.54	111	Mexico	0.75	24.03
51	Hong Kong (China)	0.97	70.25	112	Albania	0.75	24.03
52	Czech Republic	0.97	70.07	113	Philippines	0.73	21.61
53	Cyprus	0.97	70.01	114	Azerbaijan	0.73	20.72
54	Kyrgyzstan	0.97	70.01	115	Lao People's Democratic Republic	0.69	11.95
55	Tanzania	0.97	69.69	116	Kuwait	0.67	7.53
56	Rwanda	0.97	69.65	117	Morocco	0.63	0.00
57	Indonesia	0.97	69.30		Eswatini	n/a	n/a
58	Peru	0.96	69.07		Iceland	n/a	n/a
59	Armenia	0.96	68.63		Oman	n/a	n/a
60	Argentina	0.96	68.43		Qatar	n/a	n/a
61	Thailand	0.96	67.30				

Source: World Bank, Global Findex database (<https://globalfindex.worldbank.org/>)

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4th pillar:

**Impact**



## 4.1.1 Medium and high-tech industry

Proportion of medium and high-tech industry value added in total value added (%) | 2016

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Singapore	78.13	100.00	62	Pakistan	24.62	31.28
2	Switzerland	64.57	82.59	63	South Africa	24.43	31.04
3	Korea (Republic of)	63.66	81.42	64	North Macedonia (Republic of)	23.03	29.24
4	Germany	61.45	78.58	65	Colombia	22.78	28.92
5	Hungary	59.72	76.36	66	Guatemala	22.40	28.43
6	Japan	56.21	71.85	67	Bahrain	22.17	28.14
7	Ireland	54.35	69.46	68	Luxembourg	22.00	27.92
8	Denmark	54.22	69.29	69	Oman	21.94	27.84
9	Qatar	54.17	69.23	70	Paraguay	21.92	27.82
10	Sweden	53.01	67.74	71	Zimbabwe	21.82	27.69
11	Czech Republic	52.40	66.96	72	Senegal	21.65	27.47
12	Slovakia	51.38	65.65	73	Latvia	21.52	27.30
13	France	50.08	63.98	74	Zambia	21.08	26.74
14	Belgium	49.51	63.25	75	Greece	20.92	26.53
15	Netherlands	48.86	62.41	76	Costa Rica	20.82	26.40
16	United States	47.77	61.01	77	Azerbaijan	20.28	25.71
17	Austria	45.65	58.29	78	Lebanon	19.95	25.29
18	United Kingdom	45.43	58.01	79	El Salvador	19.13	24.23
19	Iran (Islamic Republic of)	45.17	57.67	80	Jamaica	18.77	23.77
20	Philippines	44.68	57.04	81	New Zealand	18.53	23.46
21	Malaysia	44.12	56.32	82	Bosnia and Herzegovina	18.41	23.31
22	Italy	42.93	54.80	83	Chile	17.84	22.58
23	Romania	42.53	54.28	84	Moldova	16.38	20.70
24	Israel	42.40	54.12	85	Ethiopia	16.07	20.30
25	Mexico	41.61	53.10	86	Peru	15.91	20.10
26	China	41.45	52.90	87	Uruguay	15.29	19.30
27	Finland	41.39	52.82	88	Kenya	15.03	18.97
28	Thailand	40.71	51.95	89	Kazakhstan	14.20	17.90
29	Belarus	40.56	51.75	90	Egypt	13.98	17.62
30	Spain	39.85	50.84	91	Lao People's Democratic Republic	13.58	17.11
31	Norway	39.82	50.80	92	Iceland	13.05	16.42
32	Trinidad and Tobago	39.60	50.52	93	Ecuador	12.07	15.17
33	India	38.76	49.44	94	Georgia	11.52	14.46
34	Saudi Arabia	37.89	48.32	95	Malawi	11.34	14.23
35	Viet Nam	37.77	48.17	96	Uganda	11.07	13.88
36	Slovenia	37.47	47.78	97	Mozambique	10.89	13.65
37	Hong Kong (China)	37.38	47.67	98	Mauritius	9.78	12.23
38	Poland	35.43	45.17	99	Bangladesh	9.76	12.20
39	Brazil	35.39	45.11	100	Nepal	8.38	10.43
40	Indonesia	35.08	44.72	101	Cameroon	7.61	9.44
41	Venezuela	34.28	43.69	102	Sri Lanka	7.57	9.39
42	Tunisia	33.65	42.88	103	Namibia	7.35	9.10
43	Nigeria	33.44	42.61	104	Honduras	7.16	8.86
44	Malta	32.53	41.44	105	Tanzania	6.83	8.44
45	Turkey	31.45	40.05	106	Albania	6.69	8.26
46	Croatia	30.77	39.18	107	Rwanda	6.66	8.22
47	Canada	30.57	38.92	108	Panama	6.22	7.65
48	Ukraine	30.36	38.65	109	Botswana	5.77	7.08
49	Russian Federation	30.27	38.54	110	Mongolia	5.55	6.79
50	Bulgaria	29.73	37.85	111	Armenia	4.51	5.46
51	Kuwait	29.27	37.25	112	Madagascar	3.56	4.24
52	Lithuania	27.90	35.50	113	Kyrgyzstan	2.96	3.47
53	Estonia	27.81	35.38	114	Algeria	2.69	3.12
54	Morocco	27.75	35.30	115	Tajikistan	2.19	2.48
55	Australia	27.03	34.38	116	Yemen	2.06	2.31
56	Serbia	26.35	33.50	117	Eswatini	1.65	1.79
57	Jordan	26.30	33.44	118	Ghana	0.80	0.69
58	Argentina	26.00	33.06	119	Cambodia	0.26	0.00
59	Portugal	25.61	32.55		Dominican Republic	n/a	n/a
60	United Arab Emirates	25.46	32.36		Mali	n/a	n/a
61	Cyprus	25.39	32.27				

**Source:** United Nations Industrial Development Organization (UNIDO), UNIDO CIP 2018 Database (<https://stat.unido.org>), sourced from United Nations, Open SDG Data Hub (<http://www.sdg.org>). United Nations (2019), Metadata for Indicator 9.b.1 Proportion of medium and high-tech industry value added in total value added (<https://unstats.un.org/sdgs/metadata/files/Metadata-09-0B-01.pdf>). Galindo-Rueda, F. and F. Verger (2016). OECD Taxonomy of Economic Activities Based on R&D Intensity, OECD Science, Technology and Industry Working Papers, 2016/04, OECD Publishing, Paris (<http://dx.doi.org/10.1787/5jlv73sqpp8r-en>)

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## 4.1.2 High-tech exports

High technology manufactures exports (% of total exports of manufactured goods) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Malaysia	52.77	100.00	62	Spain	7.19	13.62
1	Philippines	61.11	100.00	63	Armenia	7.05	13.36
3	Singapore	51.72	98.01	64	Luxembourg	6.97	13.20
4	Viet Nam	41.41	78.47	65	Tanzania	6.89	13.05
5	Korea (Republic of)	36.35	68.87	66	Slovenia	6.81	12.89
6	Lao People's Democratic Republic	33.61	63.69	67	Chile	6.38	12.09
7	Malta	32.21	61.04	68	El Salvador	6.13	11.61
8	China	30.89	58.53	69	Ethiopia	5.84	11.06
9	France	25.92	49.11	70	Mozambique	5.64	10.69
10	Ireland	24.68	46.77	71	Ukraine	5.41	10.24
11	Iceland	23.47	44.48	72	Guatemala	5.34	10.11
12	Thailand	23.34	44.22	73	Argentina	5.33	10.10
13	Israel	22.83	43.26	74	South Africa	5.32	10.07
14	United Kingdom	22.59	42.81	75	Ecuador	5.28	9.99
15	Netherlands	22.24	42.13	76	Portugal	5.27	9.97
16	Kazakhstan	22.24	42.13	77	Bosnia and Herzegovina	5.23	9.91
17	Norway	21.23	40.22	78	Mongolia	4.96	9.40
18	Mexico	21.04	39.87	79	Cameroon	4.91	9.30
19	Cyprus	19.86	37.63	80	Peru	4.57	8.65
20	Czech Republic	19.63	37.20	81	Kuwait	4.12	7.80
21	Latvia	19.33	36.63	82	North Macedonia (Republic of)	4.05	7.66
22	United States	18.90	35.80	83	Azerbaijan	4.03	7.63
23	Costa Rica	18.52	35.09	84	Belarus	3.98	7.54
24	Japan	17.27	32.72	85	Morocco	3.84	7.27
25	Estonia	16.93	32.07	86	Kenya	3.62	6.85
26	Hungary	16.90	32.02	87	Uganda	3.54	6.69
27	Australia	16.71	31.66	88	Georgia	3.33	6.31
28	Germany	15.76	29.87	89	Honduras	3.13	5.92
29	Canada	15.72	29.79	90	Senegal	2.81	5.32
30	Sweden	14.34	27.18	91	Mauritius	2.60	4.92
31	Denmark	13.98	26.49	92	Moldova	2.53	4.79
32	United Arab Emirates	13.63	25.82	93	Lebanon	2.35	4.45
33	Hong Kong (China)	13.50	25.58	94	Turkey	2.33	4.41
34	Switzerland	13.37	25.34	95	Pakistan	2.20	4.16
35	Brazil	12.95	24.54	96	Jamaica	2.11	3.99
36	Greece	12.81	24.27	97	Zimbabwe	2.05	3.88
37	Rwanda	12.54	23.76	98	Zambia	2.00	3.78
38	Lithuania	12.11	22.94	99	Cambodia	1.86	3.51
39	Austria	11.64	22.05	100	Nigeria	1.85	3.51
40	Malawi	11.51	21.80	101	Jordan	1.81	3.43
41	Russian Federation	10.96	20.77	102	Iran (Islamic Republic of)	1.34	2.53
42	Poland	10.60	20.09	103	Mali	1.24	2.35
43	Slovakia	10.58	20.04	104	Nepal	1.18	2.24
44	Belgium	10.32	19.55	105	Oman	1.12	2.11
45	Bulgaria	10.12	19.17	106	Bahrain	1.05	1.99
46	Romania	10.08	19.10	107	Sri Lanka	1.02	1.93
47	New Zealand	9.73	18.43	108	Egypt	0.87	1.64
48	Paraguay	9.69	18.36	109	Botswana	0.62	1.18
49	Panama	9.19	17.41	110	Saudi Arabia	0.61	1.15
50	Kyrgyzstan	9.01	17.07	111	Algeria	0.60	1.13
51	India	9.01	17.06	112	Madagascar	0.56	1.06
52	Finland	8.93	16.91	113	Bangladesh	0.31	0.58
53	Croatia	8.89	16.85	114	Eswatini	0.30	0.56
54	Dominican Republic	8.57	16.23	115	Namibia	0.22	0.41
55	Ghana	8.26	15.65	116	Trinidad and Tobago	0.14	0.25
56	Indonesia	8.02	15.19	117	Albania	0.05	0.09
57	Yemen	8.02	15.18	118	Qatar	0.00	0.00
58	Italy	7.72	14.63		Serbia	n/a	n/a
59	Tunisia	7.39	14.00		Tajikistan	n/a	n/a
60	Colombia	7.27	13.76		Venezuela	n/a	n/a
61	Uruguay	7.20	13.63				

Source: World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>). The classification of exports is based on Lall, S. (2000), The Technological Structure and Performance of Developing Country Manufactured Exports, Oxford Development Studies, 28(3), 1985–1989

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 4.1.3 PCT patent applications

Number of applications filed under the Patent Cooperation Treaty (PCT) (per million population)

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Japan	372.84	100.00	62	Argentina	1.77	0.47
2	Sweden	346.57	92.95	63	Kuwait	1.68	0.45
3	Switzerland	324.53	87.04	64	Bosnia and Herzegovina	1.63	0.43
4	Korea (Republic of)	300.92	80.71	65	Lebanon	1.33	0.35
5	Israel	269.74	72.34	66	Trinidad and Tobago	1.23	0.32
6	Finland	253.29	67.93	67	Morocco	1.21	0.32
7	Denmark	235.28	63.10	68	Kazakhstan	1.20	0.32
8	Germany	234.72	62.95	69	Tunisia	1.16	0.31
9	Netherlands	222.30	59.62	70	Sri Lanka	1.06	0.28
10	Austria	184.77	49.55	71	Peru	0.83	0.22
11	United States	174.23	46.73	72	Iran (Islamic Republic of)	0.82	0.21
12	Luxembourg	156.28	41.91	73	Jordan	0.47	0.12
13	Singapore	153.66	41.21	74	Egypt	0.43	0.11
14	Norway	145.76	39.09	75	North Macedonia (Republic of)	0.33	0.08
15	France	124.30	33.33	76	Philippines	0.32	0.08
16	Belgium	119.44	32.03	77	Ecuador	0.30	0.07
17	Iceland	107.07	28.71	78	Guatemala	0.28	0.07
18	Ireland	100.79	27.03	79	Algeria	0.26	0.06
19	United Kingdom	100.40	26.92	80	Jamaica	0.21	0.05
20	Canada	88.26	23.67	81	Kenya	0.17	0.04
21	Hong Kong (China)	85.78	23.00	82	Venezuela	0.15	0.03
22	Australia	82.91	22.23	83	Mongolia	0.14	0.03
23	New Zealand	64.96	17.42	84	Zimbabwe	0.12	0.03
24	Italy	63.56	17.04	85	El Salvador	0.08	0.01
25	Slovenia	45.19	12.11	86	Indonesia	0.07	0.01
26	Spain	40.10	10.75	87	Pakistan	0.03	0.00
27	Malta	36.56	9.80	88	Nigeria	0.02	0.00
28	China	31.64	8.48		Albania	n/a	n/a
29	Hungary	29.14	7.81		Azerbaijan	n/a	n/a
30	Estonia	26.22	7.03		Bahrain	n/a	n/a
31	Czech Republic	23.94	6.41		Bangladesh	n/a	n/a
32	Portugal	22.19	5.95		Botswana	n/a	n/a
33	Latvia	14.59	3.91		Cambodia	n/a	n/a
34	Slovakia	13.75	3.68		Cameroon	n/a	n/a
35	Turkey	13.67	3.66		Dominican Republic	n/a	n/a
36	Panama	13.24	3.55		Eswatini	n/a	n/a
37	Poland	13.08	3.50		Ethiopia	n/a	n/a
38	Saudi Arabia	12.35	3.31		Ghana	n/a	n/a
39	Lithuania	11.32	3.03		Honduras	n/a	n/a
40	Greece	11.27	3.02		Kyrgyzstan	n/a	n/a
41	Croatia	10.09	2.70		Lao People's Democratic Republic	n/a	n/a
42	Cyprus	9.80	2.62		Madagascar	n/a	n/a
43	Chile	9.71	2.60		Malawi	n/a	n/a
44	Malaysia	9.59	2.57		Mali	n/a	n/a
45	United Arab Emirates	8.40	2.25		Mauritius	n/a	n/a
46	Bulgaria	7.74	2.07		Mozambique	n/a	n/a
47	Russian Federation	7.73	2.07		Namibia	n/a	n/a
48	South Africa	5.52	1.48		Nepal	n/a	n/a
49	Romania	4.29	1.15		Oman	n/a	n/a
50	Costa Rica	3.79	1.01		Paraguay	n/a	n/a
51	Armenia	3.72	0.99		Qatar	n/a	n/a
52	Georgia	3.63	0.97		Rwanda	n/a	n/a
53	Moldova	3.56	0.95		Senegal	n/a	n/a
54	Brazil	3.51	0.94		Serbia	n/a	n/a
55	Ukraine	3.42	0.91		Tajikistan	n/a	n/a
56	Belarus	3.13	0.83		Tanzania	n/a	n/a
57	Uruguay	3.04	0.81		Uganda	n/a	n/a
58	Mexico	2.75	0.73		Viet Nam	n/a	n/a
59	Thailand	2.54	0.67		Yemen	n/a	n/a
60	Colombia	2.17	0.57		Zambia	n/a	n/a
61	India	1.86	0.49				

**Source:** World Intellectual Property Organization (WIPO) PCT Data, sourced from Organisation for Economic Co-operation and Development (OECD), Patent Database (<http://www.oecd.org/sti/innov/intellectual-property-statistics-and-analysis.htm>). Population data sourced from World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>) For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 4.1.4 Labor productivity per employee

Labor productivity per person employed (2018 US\$) | 2019

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Qatar	170528.53	100.00	62	Jordan	43210.95	24.24
2	Singapore	153123.97	89.64	63	Costa Rica	42003.46	23.52
3	Ireland	152145.65	89.06	64	Tunisia	41985.53	23.51
4	Luxembourg	141060.35	82.46	65	Dominican Republic	40704.34	22.75
5	Norway	139960.22	81.81	66	North Macedonia (Republic of)	40062.58	22.36
6	Saudi Arabia	138682.72	81.05	67	Azerbaijan	37317.34	20.73
7	United States	131783.05	76.94	68	Sri Lanka	36367.74	20.16
8	Kuwait	129337.48	75.49	69	China	35604.34	19.71
9	Hong Kong (China)	124585.60	72.66	70	Thailand	35555.98	19.68
10	Belgium	114405.43	66.60	71	Serbia	34855.53	19.26
11	United Arab Emirates	110221.02	64.11	72	Albania	34572.13	19.10
12	Switzerland	107122.39	62.27	73	Colombia	33219.50	18.29
13	Sweden	106004.00	61.60	74	Brazil	32863.97	18.08
14	France	105106.10	61.07	75	Armenia	30870.17	16.89
15	Netherlands	103412.12	60.06	76	Indonesia	28693.57	15.60
16	Australia	103329.57	60.01	77	Peru	27341.47	14.79
17	Austria	102332.33	59.42	78	Morocco	25966.48	13.98
18	Denmark	101064.91	58.66	79	Georgia	25463.05	13.68
19	Finland	98109.62	56.91	80	Ecuador	24821.52	13.29
20	Iceland	97625.32	56.62	81	Ukraine	24715.03	13.23
21	Germany	96409.84	55.89	82	Philippines	23770.19	12.67
22	Canada	95612.57	55.42	83	Venezuela	21578.56	11.36
23	Bahrain	93765.60	54.32	84	Moldova	21534.95	11.34
24	Italy	93519.23	54.17	85	Guatemala	21138.96	11.10
25	Spain	93007.75	53.87	86	India	20127.21	10.50
26	United Kingdom	92771.96	53.73	87	Jamaica	19840.06	10.33
27	Malta	90602.37	52.44	88	Pakistan	18959.46	9.81
28	Japan	82381.88	47.55	89	Nigeria	16669.75	8.44
29	Cyprus	82067.56	47.36	90	Senegal	14292.63	7.03
30	Korea (Republic of)	80565.77	46.47	91	Zambia	14196.57	6.97
31	Slovakia	80505.01	46.43	92	Viet Nam	13768.41	6.72
32	Israel	80279.21	46.30	93	Ghana	13046.65	6.29
33	Turkey	77482.75	44.63	94	Tajikistan	12938.10	6.22
34	Poland	75650.98	43.54	95	Yemen	12253.26	5.81
35	New Zealand	75614.33	43.52	96	Bangladesh	11713.22	5.49
36	Oman	74898.35	43.09	97	Kyrgyzstan	10388.66	4.71
37	Slovenia	74253.40	42.71	98	Kenya	8600.60	3.64
38	Czech Republic	73846.87	42.47	99	Cambodia	7447.75	2.96
39	Greece	73257.24	42.12	100	Uganda	7179.00	2.80
40	Lithuania	72339.72	41.57	101	Tanzania	6990.08	2.68
41	Estonia	70040.30	40.20	102	Mali	6901.62	2.63
42	Hungary	68737.93	39.43	103	Cameroon	6569.18	2.43
43	Malaysia	68472.93	39.27	104	Zimbabwe	4881.15	1.43
44	Trinidad and Tobago	68391.42	39.22	105	Mozambique	3821.48	0.80
45	Portugal	66396.16	38.03	106	Ethiopia	3537.87	0.63
46	Iran (Islamic Republic of)	65299.26	37.38	107	Madagascar	3260.35	0.46
47	Latvia	65278.51	37.37	108	Malawi	2481.62	0.00
48	Croatia	63880.02	36.54		Botswana	n/a	n/a
49	Romania	61281.79	34.99		El Salvador	n/a	n/a
50	Algeria	61121.84	34.90		Eswatini	n/a	n/a
51	Kazakhstan	59881.77	34.16		Honduras	n/a	n/a
52	Russian Federation	59174.22	33.74		Lao People's Democratic Republic	n/a	n/a
53	Chile	58351.19	33.25		Lebanon	n/a	n/a
54	Bosnia and Herzegovina	57926.77	32.99		Mauritius	n/a	n/a
55	Uruguay	50197.19	28.39		Mongolia	n/a	n/a
56	Egypt	49092.80	27.74		Namibia	n/a	n/a
57	Mexico	47129.48	26.57		Nepal	n/a	n/a
58	South Africa	47053.36	26.52		Panama	n/a	n/a
59	Bulgaria	46987.10	26.48		Paraguay	n/a	n/a
60	Belarus	44674.75	25.11		Rwanda	n/a	n/a
61	Argentina	44186.86	24.82				

Source: The Conference Board, Total Economy Database™ (Adjusted version) ([www.conference-board.org/data/economydatabase](http://www.conference-board.org/data/economydatabase))

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.



## 4.2.1 Happiness

Happiness score (life ladder) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Finland	7.86	100.00	62	Japan	5.79	56.99
2	Denmark	7.65	95.64	63	Argentina	5.79	56.98
3	Switzerland	7.51	92.72	64	Paraguay	5.71	55.32
4	Iceland	7.48	92.04	65	Moldova	5.68	54.68
5	Netherlands	7.46	91.77	66	Peru	5.68	54.62
6	Norway	7.44	91.38	67	Croatia	5.54	51.63
7	Austria	7.40	90.37	68	Russian Federation	5.51	51.16
8	Sweden	7.37	89.93	69	Ghana	5.48	50.49
9	New Zealand	7.37	89.84	70	Pakistan	5.47	50.29
10	Luxembourg	7.24	87.18	71	Mongolia	5.46	50.14
11	United Kingdom	7.23	86.99	72	Dominican Republic	5.43	49.49
12	Australia	7.18	85.81	73	Greece	5.41	48.99
13	Canada	7.18	85.78	74	Hong Kong (China)	5.36	48.01
14	Costa Rica	7.14	85.06	75	Indonesia	5.34	47.55
15	Germany	7.12	84.59	76	Malaysia	5.34	47.52
16	Czech Republic	7.03	82.84	77	Kyrgyzstan	5.30	46.66
17	Ireland	6.96	81.34	78	Viet Nam	5.30	46.62
18	Israel	6.93	80.61	79	Nigeria	5.25	45.72
19	Malta	6.91	80.24	80	Cameroon	5.25	45.69
20	Belgium	6.89	79.88	81	North Macedonia (Republic of)	5.24	45.46
21	United States	6.88	79.68	82	Belarus	5.23	45.33
22	Oman	6.85	79.06	83	Turkey	5.19	44.33
23	France	6.67	75.17	84	Azerbaijan	5.17	43.96
24	Guatemala	6.63	74.35	85	Lebanon	5.17	43.95
25	United Arab Emirates	6.60	73.87	86	China	5.13	43.20
26	Mexico	6.55	72.74	87	Cambodia	5.12	43.00
27	Italy	6.52	72.05	88	Bulgaria	5.10	42.52
28	Spain	6.51	71.99	89	Armenia	5.06	41.76
29	Chile	6.44	70.38	90	Algeria	5.04	41.36
30	Singapore	6.37	69.10	91	Venezuela	5.01	40.58
31	Qatar	6.37	69.10	92	Albania	5.00	40.56
32	Uruguay	6.37	69.04	93	Nepal	4.91	38.59
33	Saudi Arabia	6.36	68.72	94	Morocco	4.90	38.31
34	Lithuania	6.31	67.73	95	South Africa	4.88	38.05
35	Panama	6.28	67.16	96	Lao People's Democratic Republic	4.86	37.53
36	Cyprus	6.28	67.05	97	Namibia	4.83	37.01
37	El Salvador	6.28	67.05	98	Senegal	4.77	35.66
38	Slovenia	6.25	66.49	99	Tunisia	4.74	35.07
39	Slovakia	6.24	66.19	100	Ukraine	4.66	33.42
40	Bahrain	6.23	66.03	101	Georgia	4.66	33.36
41	Poland	6.20	65.49	102	Kenya	4.66	33.29
42	Trinidad and Tobago	6.19	65.29	103	Mozambique	4.65	33.25
43	Brazil	6.19	65.27	104	Jordan	4.64	32.94
44	Romania	6.15	64.44	105	Bangladesh	4.50	30.03
45	Ecuador	6.13	63.96	106	Mali	4.42	28.29
46	Kuwait	6.09	63.25	107	Sri Lanka	4.40	27.97
47	Estonia	6.09	63.20	108	Ethiopia	4.38	27.53
48	Hungary	6.07	62.65	109	Uganda	4.32	26.33
49	Thailand	6.01	61.54	110	Iran (Islamic Republic of)	4.28	25.43
50	Kazakhstan	6.01	61.45	111	Eswatini	4.21	24.04
51	Colombia	5.98	60.95	112	Madagascar	4.07	21.10
52	Serbia	5.94	59.97	113	Zambia	4.04	20.50
53	Portugal	5.92	59.62	114	Egypt	4.01	19.75
54	Honduras	5.91	59.39	115	India	3.82	15.84
55	Latvia	5.90	59.24	116	Zimbabwe	3.62	11.64
56	Jamaica	5.89	59.00	117	Rwanda	3.56	10.49
57	Bosnia and Herzegovina	5.89	58.95	118	Botswana	3.46	8.41
58	Mauritius	5.88	58.83	119	Tanzania	3.45	8.07
59	Philippines	5.87	58.57	120	Malawi	3.33	5.77
60	Korea (Republic of)	5.84	57.97	121	Yemen	3.06	0.00
61	Tajikistan	5.83	57.74				

Source: The Gallup World Poll (2006–2018) (<https://www.gallup.com/analytics/232838/world-poll.aspx>), sourced from Helliwell, J., Layard, R., & Sachs, J. (2019). World Happiness Report 2019, New York: Sustainable Development Solutions Network (<https://worldhappiness.report/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 4.2.2 Freedom to make life choices

Freedom to make life choices score | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Norway	0.96	100.00	62	Albania	0.82	68.45
2	Cambodia	0.96	99.51	63	Moldova	0.82	68.36
3	New Zealand	0.95	97.42	64	Kenya	0.82	67.81
4	Canada	0.95	96.61	65	Botswana	0.82	66.93
5	Kyrgyzstan	0.94	96.41	66	France	0.82	66.64
6	United Arab Emirates	0.94	96.12	67	Cameroon	0.82	66.62
7	Slovenia	0.94	95.74	68	Mexico	0.82	66.60
8	Costa Rica	0.94	95.71	69	Belgium	0.81	64.79
9	Sweden	0.94	95.67	70	Armenia	0.81	64.62
10	Iceland	0.94	94.99	71	Tanzania	0.81	64.50
11	Finland	0.94	94.76	72	Malawi	0.80	62.60
12	Denmark	0.94	94.21	73	Cyprus	0.79	61.51
13	Malta	0.93	92.34	74	Zambia	0.79	60.68
14	Switzerland	0.93	92.12	75	Czech Republic	0.79	60.56
15	Qatar	0.92	91.64	76	Nigeria	0.79	60.50
16	Rwanda	0.92	91.62	77	Chile	0.79	60.19
17	Netherlands	0.92	90.63	78	Ghana	0.78	58.92
18	Philippines	0.92	90.13	79	Georgia	0.78	57.09
19	Oman	0.92	89.78	80	Japan	0.77	56.70
20	Singapore	0.92	89.73	81	Morocco	0.77	56.64
21	Australia	0.92	89.72	82	Pakistan	0.77	56.49
22	Guatemala	0.91	88.21	83	Azerbaijan	0.77	56.47
23	Viet Nam	0.91	88.15	84	Nepal	0.77	55.92
24	Lao People's Democratic Republic	0.91	87.55	85	Zimbabwe	0.76	54.20
25	Bahrain	0.91	87.36	86	Jordan	0.76	54.14
26	Thailand	0.90	87.12	87	Slovakia	0.76	53.03
27	Austria	0.90	86.96	88	Namibia	0.75	52.17
28	Bangladesh	0.90	86.35	89	South Africa	0.75	51.90
29	Mozambique	0.90	85.22	90	Brazil	0.75	51.41
30	China	0.90	84.93	91	North Macedonia (Republic of)	0.74	50.06
31	Paraguay	0.89	83.96	92	Ethiopia	0.74	49.03
32	India	0.89	83.79	93	Serbia	0.74	48.93
33	Estonia	0.89	82.67	94	Mali	0.74	48.30
34	Kuwait	0.88	82.34	95	Russian Federation	0.73	46.47
35	Luxembourg	0.88	82.28	96	Uganda	0.73	46.29
36	Indonesia	0.88	81.23	97	Israel	0.72	45.40
37	Portugal	0.88	80.77	98	Bulgaria	0.72	45.32
38	Germany	0.88	80.65	99	Spain	0.72	44.84
39	Uruguay	0.88	80.50	100	Eswatini	0.71	42.00
40	Malaysia	0.87	80.11	101	Lithuania	0.70	39.44
41	Honduras	0.87	79.56	102	Mongolia	0.70	38.66
42	Ecuador	0.87	78.91	103	Croatia	0.69	37.57
43	Mauritius	0.87	78.35	104	Egypt	0.68	35.44
44	Dominican Republic	0.87	78.28	105	Ukraine	0.66	31.13
45	El Salvador	0.86	77.48	106	Hungary	0.66	30.69
46	Ireland	0.86	77.08	107	Bosnia and Herzegovina	0.66	30.16
47	Panama	0.86	77.08	108	Italy	0.65	28.11
48	Jamaica	0.86	76.90	109	Tunisia	0.65	28.03
49	Trinidad and Tobago	0.86	76.54	110	Belarus	0.64	26.63
50	Saudi Arabia	0.85	75.57	111	Senegal	0.63	23.30
51	Sri Lanka	0.85	75.03	112	Venezuela	0.61	19.04
52	Colombia	0.85	74.60	113	Latvia	0.61	18.43
53	Argentina	0.85	73.48	114	Lebanon	0.61	18.16
54	Romania	0.85	73.30	115	Iran (Islamic Republic of)	0.60	17.30
55	Kazakhstan	0.84	72.15	116	Korea (Republic of)	0.60	16.57
56	United Kingdom	0.84	71.53	117	Algeria	0.58	12.68
57	Tajikistan	0.83	70.26	118	Greece	0.56	8.30
58	Poland	0.83	69.99	119	Yemen	0.55	5.58
59	Hong Kong (China)	0.83	69.95	120	Madagascar	0.55	5.29
60	Peru	0.83	69.71	121	Turkey	0.53	0.00
61	United States	0.82	68.55				

Source: The Gallup World Poll (2006–2018) (<https://www.gallup.com/analytics/232838/world-poll.aspx>), sourced from Helliwell, J., Layard, R., & Sachs, J. (2019). World Happiness Report 2019, New York: Sustainable Development Solutions Network (<https://worldhappiness.report/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

## 4.2.3 Income inequality

Gini index | 2017

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Ukraine	25.00	100.00	62	Russian Federation	37.70	66.58
2	Belarus	25.40	98.95	63	Tanzania	37.80	66.32
2	Slovenia	25.40	98.95	64	Georgia	37.90	66.05
4	Czech Republic	25.90	97.63	65	El Salvador	38.00	65.79
4	Moldova	25.90	97.63	66	Indonesia	38.10	65.53
6	Slovakia	26.50	96.05	67	Mauritius	38.50	64.47
7	Finland	27.10	94.47	68	China	38.60	64.21
8	Kyrgyzstan	27.30	93.95	69	Israel	38.90	63.42
9	Kazakhstan	27.50	93.42	70	Morocco	39.50	61.84
9	Norway	27.50	93.42	70	Uruguay	39.50	61.84
11	Algeria	27.60	93.16	72	Serbia	39.60	61.58
12	Belgium	27.70	92.89	73	Sri Lanka	39.80	61.05
13	Iceland	27.80	92.63	74	Iran (Islamic Republic of)	40.00	60.53
14	Denmark	28.20	91.58	75	Senegal	40.30	59.74
14	Netherlands	28.20	91.58	76	Kenya	40.80	58.42
16	Albania	29.00	89.47	77	Malaysia	41.00	57.89
17	Sweden	29.20	88.95	78	Argentina	41.20	57.37
18	Malta	29.40	88.42	79	United States	41.50	56.58
19	Hungary	30.40	85.79	80	Turkey	41.90	55.53
20	Austria	30.50	85.53	81	Madagascar	42.60	53.68
21	Croatia	31.10	83.95	82	Uganda	42.80	53.16
22	Korea (Republic of)	31.60	82.63	83	Nigeria	43.00	52.63
23	Germany	31.70	82.37	84	Zimbabwe	43.20	52.11
24	Egypt	31.80	82.11	85	Peru	43.30	51.84
24	Ireland	31.80	82.11	86	Ghana	43.50	51.32
24	Lebanon	31.80	82.11	87	Rwanda	43.70	50.79
24	Poland	31.80	82.11	88	Philippines	44.40	48.95
28	Japan	32.10	81.32	89	Ecuador	44.70	48.16
29	Mongolia	32.30	80.79	89	Malawi	44.70	48.16
29	Switzerland	32.30	80.79	91	Dominican Republic	45.70	45.53
31	Bangladesh	32.40	80.53	92	Cameroon	46.60	43.16
32	Estonia	32.70	79.74	92	Chile	46.60	43.16
32	France	32.70	79.74	94	Costa Rica	48.30	38.68
34	Nepal	32.80	79.47	94	Guatemala	48.30	38.68
34	Tunisia	32.80	79.47	94	Mexico	48.30	38.68
36	Bosnia and Herzegovina	33.00	78.95	97	Paraguay	48.80	37.37
36	Mali	33.00	78.95	98	Colombia	49.70	35.00
38	United Kingdom	33.20	78.42	99	Panama	49.90	34.47
39	Pakistan	33.50	77.63	100	Honduras	50.50	32.89
40	Armenia	33.60	77.37	101	Eswatini	51.50	30.26
41	Jordan	33.70	77.11	102	Botswana	53.30	25.53
42	Luxembourg	33.80	76.84	102	Brazil	53.30	25.53
43	Canada	34.00	76.32	104	Mozambique	54.00	23.68
43	Cyprus	34.00	76.32	105	Zambia	57.10	15.53
43	Tajikistan	34.00	76.32	106	Namibia	59.10	10.26
46	Latvia	34.20	75.79	107	South Africa	63.00	0.00
47	Ethiopia	35.00	73.68		Azerbaijan	n/a	n/a
48	Viet Nam	35.30	72.89		Bahrain	n/a	n/a
49	Italy	35.40	72.63		Cambodia	n/a	n/a
50	Portugal	35.50	72.37		Hong Kong (China)	n/a	n/a
51	North Macedonia (Republic of)	35.60	72.11		Jamaica	n/a	n/a
52	India	35.70	71.84		Kuwait	n/a	n/a
53	Australia	35.80	71.58		New Zealand	n/a	n/a
54	Romania	35.90	71.32		Oman	n/a	n/a
55	Greece	36.00	71.05		Qatar	n/a	n/a
56	Spain	36.20	70.53		Saudi Arabia	n/a	n/a
57	Lao People's Democratic Republic	36.40	70.00		Singapore	n/a	n/a
58	Thailand	36.50	69.74		Trinidad and Tobago	n/a	n/a
59	Yemen	36.70	69.21		United Arab Emirates	n/a	n/a
60	Bulgaria	37.40	67.37		Venezuela	n/a	n/a
60	Lithuania	37.40	67.37				

Source: World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>)

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## 4.2.4 Healthy life expectancy at birth

Healthy life expectancy at birth (years) | 2016

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Singapore	76.20	100.00	62	Armenia	66.30	63.74
2	Japan	74.80	94.87	62	Kuwait	66.30	63.74
3	Spain	73.80	91.21	62	Tunisia	66.30	63.74
4	Switzerland	73.50	90.11	65	Latvia	66.20	63.37
5	France	73.40	89.74	66	Lebanon	66.10	63.00
6	Cyprus	73.30	89.38	66	Lithuania	66.10	63.00
7	Canada	73.20	89.01	66	Venezuela	66.10	63.00
7	Italy	73.20	89.01	69	Brazil	66.00	62.64
9	Australia	73.00	88.28	69	Turkey	66.00	62.64
9	Iceland	73.00	88.28	71	Mauritius	65.80	61.90
9	Korea (Republic of)	73.00	88.28	72	Saudi Arabia	65.70	61.54
9	Norway	73.00	88.28	73	Oman	65.60	61.17
13	Israel	72.90	87.91	74	Algeria	65.50	60.81
14	New Zealand	72.80	87.55	74	Belarus	65.50	60.81
15	Luxembourg	72.60	86.81	74	El Salvador	65.50	60.81
16	Austria	72.40	86.08	77	Iran (Islamic Republic of)	65.40	60.44
16	Sweden	72.40	86.08	78	Morocco	65.30	60.07
18	Malta	72.20	85.35	78	Paraguay	65.30	60.07
19	Ireland	72.10	84.98	80	Dominican Republic	65.20	59.71
19	Netherlands	72.10	84.98	81	Azerbaijan	64.90	58.61
21	Greece	72.00	84.62	81	Georgia	64.90	58.61
21	Portugal	72.00	84.62	83	Guatemala	64.20	56.04
23	United Kingdom	71.90	84.25	84	Ukraine	64.00	55.31
24	Denmark	71.80	83.88	85	Moldova	63.60	53.85
25	Finland	71.70	83.52	86	Kyrgyzstan	63.50	53.48
26	Belgium	71.60	83.15	86	Russian Federation	63.50	53.48
26	Germany	71.60	83.15	86	Tajikistan	63.50	53.48
28	Costa Rica	70.90	80.59	89	Kazakhstan	63.40	53.11
29	Slovenia	70.50	79.12	90	Bangladesh	63.30	52.75
30	Chile	69.70	76.19	90	Trinidad and Tobago	63.30	52.75
31	Panama	69.40	75.09	92	Mongolia	61.90	47.62
32	Czech Republic	69.30	74.73	93	Indonesia	61.70	46.89
33	Croatia	69.00	73.63	93	Philippines	61.70	46.89
34	Uruguay	68.80	72.89	95	Nepal	61.30	45.42
35	China	68.70	72.53	96	Egypt	61.10	44.69
36	Qatar	68.60	72.16	97	Cambodia	60.80	43.59
37	Poland	68.50	71.79	98	Rwanda	59.90	40.29
37	United States	68.50	71.79	99	India	59.30	38.10
39	Argentina	68.40	71.43	100	Kenya	58.90	36.63
40	Slovakia	68.30	71.06	101	Senegal	58.80	36.26
41	Estonia	68.20	70.70	102	Madagascar	58.30	34.43
42	Albania	68.10	70.33	103	Lao People's Democratic Republic	57.90	32.97
42	Bahrain	68.10	70.33	104	Pakistan	57.70	32.23
44	Ecuador	67.90	69.60	105	Botswana	57.50	31.50
45	Mexico	67.70	68.86	105	Ethiopia	57.50	31.50
46	Peru	67.50	68.13	107	Tanzania	56.50	27.84
46	Viet Nam	67.50	68.13	108	Ghana	56.40	27.47
48	Serbia	67.40	67.77	109	Malawi	56.20	26.74
49	Bosnia and Herzegovina	67.20	67.03	110	Namibia	55.90	25.64
50	Colombia	67.10	66.67	111	South Africa	55.70	24.91
50	North Macedonia (Republic of)	67.10	66.67	112	Yemen	55.10	22.71
52	Jamaica	66.90	65.93	113	Uganda	54.90	21.98
53	Honduras	66.80	65.57	114	Zimbabwe	54.40	20.15
53	Hungary	66.80	65.57	115	Zambia	54.30	19.78
53	Sri Lanka	66.80	65.57	116	Mozambique	52.20	12.09
53	Thailand	66.80	65.57	117	Cameroon	51.10	8.06
57	United Arab Emirates	66.70	65.20	118	Mali	50.70	6.59
58	Malaysia	66.60	64.84	119	Eswatini	50.20	4.76
58	Romania	66.60	64.84	120	Nigeria	48.90	0.00
60	Bulgaria	66.40	64.10		Hong Kong (China)	n/a	n/a
60	Jordan	66.40	64.10				

Source: World Health Organization, Global Health Observatory (GHO) database (<https://www.who.int/gho>)

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### 4.3.1 Access to basic services

Population with access to basic sanitation services and basic drinking water services (%) | 2015

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Bahrain	100.00	100.00	62	Ukraine	95.01	93.41
1	Israel	100.00	100.00	63	Venezuela	94.83	93.18
1	Kuwait	100.00	100.00	64	Paraguay	94.70	93.00
1	New Zealand	100.00	100.00	65	Albania	94.38	92.59
1	Saudi Arabia	100.00	100.00	66	Ireland	94.32	92.51
1	Singapore	100.00	100.00	67	Georgia	94.21	92.36
7	Austria	99.99	99.98	68	Russian Federationn Federation	93.79	91.80
8	Australia	99.98	99.97	69	Tunisia	93.59	91.54
9	Malta	99.98	99.97	70	Colombia	93.46	91.38
10	Switzerland	99.95	99.93	71	Brazil	93.24	91.09
11	Chile	99.92	99.89	72	Sri Lanka	92.60	90.24
12	Spain	99.92	99.89	73	Bulgaria	92.56	90.18
13	Korea (Republic of)	99.89	99.86	74	El Salvador	92.41	89.99
14	Denmark	99.80	99.73	75	Romania	92.15	89.65
15	Qatar	99.78	99.72	76	Kyrgyzstan	91.98	89.42
16	Portugal	99.76	99.68	77	Azerbaijan	91.95	89.38
17	Belgium	99.74	99.66	78	Iran (Islamic Republic of)	91.83	89.23
18	Finland	99.72	99.64	79	Ecuador	90.99	88.12
19	Sweden	99.65	99.54	80	Algeria	90.57	87.56
20	United States	99.62	99.50	81	Serbia	90.53	87.51
21	Germany	99.61	99.49	82	Dominican Republic	90.29	87.19
22	United Kingdom	99.56	99.41	83	Panama	89.85	86.61
23	Czech Republic	99.51	99.35	84	Viet Nam	89.12	85.64
24	Greece	99.49	99.33	85	Tajikistan	89.11	85.64
25	Japan	99.45	99.28	86	Jamaica	88.98	85.46
26	Estonia	99.43	99.25	87	China	88.22	84.47
27	Iceland	99.39	99.20	88	Honduras	88.04	84.22
28	Cyprus	99.38	99.19	89	Morocco	87.64	83.70
29	Thailand	99.34	99.13	90	Philippines	85.05	80.28
30	France	99.33	99.11	91	South Africa	84.21	79.18
31	Slovenia	99.32	99.11	92	Botswana	83.80	78.64
32	Poland	99.26	99.02	93	Peru	82.74	77.23
33	Canada	99.21	98.95	94	Moldova	82.68	77.16
34	Italy	99.11	98.82	95	Indonesia	81.24	75.25
35	Norway	99.03	98.72	96	Guatemala	79.63	73.13
36	Hungary	99.00	98.67	97	Lao People's Democratic Republic	78.26	71.32
37	Slovakia	98.86	98.50	98	India	76.11	68.49
38	Netherlands	98.86	98.49	99	Pakistan	75.67	67.90
39	Costa Rica	98.76	98.36	100	Nepal	75.43	67.59
40	Luxembourg	98.75	98.34	101	Bangladesh	72.62	63.89
41	United Arab Emirates	98.32	97.78	102	Mongolia	70.90	61.61
42	Hong Kong (China)	98.22	97.65	103	Cambodia	68.87	58.94
43	Jordan	98.14	97.54	104	Senegal	66.08	55.25
44	Malaysia	98.13	97.54	105	Eswatini	63.68	52.09
45	Turkey	98.09	97.48	106	Rwanda	62.14	50.07
46	Croatia	98.06	97.44	107	Yemen	61.26	48.90
47	Uruguay	98.00	97.36	108	Mali	59.03	45.96
48	Mauritius	97.69	96.95	109	Namibia	58.52	45.29
49	Belarus	97.14	96.22	110	Nigeria	55.27	41.00
50	Armenia	96.78	95.75	111	Zimbabwe	50.14	34.23
51	Kazakhstan	96.75	95.71	112	Ghana	49.96	34.00
52	Argentina	96.67	95.61	113	Cameroon	49.73	33.69
53	Egypt	96.65	95.58	114	Malawi	47.74	31.06
54	North Macedonia (Republic of)	96.13	94.90	115	Kenya	43.98	26.11
55	Oman	95.97	94.68	116	Tanzania	43.29	25.20
56	Trinidad and Tobago	95.79	94.45	117	Zambia	43.17	25.03
57	Bosnia and Herzegovina	95.75	94.40	118	Mozambique	42.53	24.19
58	Lebanon	95.54	94.11	119	Uganda	33.79	12.66
59	Lithuania	95.45	94.00	120	Madagascar	32.46	10.90
60	Latvia	95.39	93.92	121	Ethiopia	24.19	0.00
61	Mexico	95.25	93.74				

**Source:** World Bank, World Development Indicators based on WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene (<http://data.worldbank.org/data-catalog/world-development-indicators>)

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## 4.3.2 Pollution

Annual mean levels of fine particulate matter in cities, urban population (micrograms per cubic meter) | 2016

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	New Zealand	5.73	100.00	62	Zimbabwe	19.35	84.62
2	Finland	5.88	99.83	63	Mozambique	19.44	84.53
3	Sweden	5.89	99.82	64	Israel	19.46	84.50
4	Iceland	5.94	99.77	65	Mexico	20.08	83.81
5	Canada	6.48	99.16	66	Honduras	20.12	83.76
6	Estonia	6.74	98.86	67	Poland	20.54	83.28
7	Norway	7.02	98.54	68	Chile	21.03	82.73
8	Australia	7.19	98.36	69	Georgia	21.20	82.54
9	United States	7.40	98.12	70	Botswana	21.24	82.50
10	Portugal	7.87	97.58	71	Madagascar	21.44	82.27
11	Ireland	8.26	97.15	72	Trinidad and Tobago	22.04	81.60
12	Uruguay	8.63	96.73	73	Malawi	22.14	81.48
13	Spain	9.48	95.77	74	Namibia	22.59	80.97
14	Denmark	10.12	95.04	75	El Salvador	23.42	80.03
15	Luxembourg	10.21	94.94	76	South Africa	23.58	79.86
16	Switzerland	10.21	94.94	77	Guatemala	23.59	79.85
17	United Kingdom	10.53	94.59	78	Cambodia	23.98	79.40
18	Paraguay	11.16	93.88	79	Peru	24.27	79.08
19	Panama	11.18	93.85	80	Serbia	24.27	79.07
20	Kazakhstan	11.32	93.70	81	Lao People's Democratic Republic	24.49	78.83
21	Japan	11.45	93.55	82	Korea (Republic of)	24.57	78.73
22	Lithuania	11.49	93.50	83	Zambia	24.70	78.59
23	Brazil	11.49	93.50	84	Tanzania	25.59	77.59
24	France	11.64	93.33	85	Kenya	25.85	77.29
25	Germany	11.71	93.25	86	Thailand	26.23	76.87
26	Argentina	11.83	93.12	87	Bosnia and Herzegovina	27.25	75.71
27	Netherlands	12.07	92.84	88	North Macedonia (Republic of)	28.34	74.48
28	Austria	12.43	92.44	89	Viet Nam	29.66	73.00
29	Latvia	12.72	92.11	90	Armenia	30.48	72.06
30	Belgium	12.88	91.94	91	Lebanon	30.67	71.85
31	Dominican Republic	12.95	91.85	92	Morocco	30.99	71.49
32	Jamaica	13.25	91.51	93	Mali	31.17	71.28
33	Mauritius	13.54	91.19	94	Ghana	31.95	70.41
34	Russian Federation	13.75	90.95	95	Jordan	32.09	70.25
35	Malta	13.97	90.70	96	Ethiopia	34.36	67.69
36	Romania	14.29	90.34	97	Iran (Islamic Republic of)	35.09	66.86
37	Ecuador	14.91	89.64	98	Algeria	35.17	66.78
38	Czech Republic	15.15	89.37	99	Tunisia	35.66	66.23
39	Colombia	15.24	89.26	100	Senegal	37.52	64.12
40	Sri Lanka	15.25	89.26	101	Oman	38.25	63.30
41	Italy	15.28	89.22	102	United Arab Emirates	39.44	61.95
42	Indonesia	15.58	88.89	103	Tajikistan	40.05	61.27
43	Hungary	15.62	88.84	104	Mongolia	40.42	60.85
44	Greece	15.69	88.76	105	Rwanda	40.75	60.48
45	Slovenia	15.81	88.62	106	Turkey	41.97	59.10
46	Venezuela	15.82	88.61	107	Yemen	44.96	55.72
47	Costa Rica	15.85	88.57	108	Uganda	48.41	51.83
48	Moldova	15.97	88.45	109	Nigeria	48.73	51.47
49	Malaysia	16.04	88.37	110	China	49.16	50.99
50	Eswatini	16.26	88.12	111	Pakistan	55.21	44.15
51	Cyprus	16.79	87.52	112	Kuwait	57.17	41.94
52	Croatia	17.03	87.25	113	Bangladesh	58.33	40.63
53	Slovakia	17.54	86.67	114	India	65.20	32.87
54	Albania	17.87	86.30	115	Cameroon	65.26	32.81
55	Belarus	18.06	86.09	116	Bahrain	69.04	28.54
56	Kyrgyzstan	18.12	86.01	117	Saudi Arabia	78.38	18.00
57	Azerbaijan	18.20	85.93	118	Egypt	79.28	16.99
58	Singapore	18.26	85.86	119	Qatar	90.35	4.50
59	Ukraine	18.29	85.83	120	Nepal	94.33	0.00
60	Philippines	18.38	85.72		Hong Kong (China)	n/a	n/a
61	Bulgaria	18.82	85.23				

Source: World Health Organization, Global Health Observatory (GHO) database (<https://www.who.int/gho>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 4.3.3 Road safety

Road traffic death rate (per 100,000 population) | 2016

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Norway	2.70	100.00	61	Panama	14.30	63.75
1	Switzerland	2.70	100.00	63	Sri Lanka	14.90	61.88
3	Singapore	2.80	99.69	64	Bangladesh	15.30	60.62
3	Sweden	2.80	99.69	64	Georgia	15.30	60.62
5	United Kingdom	3.10	98.75	66	Kyrgyzstan	15.40	60.31
6	Netherlands	3.80	96.56	67	Bosnia and Herzegovina	15.70	59.38
7	Denmark	4.00	95.94	68	Nepal	15.90	58.75
8	Germany	4.10	95.62	69	Oman	16.10	58.12
8	Ireland	4.10	95.62	70	Mongolia	16.50	56.88
8	Japan	4.10	95.62	71	Guatemala	16.60	56.56
8	Spain	4.10	95.62	71	Lao People's Democratic Republic	16.60	56.56
12	Israel	4.20	95.31	73	Costa Rica	16.70	56.25
13	Finland	4.70	93.75	73	Honduras	16.70	56.25
14	Cyprus	5.10	92.50	75	Armenia	17.10	55.00
15	Austria	5.20	92.19	76	Kazakhstan	17.60	53.44
16	France	5.50	91.25	76	Kuwait	17.60	53.44
17	Australia	5.60	90.94	78	Cambodia	17.80	52.81
17	Italy	5.60	90.94	79	Russian Federation	18.00	52.19
19	Belgium	5.80	90.31	80	Lebanon	18.10	51.88
19	Canada	5.80	90.31	80	Tajikistan	18.10	51.88
21	Czech Republic	5.90	90.00	80	United Arab Emirates	18.10	51.88
22	Estonia	6.10	89.38	83	China	18.20	51.56
22	Malta	6.10	89.38	84	Colombia	18.50	50.62
22	Slovakia	6.10	89.38	85	Morocco	19.60	47.19
25	Luxembourg	6.30	88.75	86	Brazil	19.70	46.88
26	North Macedonia (Republic of)	6.40	88.44	87	Iran (Islamic Republic of)	20.50	44.38
26	Slovenia	6.40	88.44	88	Ecuador	21.30	41.88
28	Iceland	6.60	87.81	89	Nigeria	21.40	41.56
29	Portugal	7.40	85.31	90	Yemen	21.50	41.25
29	Serbia	7.40	85.31	91	El Salvador	22.20	39.06
31	Hungary	7.80	84.06	92	India	22.60	37.81
31	New Zealand	7.80	84.06	93	Paraguay	22.70	37.50
33	Bahrain	8.00	83.44	94	Tunisia	22.80	37.19
33	Lithuania	8.00	83.44	95	Mali	23.10	36.25
35	Croatia	8.10	83.12	96	Senegal	23.40	35.31
36	Azerbaijan	8.70	81.25	97	Malaysia	23.60	34.69
37	Belarus	8.90	80.62	98	Algeria	23.80	34.06
38	Greece	9.20	79.69	98	Botswana	23.80	34.06
39	Latvia	9.30	79.38	100	Jordan	24.40	32.19
39	Qatar	9.30	79.38	101	Zambia	24.70	31.25
41	Egypt	9.70	78.12	102	Ghana	24.90	30.62
41	Moldova	9.70	78.12	103	South Africa	25.90	27.50
41	Poland	9.70	78.12	104	Viet Nam	26.40	25.94
44	Korea (Republic of)	9.80	77.81	105	Ethiopia	26.70	25.00
45	Bulgaria	10.20	76.56	106	Eswatini	26.90	24.38
46	Romania	10.30	76.25	107	Kenya	27.80	21.56
47	Trinidad and Tobago	12.10	70.62	108	Madagascar	28.60	19.06
48	Indonesia	12.20	70.31	109	Saudi Arabia	28.80	18.44
49	Philippines	12.30	70.00	110	Uganda	29.00	17.81
49	Turkey	12.30	70.00	111	Tanzania	29.20	17.19
51	United States	12.40	69.69	112	Rwanda	29.70	15.62
52	Chile	12.50	69.38	113	Cameroon	30.10	14.38
53	Mexico	13.10	67.50	113	Mozambique	30.10	14.38
54	Uruguay	13.40	66.56	115	Namibia	30.40	13.44
55	Peru	13.50	66.25	116	Malawi	31.00	11.56
56	Albania	13.60	65.94	117	Thailand	32.70	6.25
56	Jamaica	13.60	65.94	118	Venezuela	33.70	3.12
58	Mauritius	13.70	65.62	119	Dominican Republic	34.60	0.31
58	Ukraine	13.70	65.62	120	Zimbabwe	34.70	0.00
60	Argentina	14.00	64.69		Hong Kong (China)	n/a	n/a
61	Pakistan	14.30	63.75				

Source: World Health Organization, Global Health Observatory (GHO) database (<https://www.who.int/gho>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.

### 4.3.4 Reading proficiency in schools

Minimum proficiency in reading, lower primary education (%)| 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Latvia	99.20	100.00	62	Uganda	33.20	32.79
2	Netherlands	98.69	99.48	63	Morocco	33.12	32.71
3	Norway	98.61	99.40	64	Cameroon	29.54	29.06
4	Hong Kong (China)	98.60	99.39	65	Senegal	28.74	28.25
5	Finland	98.29	99.08	66	Dominican Republic	25.90	25.36
6	Sweden	98.07	98.86	67	India	25.10	24.54
7	Poland	98.01	98.79	68	Lao People's Democratic Republic	24.03	23.45
8	Italy	97.86	98.64	69	Malawi	22.00	21.39
9	Ireland	97.69	98.46	70	Ethiopia	10.00	9.17
10	Denmark	97.38	98.15	71	Egypt	5.00	4.07
11	Singapore	97.25	98.02	72	Jordan	3.00	2.04
12	Czech Republic	97.04	97.80	73	Mali	1.90	0.92
13	Portugal	97.01	97.77	74	Zambia	1.00	0.00
14	Spain	96.57	97.32		Algeria	n/a	n/a
15	Slovenia	96.32	97.07		Armenia	n/a	n/a
16	United States	96.09	96.84		Austria	n/a	n/a
17	Canada	95.74	96.48		Azerbaijan	n/a	n/a
18	Australia	94.49	95.20		Belarus	n/a	n/a
19	France	93.72	94.42		Belgium	n/a	n/a
20	Israel	91.02	91.68		Bosnia and Herzegovina	n/a	n/a
21	Chile	90.10	90.74		Bulgaria	n/a	n/a
22	New Zealand	89.97	90.61		Cambodia	n/a	n/a
23	Jamaica	86.50	87.07		Croatia	n/a	n/a
24	Georgia	86.48	87.05		Cyprus	n/a	n/a
25	Malaysia	86.42	86.98		El Salvador	n/a	n/a
26	Sri Lanka	86.00	86.56		Estonia	n/a	n/a
27	Romania	85.93	86.49		Eswatini	n/a	n/a
28	Albania	85.58	86.13		Germany	n/a	n/a
29	Costa Rica	82.40	82.89		Greece	n/a	n/a
30	China	81.80	82.28		Hungary	n/a	n/a
31	Trinidad and Tobago	80.34	80.79		Iceland	n/a	n/a
32	Nigeria	74.62	74.97		Japan	n/a	n/a
33	Malta	73.17	73.49		Kazakhstan	n/a	n/a
34	Uruguay	71.50	71.79		Korea (Republic of)	n/a	n/a
35	Ghana	70.70	70.98		Lebanon	n/a	n/a
36	Bahrain	69.37	69.62		Lithuania	n/a	n/a
37	Colombia	67.90	68.13		Luxembourg	n/a	n/a
38	Peru	67.70	67.92		Madagascar	n/a	n/a
39	United Arab Emirates	67.57	67.79		Mauritius	n/a	n/a
40	Mexico	67.00	67.21		Moldova	n/a	n/a
41	Brazil	66.30	66.50		Mongolia	n/a	n/a
42	Indonesia	66.23	66.42		Mozambique	n/a	n/a
43	Qatar	66.18	66.38		Namibia	n/a	n/a
44	Tunisia	66.00	66.19		Nepal	n/a	n/a
45	Iran (Islamic Republic of)	65.99	66.18		North Macedonia (Republic of)	n/a	n/a
46	Saudi Arabia	63.33	63.48		Philippines	n/a	n/a
47	Ecuador	61.90	62.02		Russian Federation	n/a	n/a
48	Argentina	61.60	61.71		Rwanda	n/a	n/a
49	Oman	59.06	59.13		Serbia	n/a	n/a
50	Kuwait	58.37	58.42		Slovakia	n/a	n/a
51	Kyrgyzstan	57.90	57.94		Switzerland	n/a	n/a
52	Tanzania	55.98	55.99		Tajikistan	n/a	n/a
53	Botswana	55.70	55.71		Thailand	n/a	n/a
54	Honduras	54.30	54.28		Turkey	n/a	n/a
55	Guatemala	53.90	53.87		Ukraine	n/a	n/a
56	Panama	51.10	51.02		United Kingdom	n/a	n/a
57	South Africa	51.08	51.00		Venezuela	n/a	n/a
58	Bangladesh	47.00	46.84		Viet Nam	n/a	n/a
59	Paraguay	42.60	42.36		Yemen	n/a	n/a
60	Kenya	38.10	37.78		Zimbabwe	n/a	n/a
61	Pakistan	35.00	34.62				

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.



### 4.3.5 Math proficiency in schools

Minimum proficiency in mathematics, lower primary education (%) | 2018

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Hong Kong (China)	97.80	100.00	62	Indonesia	17.54	15.93
2	Korea (Republic of)	96.85	99.01	63	Ethiopia	17.00	15.37
3	Japan	95.09	97.17	64	Saudi Arabia	16.21	14.54
4	Singapore	93.39	95.38	65	Jordan	16.00	14.32
5	Norway	85.73	87.36	66	Morocco	15.69	14.00
6	Chile	84.70	86.28	67	Dominican Republic	15.20	13.49
7	China	84.60	86.18	68	Pakistan	14.50	12.75
8	Sri Lanka	84.30	85.86	69	Jamaica	14.00	12.23
9	Ireland	83.85	85.39	70	Kuwait	11.74	9.86
10	Netherlands	82.98	84.48	71	Tunisia	11.29	9.39
11	Finland	82.20	83.66	72	Zambia	9.00	6.99
12	Portugal	81.76	83.20	73	Mali	2.60	0.29
13	Denmark	80.32	81.69	74	Yemen	2.33	0.00
14	Poland	79.83	81.18		Albania	n/a	n/a
15	United States	78.65	79.94		Algeria	n/a	n/a
16	Czech Republic	78.42	79.70		Armenia	n/a	n/a
17	Costa Rica	76.90	78.11		Austria	n/a	n/a
18	Slovenia	75.48	76.63		Azerbaijan	n/a	n/a
19	Sweden	74.91	76.02		Belarus	n/a	n/a
20	Cyprus	73.76	74.82		Belgium	n/a	n/a
21	Malaysia	70.97	71.90		Bosnia and Herzegovina	n/a	n/a
22	Australia	70.23	71.13		Bulgaria	n/a	n/a
23	Mexico	69.70	70.57		Cambodia	n/a	n/a
24	Canada	69.44	70.29		Croatia	n/a	n/a
25	Italy	68.68	69.50		Egypt	n/a	n/a
26	Uruguay	68.10	68.89		El Salvador	n/a	n/a
27	Spain	67.43	68.20		Estonia	n/a	n/a
28	South Africa	64.40	65.02		Eswatini	n/a	n/a
29	Senegal	63.20	63.76		Germany	n/a	n/a
30	Malta	63.13	63.69		Greece	n/a	n/a
31	Brazil	62.60	63.13		Hungary	n/a	n/a
32	Argentina	61.00	61.46		Iceland	n/a	n/a
33	Peru	60.40	60.83		Israel	n/a	n/a
34	New Zealand	58.65	58.99		Kazakhstan	n/a	n/a
35	France	58.07	58.39		Latvia	n/a	n/a
36	Romania	57.03	57.29		Lebanon	n/a	n/a
37	Cameroon	56.95	57.21		Lithuania	n/a	n/a
38	Ghana	55.00	55.17		Luxembourg	n/a	n/a
39	Ecuador	52.20	52.24		Madagascar	n/a	n/a
40	Colombia	52.00	52.03		Mauritius	n/a	n/a
41	Kyrgyzstan	51.30	51.30		Moldova	n/a	n/a
42	Malawi	51.00	50.98		Mongolia	n/a	n/a
43	Georgia	47.26	47.07		Mozambique	n/a	n/a
44	Lao People's Democratic Republic	46.37	46.13		Namibia	n/a	n/a
45	Honduras	44.40	44.07		Nepal	n/a	n/a
46	Thailand	43.41	43.03		North Macedonia (Republic of)	n/a	n/a
47	United Arab Emirates	42.48	42.06		Philippines	n/a	n/a
48	Bahrain	39.93	39.39		Russian Federation	n/a	n/a
49	Guatemala	39.90	39.36		Rwanda	n/a	n/a
49	Panama	39.90	39.36		Serbia	n/a	n/a
51	Qatar	36.39	35.68		Slovakia	n/a	n/a
52	Kenya	36.10	35.38		Switzerland	n/a	n/a
53	Tanzania	35.06	34.28		Tajikistan	n/a	n/a
54	Bangladesh	34.00	33.18		Trinidad and Tobago	n/a	n/a
55	Paraguay	33.50	32.65		Turkey	n/a	n/a
56	Iran (Islamic Republic of)	32.73	31.85		Ukraine	n/a	n/a
57	Oman	32.12	31.20		United Kingdom	n/a	n/a
58	Botswana	28.95	27.88		Venezuela	n/a	n/a
59	Nigeria	28.30	27.21		Viet Nam	n/a	n/a
60	India	27.60	26.47		Zimbabwe	n/a	n/a
61	Uganda	21.00	19.56				

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>)

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### 4.3.6 Use of clean fuels and technology

Proportion of population with primary reliance on clean fuels and technology (%) | 2017

RANK	COUNTRY/ECONOMY	VALUE	SCORE	RANK	COUNTRY/ECONOMY	VALUE	SCORE
1	Algeria	95.00	100.00	1	United Kingdom	95.00	100.00
1	Argentina	95.00	100.00	1	United States	95.00	100.00
1	Armenia	95.00	100.00	1	Uruguay	95.00	100.00
1	Australia	95.00	100.00	1	Venezuela	95.00	100.00
1	Austria	95.00	100.00	66	Colombia	94.00	98.89
1	Azerbaijan	95.00	100.00	66	Moldova	94.00	98.89
1	Bahrain	95.00	100.00	68	Croatia	93.00	97.78
1	Belarus	95.00	100.00	69	Jamaica	92.00	96.67
1	Belgium	95.00	100.00	70	Bulgaria	91.00	95.56
1	Brazil	95.00	100.00	70	Dominican Republic	91.00	95.56
1	Canada	95.00	100.00	72	Panama	90.00	94.44
1	Chile	95.00	100.00	73	El Salvador	89.00	93.33
1	Costa Rica	95.00	100.00	73	Romania	89.00	93.33
1	Cyprus	95.00	100.00	75	Mexico	86.00	90.00
1	Czech Republic	95.00	100.00	75	South Africa	86.00	90.00
1	Denmark	95.00	100.00	77	Kyrgyzstan	83.00	86.67
1	Ecuador	95.00	100.00	77	Tajikistan	83.00	86.67
1	Egypt	95.00	100.00	79	Albania	80.00	83.33
1	Estonia	95.00	100.00	80	Georgia	79.00	82.22
1	Finland	95.00	100.00	81	Thailand	78.00	81.11
1	France	95.00	100.00	82	Peru	76.00	78.89
1	Germany	95.00	100.00	83	Serbia	74.00	76.67
1	Greece	95.00	100.00	84	Viet Nam	70.00	72.22
1	Hungary	95.00	100.00	85	North Macedonia (Republic of)	66.00	67.78
1	Iceland	95.00	100.00	85	Paraguay	66.00	67.78
1	Iran (Islamic Republic of)	95.00	100.00	87	Indonesia	65.00	66.67
1	Ireland	95.00	100.00	88	Bosnia and Herzegovina	63.00	64.44
1	Israel	95.00	100.00	88	Yemen	63.00	64.44
1	Italy	95.00	100.00	90	Botswana	59.00	60.00
1	Japan	95.00	100.00	91	China	58.00	58.89
1	Jordan	95.00	100.00	92	Honduras	54.00	54.44
1	Kazakhstan	95.00	100.00	93	Eswatini	51.00	51.11
1	Korea (Republic of)	95.00	100.00	94	India	45.00	44.44
1	Kuwait	95.00	100.00	95	Namibia	44.00	43.33
1	Latvia	95.00	100.00	95	Pakistan	44.00	43.33
1	Lithuania	95.00	100.00	95	Philippines	44.00	43.33
1	Luxembourg	95.00	100.00	98	Guatemala	43.00	42.22
1	Malaysia	95.00	100.00	99	Mongolia	41.00	40.00
1	Malta	95.00	100.00	100	Senegal	31.00	28.89
1	Mauritius	95.00	100.00	101	Nepal	29.00	26.67
1	Morocco	95.00	100.00	101	Zimbabwe	29.00	26.67
1	Netherlands	95.00	100.00	103	Sri Lanka	28.00	25.56
1	New Zealand	95.00	100.00	104	Cameroon	25.00	22.22
1	Norway	95.00	100.00	104	Ghana	25.00	22.22
1	Oman	95.00	100.00	106	Cambodia	20.00	16.67
1	Poland	95.00	100.00	107	Bangladesh	19.00	15.56
1	Portugal	95.00	100.00	108	Zambia	16.00	12.22
1	Qatar	95.00	100.00	109	Kenya	14.00	10.00
1	Russian Federation	95.00	100.00	110	Nigeria	7.00	2.22
1	Saudi Arabia	95.00	100.00	111	Ethiopia	5.00	0.00
1	Singapore	95.00	100.00	111	Lao People's Democratic Republic	5.00	0.00
1	Slovakia	95.00	100.00	111	Madagascar	5.00	0.00
1	Slovenia	95.00	100.00	111	Malawi	5.00	0.00
1	Spain	95.00	100.00	111	Mali	5.00	0.00
1	Sweden	95.00	100.00	111	Mozambique	5.00	0.00
1	Switzerland	95.00	100.00	111	Rwanda	5.00	0.00
1	Trinidad and Tobago	95.00	100.00	111	Tanzania	5.00	0.00
1	Tunisia	95.00	100.00	111	Uganda	5.00	0.00
1	Turkey	95.00	100.00		Hong Kong (China)	n/a	n/a
1	Ukraine	95.00	100.00		Lebanon	n/a	n/a
1	United Arab Emirates	95.00	100.00				

Source: World Health Organization, Global Health Observatory (GHO) database (<https://www.who.int/gho>)

For some countries, the latest year for which data are available may differ from the year that appears at the top of the page. The cut-off year is 2008.





# Section 4:

**Focus on Taiwan and  
Uzbekistan**



## Focus on Taiwan and Uzbekistan

The Network Readiness Index (NRI) is one of the leading global indices on the application and utilization of information and communication technology (ICT). In its latest version (2019), the NRI Report maps the network-based readiness landscape of 121 economies based on their performances in four different pillars: Technology, People, Governance, and Impact. Each of these pillars is itself comprised of three sub-pillars (see Figure 1) that have been populated by a total of 62 indicators. Pre-specified threshold values have determined what indicators and economies have been eventually included in the NRI 2019 rankings.

Two economies that did not meet the thresholds are Taiwan and Uzbekistan. In the case of the former, there was not enough data for the Impact pillar—primarily because of the lack of data collection by international

organizations, including the United Nations, a core source of primary data for the NRI. In the latter case, there was a lack of data relating to the Technology pillar. Because each economy therefore has sufficient data for three of the four pillars, a partial assessment of their network readiness can certainly be made. Portulans Institute has thus produced the following two case studies that summarize how Taiwan and Uzbekistan, respectively, perform against the economies that are covered in NRI 2019 in those dimensions where data is available.

**Note:** It should be underlined that the rankings displayed are hypothetical and do not have any bearing on the full rankings of the NRI 2019. Rather, they provide an indication of the network readiness of Taiwan and Uzbekistan, as these are not covered in the NRI 2019 rankings themselves, as published in December 2019.

## The Network Readiness of Taiwan

*Taiwan would be **hypothetically** ranked 26th out of 122 economies when considering its performance in only three (of the four) pillars of the NRI: Technology, People, and Governance. Its strongest dimension relates to People, where Taiwan has an impressive showing in the ICT usage and skills of Individuals.*

### INTRODUCTION

NRI 2019 is based on a model comprised of four fundamental pillars: Technology, People, Governance, and Impact, each comprising a list of measurement elements that satisfy that category.

A total of 62 indicators have been identified to populate these 12 sub-pillars. Details about these indicators can be found in Appendix II: Sources and Definitions of the NRI 2019.

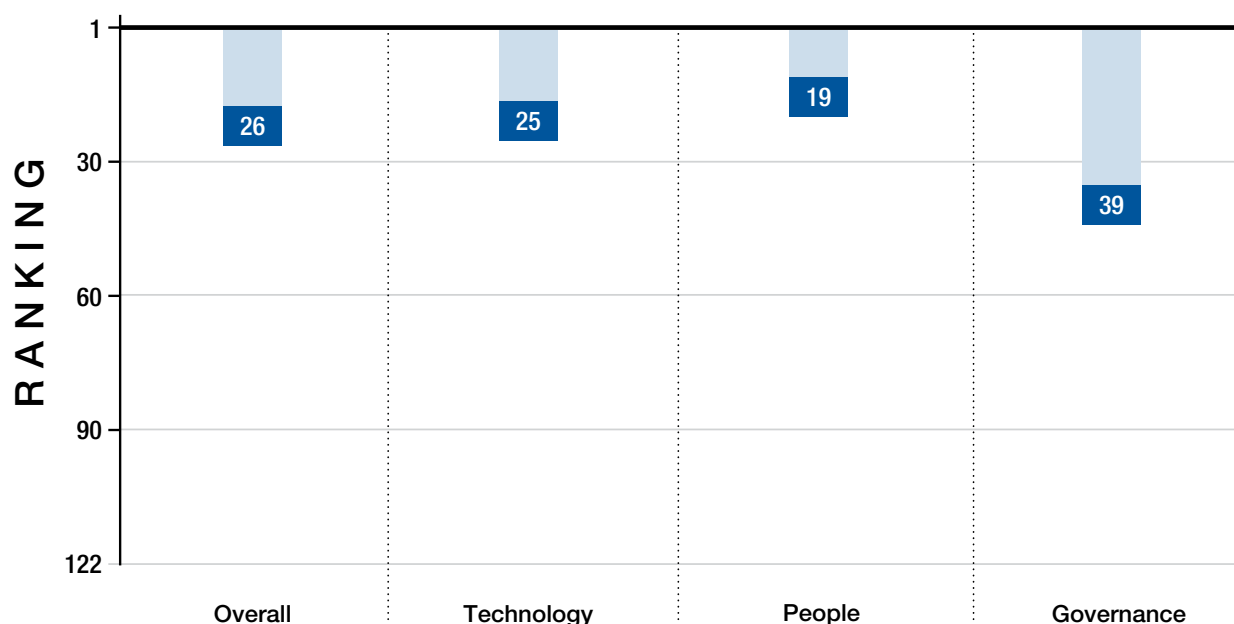
To be included in the official rankings with a higher threshold of data, economies need to have sufficient data on a pre-specified number of dimensions allowing for direct comparison. Because there is not enough readily available data for Taiwan for the Impact pillar from the same sources used for the other economies included in the NRI, Taiwan is not featured in the full NRI rankings. However, since there is sufficient data in the other three

pillars, this case study evaluates Taiwan's network readiness with regard to this subset of dimensions.

### OVERALL PERFORMANCE

Taiwan would be hypothetically ranked 26th out of 122 economies when considering its performance in the Technology, People, and Governance pillars. Its strength lies primarily in the People (19th) pillar, where a top 10 position in the ICT usage and skills of Individuals (5th) is particularly impressive. In the Technology (25th) pillar, Taiwan performs strongly when it comes to the two sub-pillars related to Access (6th) and Future Technologies (16th). Its pillar score would improve with greater digital participation and content creation, which drags down the economy's ranking with respect to Content (54th). Taiwan's weakest pillar, relatively speaking, concerns Governance (39th), with room for improvement in all three sub-pillars: Trust (35th), Regulation (45th), and Inclusion (46th).

Figure 2: Taiwan's performance in three NRI pillars (hypothetical rankings)



## PERFORMANCE AGAINST ITS RELEVANT INCOME GROUP

Taiwan falls into the group of high-income economies based on its GDP per capita (PPP) performance. As can be seen in the radar chart on the data page (see next page), Taiwan's performance—overall and at the pillar level—closely resembles the average of its relevant income group. In terms of overall score, it finds itself just shy of the high-income group average. As would be expected, Taiwan outperforms high-income economies in general when it comes to the People pillar (ranking 19th in its income group), with scores in each sub-pillar above the corresponding averages. By contrast, the economy lags behind most high-income economies in the Governance pillar (ranking 38th), with scores below the averages in all three sub-pillars. As for the Technology pillar, Taiwan ranks 25th among the high-income group, with a score that is marginally lower than the average as a result of its sub-optimal performance in the Content sub-pillar.

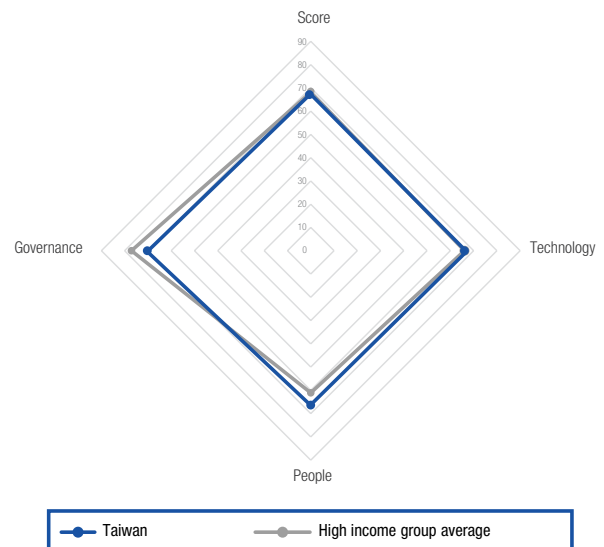
## PERFORMANCE AGAINST ITS RELEVANT REGION

As for its region—Asia & Pacific—Taiwan would be hypothetically ranked 7th out of 22 economies. Its overall score is greater than the regional average, as are its scores in each of the three pillars. Unsurprisingly, the best showing relates to the People pillar, where it ranks 6th regionally. In fact, Taiwan is the region's top performer when it comes to ICT usage and skills of Individuals. When it comes to Technology (ranked 7th regionally), the economy's strengths in the Access and Future Technologies dimensions are equally evident at the regional level (ranking 2nd and 5th, respectively), while the pillar-level score is dragged down by the Content sub-pillar (rank: 8th). As for the Governance pillar, Taiwan is ranked 8th regionally, with its level of Trust (8th) considerably higher than the average regional score.



# Taiwan

	Hypothetical Rank (out of 122)	Score
<b>Network Readiness (excl. Impact pillar)</b>	<b>26</b>	<b>68.06</b>
<b>A. Technology pillar</b>	<b>25</b>	<b>67.41</b>
1st sub-pillar: Access	6	89.65
2nd sub-pillar: Content	54	49.88
3rd sub-pillar: Future Technologies	16	62.70
<b>B. People pillar</b>	<b>19</b>	<b>66.29</b>
1st sub-pillar: Individuals	5	74.99
2nd sub-pillar: Businesses	23	58.89
3rd sub-pillar: Governments	22	64.99
<b>C. Governance pillar</b>	<b>39</b>	<b>70.48</b>
1st sub-pillar: Trust	35	71.45
2nd sub-pillar: Regulation	45	70.33
3rd sub-pillar: Inclusion	46	69.65



## Performance in detail

INDICATOR	RANK/122	SCORE
<b>A. Technology pillar</b>		
<b>1st sub-pillar: Access</b>		
1.1.1 Mobile tariffs	NA	NA
1.1.2 Handset prices	NA	NA
1.1.3 Internet access	18	89.22
1.1.4 4G mobile network coverage	9	99.90
1.1.5 Fixed broadband subscriptions	45	81.74
1.1.6 International internet bandwidth	3	87.72
1.1.7 Internet access in schools	NA	NA
<b>2nd sub-pillar: Content</b>		
1.2.1 Digital participation and content creation*	-	-
1.2.2 Mobile app development	NA	NA
1.2.3 Intellectual property receipts	28	2.47
<b>3rd sub-pillar: Future technologies</b>		
1.3.1 Availability of latest technologies	30	74.71
1.3.2 Company investment in emerging technology	19	67.44
1.3.3 Government procurement of advanced technology products	31	53.76
1.3.4 ICT PCT patent applications	23	52.19
1.3.5 Computer software spending	NA	NA
1.3.6 Robot density	8	65.41
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users	13	92.35
2.1.2 Active mobile-broadband subscriptions	23	43.01
2.1.3 Use of virtual social networks	4	89.60
2.1.4 Tertiary enrolment	NA	NA
2.1.5 Adult literacy rate	NA	NA
2.1.6 ICT skills	NA	NA
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website	NA	NA
2.2.2 Internet shopping	30	54.82

INDICATOR	RANK/122	SCORE
2.2.3 Professionals	52	31.49
2.2.4 Technicians and associate professionals	10	78.38
2.2.5 Extent of staff training	29	64.01
2.2.6 R&D expenditure by businesses	3	65.74
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services	NA	NA
2.3.2 Publication and use of open data	NA	NA
2.3.3 ICT use and government efficiency	22	68.80
2.3.4 R&D expenditure by governments and higher education	18	61.18
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law	26	78.70
3.1.2 Software piracy rate	25	74.32
3.1.3 Secure Internet servers	NA	NA
3.1.4 Cybersecurity	NA	NA
3.1.5 Online trust and safet	53	61.34
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality	20	81.27
3.2.2 Ease of doing business	15	89.66
3.2.3 Legal framework's adaptability to digital business models	36	55.74
3.2.4 E-commerce legislation	NA	NA
3.2.5 Social safety net protection	43	54.66
3.2.6 ICT regulatory environment	NA	NA
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation	NA	NA
3.3.2 Socioeconomic gap in use of digital payments	33	83.19
3.3.3 Availability of local online content	24	80.46
3.3.4 Gender gap in internet use	41	61.54
3.3.5 Rural gap in use of digital payments	88	53.40

\* Confidential data.

# The Network Readiness of Uzbekistan

Uzbekistan would be **hypothetically** ranked 83rd out of 122 economies when considering its performance in only three (of the four) pillars of the NRI: People, Governance, and Impact. Its strongest dimension relates to Impact, where Uzbekistan makes it into the top quartile when it comes to Quality of Life.

## INTRODUCTION

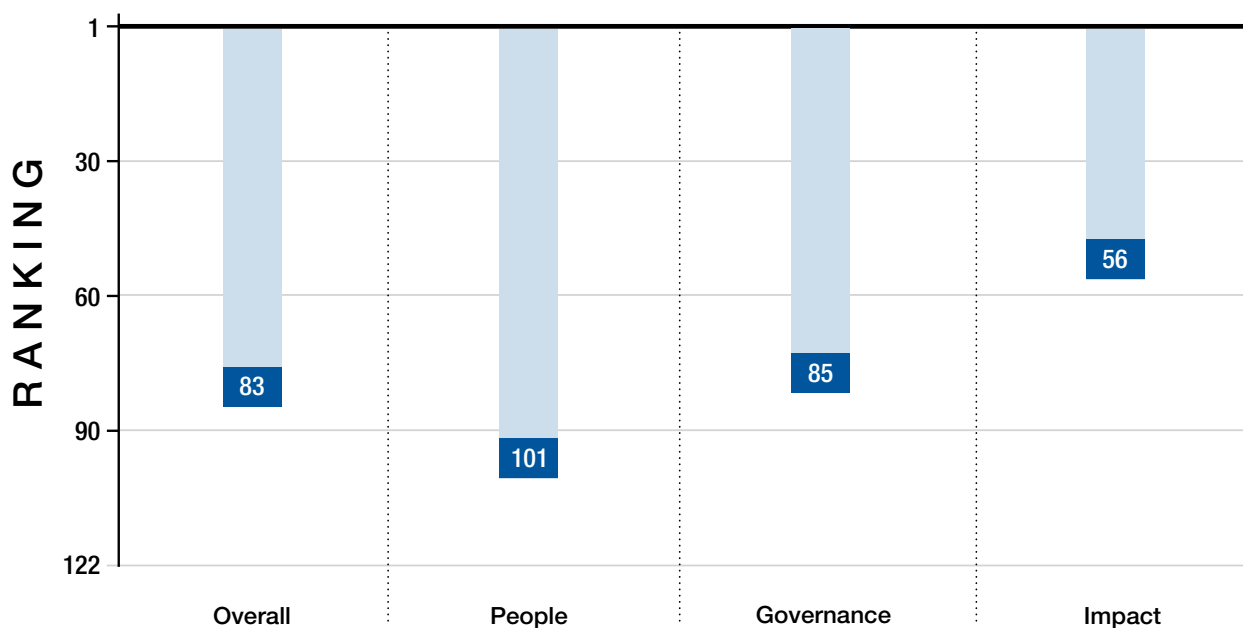
NRI 2019 is based on a model comprised of four fundamental pillars: Technology, People, Governance, and Impact. Economies need to have sufficient data on a pre-specified number of dimensions in order to be included in the index. Because there is not enough readily available data on the Technology pillar, Uzbekistan does not feature in the full NRI rankings. However, since there is sufficient data in the other three pillars, this case study evaluates the country's network readiness with regard to this subset of dimensions.

## OVERALL PERFORMANCE

Uzbekistan would be hypothetically ranked 83rd out of 122 economies when considering its performance in the

People, Governance, and Impact pillars. As can be seen in Figure 3, its greatest strength relates to the Impact (56th) pillar. More specifically, Uzbekistan has a high level of Quality of Life (26th) and performs relatively well in terms of SDG Contribution (43rd). The strong showing in these sub-pillars is, however, offset by a below-par performance in the Economy (115th) sub-pillar. The country's greatest challenge in raising network readiness concerns the People (101st) pillar, where there is room for improvement in ICT usage and skills at the level of Individuals (94th), Businesses (122nd), and Governments (68th). As for the Governance (85th) pillar, more could be done to enhance Regulation (111th) in particular.

Figure 3: Uzbekistan's performance in three NRI pillars (hypothetical rankings)



## PERFORMANCE AGAINST ITS RELEVANT INCOME GROUP

Uzbekistan falls into the group of lower-middle-income economies based on its GDP per capita (PPP) performance. As can be seen in the radar chart on the

data page (see next page), Uzbekistan has a higher aggregate score across the three pillars than lower-middle-income countries on average: 45.1 against 39.1. Consequently, within its income group it would be among the better performers, with a hypothetical rank of 7th out of 26 countries. The country's strength in the Impact

pillar is evident in a comparison against lower-middle-income countries (rank: 3rd). This is particularly the case when it comes to the sub-pillars Quality of Life and SDG Contribution, where Uzbekistan is the income-group leader. The country also does very well in the Inclusion sub-pillar (ranking 2nd within its income group), which contributes to a score in the Governance pillar that is greater than the average lower-middle-income country (ranking 9th out of the 26 countries). As for the People pillar, it lags behind most countries within its income group (rank: 16th). In fact, among all lower-middle-income countries, it is the worst-performing country in the sub-pillar related to ICT usage and skills of Businesses.

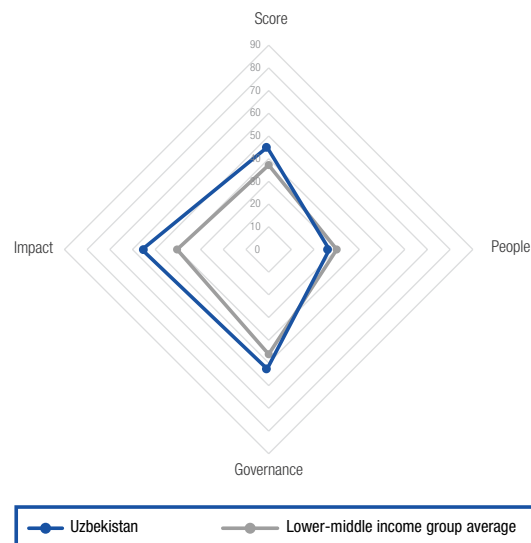
## PERFORMANCE AGAINST ITS RELEVANT REGION

As for its region—the Commonwealth of Independent States (CIS)—Uzbekistan would be ranked 6th out of 8

economies. The only dimension where it outperforms its region is, unsurprisingly, Impact (rank: 3rd). It is the regional leader when it comes to the Quality of Life sub-pillar and is also one of the better performers with respect to SDG Contribution (regional rank of 3). Uzbekistan ranks 6th in the Governance pillar out of all the countries in the CIS group, with strong showings in the Trust and Inclusion sub-pillars (ranking 3rd in both), offset by the region's lowest score in the Regulation sub-pillar. As for the country's weakest dimension—People—it is only ahead of neighboring Tajikistan. Uzbekistan has the region's lowest score when it comes to the Businesses sub-pillar and the second-lowest score in the Individuals sub-pillar. It has a higher-than-average score in terms of ICT usage and skills of Governments, albeit it ranks 5th within its region.

# Uzbekistan

	Hypothetical Rank (out of 122)	Score
<b>Network Readiness (excl. Technology pillar)</b>	<b>83</b>	<b>45.07</b>
<b>B. People pillar</b>	<b>101</b>	<b>27.44</b>
1st sub-pillar: Individuals	94	36.13
2nd sub-pillar: Businesses	122	3.12
3rd sub-pillar: Governments	68	43.08
<b>C. Governance pillar</b>	<b>85</b>	<b>52.60</b>
1st sub-pillar: Trust	80	49.27
2nd sub-pillar: Regulation	111	39.95
3rd sub-pillar: Inclusion	47	68.58
<b>D. Impact pillar</b>	<b>56</b>	<b>55.17</b>
1st sub-pillar: Economy	115	4.86
2nd sub-pillar: Quality of Life	26	74.24
3rd sub-pillar: SDG Contribution	43	86.42



## Performance in detail

INDICATOR	RANK/122	SCORE
<b>B. People pillar</b>		
<b>1st sub-pillar: Individuals</b>		
2.1.1 Internet users	89	47.31
2.1.2 Active mobile-broadband subscriptions	82	23.10
2.1.3 Use of virtual social networks	117	3.43
2.1.4 Tertiary enrolment	104	6.81
2.1.5 Adult literacy rate	1	100.00
2.1.6 ICT skills	NA	NA
<b>2nd sub-pillar: Businesses</b>		
2.2.1 Firms with website	104	5.19
2.2.2 Internet shopping	109	2.34
2.2.3 Professionals	NA	NA
2.2.4 Technicians and associate professionals	NA	NA
2.2.5 Extent of staff training	NA	NA
2.2.6 R&D expenditure by businesses	65	1.83
<b>3rd sub-pillar: Governments</b>		
2.3.1 Government online services	48	76.93
2.3.2 Publication and use of open data	NA	NA
2.3.3 ICT use and government efficiency	NA	NA
2.3.4 R&D expenditure by governments and higher education	91	9.24
<b>C. Governance pillar</b>		
<b>1st sub-pillar: Trust</b>		
3.1.1 Rule of law	116	28.85
3.1.2 Software piracy rate	NA	NA
3.1.3 Secure Internet servers	78	48.03
3.1.4 Cybersecurity	54	70.94
3.1.5 Online trust and safety	NA	NA
<b>2nd sub-pillar: Regulation</b>		
3.2.1 Regulatory quality	117	27.12
3.2.2 Ease of doing business	63	70.13

INDICATOR	RANK/122	SCORE
3.2.3 Legal framework's adaptability to digital business models	NA	NA
3.2.4 E-commerce legislation	100	50.00
3.2.5 Social safety net protection	NA	NA
3.2.6 ICT regulatory environment	120	12.54
<b>3rd sub-pillar: Inclusion</b>		
3.3.1 E-Participation	59	72.61
3.3.2 Socioeconomic gap in use of digital payments	61	69.64
3.3.3 Availability of local online content	NA	NA
3.3.4 Gender gap in internet use	NA	NA
3.3.5 Rural gap in use of digital payments	72	63.48
<b>D. Impact pillar</b>		
<b>1st sub-pillar: Economy</b>		
4.1.1 Medium and high-tech industry	NA	NA
4.1.2 High-tech exports	NA	NA
4.1.3 PCT patent applications	85	0.02
4.1.4 Labour productivity per employee	89	9.70
<b>2nd sub-pillar: Quality of Life</b>		
4.2.1 Happiness	41	65.57
4.2.2 Freedom to make life choices	1	100.00
4.2.3 Income inequality	NA	NA
4.2.4 Healthy life expectancy at birth	83	57.14
<b>3rd sub-pillar: SDG Contribution</b>		
4.3.1 Access to basic services	37	98.57
4.3.2 Pollution	84	77.92
4.3.3 Road safety	47	72.50
4.3.4 Reading proficiency in schools	NA	NA
4.3.5 Maths proficiency in schools	NA	NA
4.3.6 Use of clean fuels and technology	69	96.67





# Appendix I:

## Indices Review





# Analysis

During the development process of this renewed Network Readiness Index, the team has reviewed and benchmarked over 30 other general or technology-specific indices, and reviewed the metrics and methodology used.

This exercise pointed to the lack of country-level data in various metrics that could inform our methodological pillars. It also showed a greater focus on infrastructure related indicators—from the presence of connectivity to its affordability, adoption, and in some cases its relevance (e.g. existence of content in a local language). Another conclusion is the great dependency on survey instruments that focus on perceptions of one specific technology adoption (e.g. artificial intelligence, fintech, digital health tools) without enough country granularity.

Primary sources are also scarce regarding a people-centric approach on technology and regulatory choices, and on assessments of those choices that could provide more correlational data for impact measurements. A comparatively smaller number of indices give priority to the human factor of network readiness and try to capture the impact of people's choices regarding technology and governance on economic growth, and more generally to the contribution of network readiness to the achievement of broader goals, such as those in the SDGs.

Some relevant indexes used in the design process of the renewed NRI were the previous version of the NRI (from 2012 until the last ranking published in 2016), ITU's ICT Development Index (IDI), the Digital Knowledge Economy Index (DKEI), the Internet Inclusiveness Index, the Information Economy Report (IER), the extinct Web Index, and one of its spin-offs, the Internet Affordability Report.

The NRI has provided a methodological framework that identifies the enabling factors for countries to fully benefit from information and communication technology (ICT) advances while highlighting the joint responsibility of all social actors, namely individuals, businesses, and governments, in this respect. Back in 2009-2010, NRI had established itself as one of the most comprehensive assessments of ICT readiness, covering 133 economies from the developing and developed world, representing over 98 percent of global GDP. In its previous installation, the NRI was structured into 4 categories, 10 sub-categories, and 53 indicators.

The Digital Knowledge Economy Index (DKEI) is quantified by measuring content creation and participation through digital platforms, namely the code sharing platform GitHub, the crowdsourced encyclopedia Wikipedia, and Internet domain registrations and estimating a fifth sub-index for the World Bank Knowledge Economy Index (KEI) (Ojanperä, Graham, & Zook, 2019). The data for the digital participation and content creation sub-index is obtained through bespoke methods that allow the scraping of information directly from websites and other online resources.

This approach complements conventional data sources such as national statistics and expert surveys and helps reflect the underlying digital content creation, capacities, and skills of the population. An index that combines traditional and novel digitally based data sources can provide a more revealing view of the status of the world's digital knowledge economy and highlight where the (un)availability of digital resources may actually reinforce inequalities in the age of data.

The Web Index Report was published by the World Wide Web Foundation between 2012 and 2014. The index covered 86 countries in its last edition and aimed to assess Internet issues such as universal access, freedom and openness, relevant content, and empowerment. The report's focus was a core reason we reviewed it, since some of the elements covered are the closest to some of the SDGs. For instance, in its last edition in 2014, issues related to gender, open data, privacy rights, and censorship had been included. The index uses primary and secondary sources, including surveys by experts. This could have been considered the most comprehensive of the indices aimed at measuring the Internet's social, developmental, economic, and political dimensions. The report only uses indicators that fulfill five core requirements:

1. Data providers have to be credible and reliable organizations.
2. The release of data should be regular (at least every three years).
3. There should be at least two data years for each indicator, so to make credible statistical inferences,
4. Data should not be older than three years.

5. The data should cover at least 2/3 of the sample countries in order to reduce possible comparative bias due to a narrow coverage. The methodology was substantially revised and strengthened in 2013.

The Affordability Report is an annual report produced by the Alliance for Affordable Internet (A4AI). It represents an ongoing effort to understand why some countries have succeeded in making Internet access more affordable, accessible, and universal, and what others can do to catch up quickly. The report provides analysis of relevant issues to understand key barriers to affordability, and develops actionable recommendations focused on how best to reduce prices and progress toward universal access. To do this, A4AI conducts biannual policy surveys and annually collects secondary data on indicators proven to lead to lower Internet prices. The 2019 Affordability Report examines these policies across 61 low- and middle-income countries, and produces an Affordability Drivers Index (ADI), which ranks each of these countries on a scale of 0-100 based on an in-depth analysis of communications infrastructure and access and affordability indicators. To allow for a fair comparison, country scores in the report are disaggregated by income group.

The ICT Development Index (IDI), which has been published annually since 2009, is a composite index that until 2017, combined 11 indicators into one benchmark measure. It is used to monitor and compare developments in ICT between countries and over time.

The main objectives of the IDI are to measure: (i) the level and evolution over time of ICT developments within countries and the experience of those countries relative to others; (ii) progress in ICT development in both developed and developing countries; (iii) the digital divide, i.e. differences between countries in terms of their levels of ICT development; and (iv) the development potential of ICTs and the extent to which countries can make use of them to enhance growth and development in the context of available capabilities and skills.

It relies on a limited set of data, which can be established with reasonable confidence in countries at all levels of development. IDI is divided into the three sub-indices (Access, Use, and Skills), and a total of 11 indicators.

However, the IDI, unlike the A4AI's report ranking, does not track nor discuss the technological or regulatory choices made by a country.

# Indices Indicators Comparison

NRI 2012>		
4	10	53
CATEGORY	SUB-CATEGORY	INDICATOR
ENVIRONMENT	POLITICAL AND REGULATORY ENVIRONMENT	1.01 Effectiveness of law-making bodies 1.02 Laws relating to ICTs 1.03 Judicial independence* 1.04 Efficiency of legal system in settling disputes “1.05 Efficiency of legal system in challenging regulations” 1.06 Intellectual property protection 1.07 Software piracy rate, % software installed 1.08 Number of procedures to enforce a contract 1.09 Number of days to enforce a contract
	BUSINESS AND INNOVATION ENVIRONMENT	2.01 Availability of latest technologies 2.02 Venture capital availability* 2.03 Total tax rate, % profits 2.04 Number of days to start a business 2.05 Number of procedures to start a business 2.06 Intensity of local competition* 2.07 Tertiary education gross enrollment rate, % 2.08 Quality of management schools* 2.09 Government procurement of advanced technology products
READINESS	INFRASTRUCTURE	3.01 Electricity production, kWh/capita 3.02 Mobile network coverage, % population 3.03 International Internet bandwidth, kb/s per user 3.04 Secure Internet servers per million population
	AFFORDABILITY	4.01 Prepaid mobile cellular tariffs, PPP \$/min. 4.02 Fixed broadband Internet tariffs, PPP \$/month 4.03 Internet and telephony sectors competition index, 0–2

NRI 2012>		
4	10	53
CATEGORY	SUB-CATEGORY	INDICATOR
READINESS	SKILLS	5.01 Quality of education system* 5.02 Quality of math and science education 5.03 Secondary education gross enrollment rate, % 5.04 Adult literacy rate, %
USAGE	INDIVIDUAL USAGE	6.01 Mobile phone subscriptions per 100 population 6.02 Percentage of individuals using the Internet 6.03 Percentage of households with computer 6.04 Households with Internet access, % 6.05 Fixed broadband Internet subscriptions per 100 population 6.06 Mobile broadband Internet subscriptions per 100 population 6.07 Use of virtual social networks
	BUSINESS USAGE	7.01 Firm-level technology absorption 7.02 Capacity for innovation* 7.03 PCT patent applications per million population 7.04 ICT use for business-to-business transactions 7.05 Business-to-consumer Internet use* 7.06 Extent of staff training*
	GOVERNMENT USAGE	8.01 Importance of ICTs to government vision 8.02 Government Online Service Index, 0–1 (best) 8.03 Government success in ICT promotion*
IMPACT	ECONOMIC IMPACTS	9.01 Impact of ICTs on business models* 9.02 ICT PCT patent applications per million population 9.03 Impact of ICTs on organizational models* 9.04 Knowledge intensive jobs, % workforce
	SOCIAL IMPACTS	10.01 Impact of ICTs on access to basic services* 10.02 Internet access in schools* 10.03 ICT use and government efficiency* 10.04 E-Participation Index, 0–1 (best)

Source:

[https://www.itu.int/net/wsis/implementation/2010/forum/geneva/docs/publications/GITR%202009-2010\\_Full\\_Report\\_final.pdf](https://www.itu.int/net/wsis/implementation/2010/forum/geneva/docs/publications/GITR%202009-2010_Full_Report_final.pdf)

NRI >2009			Same or potentially similar to (NRI2012):
3	9	68	
CATEGORY	SUB-CATEGORY	INDICATOR	
ENVIRONMENT	READINESS	1.01 Venture capital availability 1.02 Financial market sophistication 1.03 Availability of latest technologies 1.04 State of cluster development 1.05 Utility patents (hard data) 1.06 High-tech exports (hard data)	2.02 none 2.01 none 7.03 and 9.02 none
	MARKET ENVIRONMENT	1.07 Burden of government regulation 1.08 Extent and effect of taxation. 1.09 Total tax rate (hard data) 1.10 Time required to start a business (hard data). "1.11 Number of procedures required to start a business business (hard data) ." 1.12 Intensity of local competition 1.13 Freedom of the press 1.14 Accessibility of digital content	none (1.01>1.05?) none 2.03 2.04 2.05 2.06 none none
ENVIRONMENT	POLITICAL AND REGULATORY ENVIRONMENT	2.01 Effectiveness of law-making bodies 2.02 Laws relating to ICT 2.03 Judicial independence 2.04 Intellectual property protection 2.05 Efficiency of legal framework for disputes settling 2.06 Property rights 2.07 Quality of competition in the ISP sector 2.08 Number of procedures to enforce a contract (hard data) 2.09 Time to enforce a contract (hard data)	1.01 1.02 1.03 1.06 1.04 see 1.06 4.03 (2.06?) 1.08 1.09
	INFRASTRUCTURE ENVIRONMENT	3.01 Telephone lines (hard data) 3.02 Secure Internet servers (hard data) 3.03 Electricity production (hard data) 3.04 Availability of scientists and engineers 3.05 Quality of scientific research institutions 3.06 Tertiary education enrollment (hard data) 3.07 Education expenditure (hard data)	none 3.04 3.01 none none 2.07 none
READINESS	INDIVIDUAL READINES	4.01 Quality of math and science education	5.02

NRI >2009			Same or potentially similar to (NRI2012):
3	9	68	
CATEGORY	SUB-CATEGORY	INDICATOR	
READINESS	INDIVIDUAL READINESS	4.02 Quality of the educational system	5.01
		4.03 Internet access in schools	10.02
		4.04 Buyer sophistication	none
		4.05 Residential telephone connection charge (hard data)	none
		4.06 Residential monthly telephone subscription (hard data)	none
		4.07 High-speed monthly broadband subscription (hard data)	see 6.05 and 6.06
		4.08 Lowest cost of broadband (hard data)	see 6.05 and 6.06
		4.09 Cost of mobile telephone call (hard data)	none
		BUSINESS READINESS	5.01 Extent of staff training
	5.02 Local availability of specialized research and training services		none
5.03 Quality of management schools	2.08		
5.04 Company spending on R&D	none		
5.05 University-industry research collaboration	none		
5.06 Business telephone connection charge (hard data)	none		
5.07 Business monthly telephone subscription (hard data)	none		
5.08 Local supplier quality	none		
5.09 Local supplier quantity	none		
5.10 Computer, communications, and other services imports (hard data)	none		
GOVERNMENT READINESS	6.01 Government prioritization of ICT	see 8.01	
	6.02 Government procurement of advanced technology products	2.09	
	6.03 Importance of ICT to government vision of the future	see 8.01	
	6.04 E-Government Readiness Index (hard data)	see 8.02	
USAGE	INDIVIDUAL USAGE	7.01 Mobile telephone subscribers (hard data)	none
		7.02 Personal computers (hard data)	see 6.03
		7.03 Broadband Internet subscribers (hard data)	see 6.05 and 6.06
		7.04 Internet users (hard data)	6.02
		7.05 Internet bandwidth (hard data)	none

NRI >2009			Same or potentially similar to (NRI2012):
3	9	68	
CATEGORY	SUB-CATEGORY	INDICATOR	
USAGE	BUSINESS USAGE	8.01 Prevalence of foreign technology licensing	none
		8.02 Firm-level technology absorption	7.01
		8.03 Capacity for innovation	7.02
		8.04 Availability of new telephone lines	none
		8.05 Extent of business Internet use	none
	GOVERNMENT USAGE	9.01 Government success in ICT promotion	8.03
		9.02 Availability of government online services	see 10.01
		9.03 ICT use and government efficiency	10.03

Source:

[http://www3.weforum.org/docs/GITR2016/WEF\\_GITR\\_Full\\_Report.pdf](http://www3.weforum.org/docs/GITR2016/WEF_GITR_Full_Report.pdf)

FACEBOOK			Same or potentially similar to (NRI2012):
4	11	53	
CATEGORY	SUB-CATEGORY	INDICATOR	
AVAILABILITY	1.1 USAGE	1.1.1 Internet users	6.02
		1.1.2 Fixed-line broadband subscribers	6.05
		1.1.3 Mobile subscribers	6.01 (and 6.06)
		1.1.4 Gender gap in Internet access	none
		1.1.5 Gender gap in mobile phone access	none
	1.2 QUALITY	1.2.1 Average fixed broadband upload speed	see 3.03
		1.2.2 Average fixed broadband download speed	none
		1.2.3 Average fixed broadband latency	none
		1.2.4 Average mobile upload speed	none
		1.2.5 Average mobile download speed	none
		1.2.6 Average mobile latency	none
		1.2.7 Bandwidth capacity	see 3.03
	1.3 INFRASTRUCTURE	1.3.1 Network coverage (min. 2G)	3.02
		1.3.2 Network coverage (min. 3G)	3.02
		1.3.3 Network coverage (min. 4G)	3.02
		1.3.4 Government initiatives to make Wi-Fi available	none
		1.3.5 Private-sector initiatives to make Wi-Fi available	none
		1.3.6 Internet exchange points	none

FACEBOOK			Same or potentially similar to (NRI2012):
4	11	53	
CATEGORY	SUB-CATEGORY	INDICATOR	
	<b>1.4 ELECTRICITY</b>	1.4.1 Urban electricity access 1.4.2 Rural electricity access	see 3.01 see 3.01
<b>AFFORDABILITY</b>	<b>2.1 PRICE</b>	2.1.1 Smartphone cost (handset) 2.1.2 Mobile phone cost (prepaid tariff) 2.1.3 Mobile phone cost (postpaid tariff) 2.1.4 Fixed-line monthly broadband cost	none 4.01 none 4.02
	<b>2.2 COMPETITIVE ENVIRONMENT</b>	2.2.1 Average revenue per user (ARPU, annualized) 2.2.2 Wireless operators' market share 2.2.3 Broadband operators' market share	see 2.06 and 4.03 see 2.06 and 4.03 see 2.06 and 4.03
<b>RELEVANCE</b>	<b>3.1 LOCAL CONTENT</b>	3.1.1 Availability of basic information in the local language 3.1.2 Concentration of websites using country-level domains 3.1.3 Availability of e-government services in the local language	none none (but see 7.01) see 8.02 and 10.1
	<b>3.2 RELEVANT CONTENT</b>	3.2.1 e-Finance content 3.2.2 Value of e-finance 3.2.3 e-Health content 3.2.4 Value of e-health 3.2.5 e-Entertainment usage 3.2.6 e-Commerce content 3.2.7 Value of e-Commerce	none none none none none none none
<b>READINESS</b>	<b>4.1 LITERACY</b>	4.1.1 Level of literacy 4.1.2 Educational attainment 4.1.3 Support for digital literacy 4.1.4 Level of web accessibility	5.04 see 2.07, 2.08, 5.01, 5.02, 5.03 none see 10.1
	<b>4.2 TRUST &amp; SAFETY</b>	4.2.1 Privacy regulations 4.2.2 Trust in online privacy	none none



FACEBOOK			Same or potentially similar to (NRI2012):
4	11	53	
CATEGORY	SUB-CATEGORY	INDICATOR	
READINESS	4.2 TRUST & SAFETY	4.2.3 Trust in government websites and apps 4.2.4 Trust in nongovernment websites and apps 4.2.5 Trust in information from social media 4.2.6 e-Commerce safety	none none see 6.07 see 3.04 and 7.05
	4.3 POLICY	4.3.1 National female e-inclusion policies = 4.3.1.1 Comprehensive female e-inclusion plan + 4.3.1.2 Female digital skills training plan + 4.3.1.3 Female STEM education plan 4.3.2 Government e-inclusion strategy 4.3.3 National broadband strategy 4.3.4 Funding for broadband buildout "4.3.5 Spectrum policy approach: 4.3.5.1 Technology-neutral policy for spectrum use + 4.3.5.2 Unlicensed spectrum + 4.3.5.2 Unlicensed spectrum policy policy" 4.3.6 National digital identification system	none see 1.02 and 8.01 see 1.02 and 8.01 see 8.01 see 1.02 and 8.01 see 1.02 and 8.01

Source:

<https://theinclusiveinternet.eiu.com/assets/external/downloads/3i-methodology.pdf>

HUAWEI			Same or potentially similar to (NRI2012):
4	24	53	
CATEGORY	SUB-CATEGORY	INDICATOR	
SUPPLY	FUNDAMENTALS	ICT Investment	none
		Telecom Investment	none
		ICT Laws	1.02
		International Internet Bandwidth	3.03
BROADBAND	BROADBAND	Fiber Optic	none
		4G Coverage	none
DATA CENTERS	DATA CENTERS	Data Center Investment	none
CLOUD	CLOUD	Cloud Investment	none

HUAWEI			Same or potentially similar to (NRI2012):
4	24	53	
CATEGORY	SUB-CATEGORY	INDICATOR	
SUPPLY	BIG DATA	Big Data Investment	none
	IOT	IoT Investment	none
DEMAND	FUNDAMENTALS	App Downloads	none
		Smartphone Penetration	see 6.01
		eCommerce Transactions	7.05
		Computer Households	6.03
	BROADBAND	Fixed Broadband Subscriptions	6.05
		Mobile Broadband subscriptions	6.06
	DATA CENTERS	Data Center Equipment	none
CLOUD	Cloud Migration	none	
BIG DATA	Analytics Data Creation	none	
IOT	IoT Installed Base	none	
EXPERIENCE	FUNDAMENTALS	E-Government Service	8.02
		Telecom Customer Service	none
		Internet Participation	10.04
		Broadband Download Speed	none
	BROADBAND	Fixed Broadband Affordability	see 4.02, 6.05
		Mobile Broadband Affordability	see 4.01, 6.06
DATA CENTERS	Data Center Experience	none	
CLOUD	Cloud Experience	none	
BIG DATA	Big Data Experience	none	
IOT	IoT Experience	none	
POTENTIAL	FUNDAMENTALS	R & D Expenditure	none
ICT Patents		7.03	
IT Workforce		see 7.06 (+ indicators on education)	
Software Developers		see 7.06 (+ indicators on education)	

HUAWEI			Same or potentially similar to (NRI2012):
4	24	53	
CATEGORY	SUB-CATEGORY	INDICATOR	
POTENTIAL	BROADBAND	Broadband Potential	none
		Mobile Potential	none
	DATA CENTERS	Data Center Potential	none
	CLOUD	Cloud Potential	none
	BIG DATA	Bida Data Potential	none
	IOT	IoT Potential	none

Source:

<https://www.huawei.com/minisite/gci/en/methodology.html>

OECD			Same or potentially similar to (NRI2012):
8	0	43	
CATEGORY	SUB-CATEGORY	INDICATOR	
ACCESS		Fixed broadband penetration	6.05
		M2M (machine-to-machine) SIM cards per 100 inhabitants	none
		“Mobile broadband subscriptions per 100 inhabitants. Average monthly mobile data usage per mobile broadband subscription, GB“	6.06
		Average monthly data usage per mobile broadband subscription	none
		Share of households with broadband connections	6.04
		Share of businesses with broadband contracted speed of 30 Mbps or more	none (but see 7.01)
USE		Internet users as a share of individuals	6.02
		Share of individuals using the Internet to interact with public authorities	see 10.04
		“Share of Internet users who have purchased online in the last 12 months	see 7.05
		Share of small businesses making e-commerce sales in the last 12 months	none
INNOVATION		Share of adults scoring level 2 or above for problem-solving in technology-rich environments	none
		ICT investment as a percentage of GDP	none
		Business R&D expenditure in Information Industries as a percentage of GDP	none

OECD			Same or potentially similar to (NRI2012):
8	0	43	
CATEGORY	SUB-CATEGORY	INDICATOR	
INNOVATION		Venture capital investment in the ICT sector as a percentage of GDP	none
		Share of start-up firms (up to 2 years old) in the business population	none
		Top 10% most-cited documents in computer science, as a percentage of the top 10% ranked documents	none
		Patents in ICT-related technologies, as a percentage of total IP5 patent families	see 9.02
JOBS		ICT task-intensive jobs as a percentage of total employment	none
		Digital-intensive sectors' share in total employment	9.04
		Workers receiving employment-based training, as a percentage of total employment	7.06
		New tertiary graduates in science, technology, engineering, and mathematics, as a percentage of new graduates	see 2.07
		Public spending on active labor market policies, as a percentage of GDP	none
SOCIETY		Percentage of individuals aged 55-74 using the Internet	none
		Percentage of individuals who live in households with income in the lowest quartile using the Internet	none
		Women as a share of all 16-24-year-olds who can program	none
		Percentage of individuals who use digital equipment at work that telework from home once a week or more	none
		15-year-old students' performance in science, mathematics, and reading	none
		E-waste generated, kilograms per inhabitant	none
TRUST		Percentage of Internet users experiencing abuse of personal information or privacy violations	none
		"Percentage of individuals not buying online due to payment security concerns	none
		Percentage of individuals not buying online due to concerns about returning products	none
		Percentage of businesses in which ICT security and data protection tasks are mainly performed by own employees	none
MARKET OPENNESS		Share of businesses making e-commerce sales that sell across borders	none
		Share of predominantly digitally-delivered services in commercial services trade	none

OECD			Same or potentially similar to (NRI2012):
8	0	43	
CATEGORY	SUB-CATEGORY	INDICATOR	
MARKET OPENNESS		Digital-intensive services value added embodied in manufacturing exports, as a percentage of manufacturing export value	none
		Digital Services Trade Restrictiveness Index	none
		Foreign Direct Investment Regulatory Restrictiveness Index	none
GROWTH AND WELL-BEING		Share of information industries in total employment	none
		Labor productivity of information industries relative to other non-agriculture business sector activities	none
		Intermediate consumption of information industry products as a percentage of intermediate consumption	none
		Final demand for information industry products as a percentage of total final demand	none
		Extended information industries domestic value added footprint, share of world total	none
		Share of jobs in information industries that are sustained by foreign final demand	none

Source:

<https://goingdigital.oecd.org/en/dimensions/>

ITU IDI 2018>			Same or potentially similar to (NRI2012):
3	0	14	
CATEGORY	SUB-CATEGORY	INDICATOR	
ACCESS		Percentage of households with a computer	6.03
		Percentage of households with Internet access	6.04
		International Internet bandwidth (bit/s) per Internet user	3.03
		Percentage of the population covered by mobile networks	3.02
		- At least 3G	see 3.02
		- At least LTE/WiMAX	see 3.02
		Fixed-broadband subscriptions by speed tiers as a % of total fixed-broadband subscriptions	6.05
		- 256 kbit/s to 2 Mbit/s	see 6.05
		- 2 to 10 Mbit/s	see 6.05
	- Equal to or above 10 Mbit/s	see 6.05	
USE		Percentage of individuals using the Internet	6.02
		Active mobile broadband subscriptions per 100 inhabitants	6.06

ITU IDI 2018>			Same or potentially similar to (NRI2012):
3	0	14	
CATEGORY	SUB-CATEGORY	INDICATOR	
USE		Mobile broadband Internet traffic per mobile broadband subscription	none
		Fixed broadband Internet traffic per fixed broadband subscription	none
		Percentage of individuals who own a mobile phone	see 6.01
SKILLS		Mean years of schooling	none
		Gross enrollment ratio (secondary level)	5.03
		Gross enrollment ratio (tertiary level)	2.07
		Proportion of individuals with ICT skills	none

Source:

[https://www.itu.int/en/ITU-D/Statistics/Documents/statistics/ITU\\_ICT%20Development%20Index.pdf](https://www.itu.int/en/ITU-D/Statistics/Documents/statistics/ITU_ICT%20Development%20Index.pdf)

ITU IDI BEFORE 2017 REVIEW			Same or potentially similar to (NRI2012):
3	0	11	
CATEGORY	SUB-CATEGORY	INDICATOR	
ACCESS		Percentage of households with a computer	6.03
		Percentage of households with Internet access	6.04
		International Internet bandwidth (bit/s) per Internet user	3.03
		Fixed telephone subscriptions per 100 inhabitants	none
		mobile telephone subscriptions per 100 inhabitants	6.01
USE		Percentage of individuals using the Internet	6.02
		Active mobile-broadband subscriptions per 100 inhabitants	6.06
		Fixed broadband subscriptions per 100	6.05
SKILLS		Mean years of schooling	none
		Gross enrollment ratio (secondary level)	5.03
		Gross enrollment ratio (tertiary level)	2.07

Source:

[https://www.itu.int/en/ITU-D/Statistics/Documents/statistics/ITU\\_ICT%20Development%20Index.pdf](https://www.itu.int/en/ITU-D/Statistics/Documents/statistics/ITU_ICT%20Development%20Index.pdf)

PARTNERSHIP FOR ICT INDICATORS			Same or potentially similar to (NRI2012):
CATEGORY	SUB-CATEGORY	SUB-CATEGORY	
ICT INFRASTRUCTURE AND ACCESS	A1	Fixed telephone subscriptions per 100 inhabitants	none
	A2	Mobile cellular telephone subscriptions per 100 inhabitants	see 6.06
	A3	Fixed broadband Internet subscriptions per 100 inhabitants, broken down by speed	6.05
	A4	Active mobile broadband subscriptions per 100 inhabitants	6.06
	A5	International Internet bandwidth per inhabitant (bits/second/inhabitant)	3.03
	A6	Percentage of the population covered by at least a 3G mobile network	see 3.02
	A7	Fixed broadband Internet prices per month	none
	A8	Mobile cellular telephone prepaid prices per month	none
	A9	Mobile broadband Internet prices per month	see 4.01
	A10	TV broadcasting subscriptions per 100 inhabitants	none
ICT ACCESS AND USE BY HOUSEHOLDS AND INDIVIDUALS	HH1	Proportion of households with a radio	none
	HH2	Proportion of households with a TV	none
	HH3	Proportion of households with a telephone	none
	HH4	Proportion of households with a computer	6.03
	HH5	Proportion of individuals using a computer	none
	HH6	Proportion of households with Internet	6.04
	HH7	Proportion of individuals using the Internet	6.02
	HH8	Proportion of individuals using the Internet, by location	none
	HH9	Proportion of individuals using the Internet, by type of activity	none
	HH10	Proportion of individuals using a mobile cellular telephone	see 6.01
	HH11	Proportion of households with Internet, by type of service	none
	HH12	Proportion of individuals using the Internet, by frequency	none
	HH13	Proportion of households with multichannel television, by type	none
	HH14	Barriers to household Internet access	none
	HH15	Individuals with ICT skills, by type of skills	none
	HH16	Household expenditure on ICT	none
	HH17	Proportion of individuals using the Internet, by type of portable device and network used to access the Internet	none

PARTNERSHIP FOR ICT INDICATORS			Same or potentially similar to (NRI2012):
CATEGORY	SUB-CATEGORY	SUB-CATEGORY	
ICT ACCESS AND USE BY HOUSEHOLDS AND INDIVIDUALS	HH18	Proportion of individuals who own a mobile phone	see 6.01
	HH19	Proportion of individuals not using the Internet, by type of reason	none
ICT ACCESS AND USE BY ENTERPRISES	B1	Proportion of businesses using computers	see 7.01
	B2	Proportion of persons employed who routinely use computers	none
	B3	Proportion of businesses using the Internet	see 7.01
	B4	Proportion of persons employed who routinely use the Internet	see 7.02
	B5	Proportion of businesses with a web presence	see 7.03
	B6	Proportion of businesses with an intranet	see 7.04
	B7	Proportion of businesses receiving orders over the Internet	see 7.05
	B8	Proportion of businesses placing orders over the Internet	see 7.06
	B9	Proportion of businesses using the Internet by type of access	none
	B10	Proportion of businesses with a Local Area Network	see 7.05
	B11	Proportion of businesses with an extranet	see 7.06
	B12	Proportion of businesses using the Internet by type of activity	see 7.06
ICT SECTOR AND TRADE IN ICT GOODS	ICT1	Proportion of total business sector workforce involved in the ICT sector	none
	ICT2	ICT sector share of gross value added	none
	ICT3	ICT goods imports as a percentage of total imports	none
	ICT4	ICT goods exports as a percentage of total export	none
ICT IN EDUCATION	ED1	Proportion of schools with a radio used for educational purposes	none
	ED2	Proportion of schools with a television used for educational purposes	none
	ED3	Proportion of schools with a telephone communication facility	none
	ED4	Learners-to-computer ratio in schools with computer-assisted instruction	see 10.02
	ED5	Proportion of schools with Internet access by type of access	see 10.02
	ED6	Proportion of learners who have access to the Internet at school	see 10.02



PARTNERSHIP FOR ICT INDICATORS			Same or potentially similar to (NRI2012):
CATEGORY	SUB-CATEGORY	SUB-CATEGORY	
ICT IN EDUCATION		ED7 Proportion of learners enrolled at the post-secondary level in ICT-related fields	none
		ED8 Proportion of ICT-qualified teachers in schools	none
		EDR1 Proportion of schools with electricity	none
ICT IN GOVERNMENT		EG1 Proportion of persons employed in central government organizations routinely using computers	see 10.03
		EG2 Proportion of persons employed in central government organizations routinely using the Internet	see 10.03
		EG3 Proportion of central government organizations with a local area network	see 10.03
		EG4 Proportion of central government organizations with an intranet	see 10.03
		EG5 Proportion of central government organizations with Internet access, by type of access	see 10.03
		EG6 Proportion of central government organizations with a web presence	see 10.03
		EG7 Selected Internet-based online services available to citizens, by level of sophistication of service	see 8.02

ITU-D TELECOMMUNICATION/ICT INDICATORS			Same or potentially similar to (NRI2012):
3	N/A	11	
CATEGORY	SUB-CATEGORY	INDICATOR	
FIXED-TELEPHONE NETWORKS		Indicator 1: Total capacity of local public switching exchanges	none
		Indicator 2: Fixed telephone subscriptions	none
		Indicator 3: Analogue fixed telephone lines	none
		Indicator 4: VoIP subscriptions	none
		Indicator 5: Fixed wireless local loop subscriptions	none
		Indicator 6: Percentage of fixed telephone subscriptions that are residential	none
		Indicator 7: Percentage of fixed telephone subscriptions in urban areas	none
		Indicator 8: ISDN subscriptions	none
		Indicator 9: ISDN voice-channel equivalents	none
		Indicator 10: Fixed telephone numbers ported	none
MOBILE-CELLULAR NETWORKS		Indicator 11: Mobile cellular telephone subscriptions, by postpaid/prepaid	see 6.01

ITU-D TELECOMMUNICATION/ICT INDICATORS			Same or potentially similar to (NRI2012):
3	N/A	11	
CATEGORY	SUB-CATEGORY	INDICATOR	
MOBILE-CELLULAR NETWORKS		Indicator 12: Mobile cellular telephone subscriptions, by speed of data access	none
		Indicator 13: Percentage of the land area covered by mobile-cellular network	none
		Indicator 14: Percentage of the population covered by a mobile-cellular network	3.02
		Indicator 15: Percentage of the population covered by at least a 3G mobile network	see 3.02
		Indicator 16: Mobile cellular numbers ported	none
INTERNET	INTERNET BANDWIDTH	Indicator 17: International Internet bandwidth, in Mbit/s Indicator 18: Domestic Internet bandwidth, in Mbit/s	3.03 none
	FIXED (WIRED) INTERNET SUBSCRIPTIONS	Indicator 19: Fixed (wired) Internet subscriptions	6.05
	FIXED (WIRED)-BROADBAND SUBSCRIPTIONS	Indicator 20: Fixed (wired) broadband subscriptions, by technology	none
	WIRELESS-BROADBAND SUBSCRIPTIONS	Indicator 21: Fixed (wired) broadband subscriptions, by speed Indicator 22: Wireless broadband subscriptions Indicator 23: Satellite broadband subscriptions Indicator 24: Terrestrial fixed wireless broadband subscriptions Indicator 25: Active mobile broadband subscriptions	none see 6.06 none see 6.05 6.06
TRAFFIC	FIXED-TELEPHONE TRAFFIC	Indicator 26: Domestic fixed-to-fixed telephone traffic, in minutes Indicator 27: Fixed-to-mobile telephone traffic, in minutes Indicator 28: International incoming and outgoing fixed telephone traffic, in minutes	none none none
	MOBILE-TELEPHONE TRAFFIC	Indicator 29: Domestic mobile telephone traffic, in minutes Indicator 30: Outgoing mobile traffic to international, in minutes Indicator 31: Incoming international traffic to mobile network, in minutes Indicator 32: Roaming by home subscribers abroad (outbound roaming), in minutes Indicator 33: Roaming by foreign subscribers (inbound roaming), in minutes Indicator 34: SMS sent Indicator 35: SMS international	see 4.01 none none none none none none

ITU-D TELECOMMUNICATION/ICT INDICATORS			Same or potentially similar to (NRI2012):
3	N/A	11	
CATEGORY	SUB-CATEGORY	INDICATOR	
TRAFFIC	MOBILE-TELEPHONE TRAFFIC	Indicator 36: MMS sent	none
	OTHER	Indicator 37: VoIP traffic, in minutes	none
		Indicator 38: Total international incoming and outgoing telephone traffic, in minutes Fixed (wired) broadband Internet traffic (exabytes)	none none
DOMESTIC INTERNET TRAFFIC		Indicator 39: Domestic Internet traffic	none
		Mobile broadband Internet traffic (within the country) Mobile broadband Internet traffic (outside the country, roaming out)	none none
TARIFFS	FIXED LOCAL TELEPHONE SERVICE TARIFFS	Indicator 40: Installation fee for residential telephone service	none
		Indicator 41: Monthly subscription for residential telephone service	none
		Indicator 42: Price of a three-minute local call to a fixed telephone line	none
		Indicator 43: Price of a three-minute local call to a mobile cellular phone	none
		Indicator 44: Installation fee for business telephone service	none
	Indicator 45: Monthly subscription for business telephone service	none	
MOBILE-CELLULAR TARIFFS		Indicator 46: Mobile cellular prepaid connection charge	4.01
		Indicator 47: Mobile cellular – cheapest recharge card value	none
		Indicator 48: Mobile cellular prepaid – price of a one-minute local call	none
		Indicator 49: Mobile cellular prepaid – price of SMS	none
FIXED (WIRED)-BROADBAND INTERNET TARIFFS		Indicator 50: Fixed (wired) broadband connection charge	none
		Indicator 51: Fixed (wired) broadband monthly subscription charge	4.02
		Indicator 52: Fixed (wired) broadband speed, in Mbit/s	none
QUALITY OF SERVICE		Indicator 53: Fixed (wired) broadband cap, in GB	none
		Indicator 54: Fixed (wired) broadband - price of excess usage	none
		Indicator 55: Faults per 100 fixed telephone lines per year	none
		Indicator 56: Percentage of fixed telephone faults cleared by next working day	none

ITU-D TELECOMMUNICATION/ICT INDICATORS			Same or potentially similar to (NRI2012):
3	N/A	11	
CATEGORY	SUB-CATEGORY	INDICATOR	
QUALITY OF SERVICE		Mobile cellular unsuccessful call ratio	none
		Mobile cellular dropped call ratio	none
		Complaints per 100 mobile cellular subscriptions	none
		Complaints per 100 mobile broadband subscriptions	none
		Complaints per 100 fixed (wired) broadband subscriptions	none
		Service activation time for fixed (wired) broadband service (in days)	none
PERSONS EMPLOYED		Indicator 57: Full-time equivalent telecommunication employees, by operator type	none
		Indicator 58: Full-time equivalent telecommunication employees, by gender	none
REVENUE		Indicator 59: Revenue from all telecommunication services	none
		Indicator 60: Revenue from fixed-telephone services	none
		Indicator 61: Revenue from fixed-telephone connection charges	none
		Indicator 62: Revenue from fixed-telephone subscription charges	none
		Indicator 63: Revenue from fixed-telephone calls	none
		Indicator 64: Revenue from mobile networks	none
		Indicator 65: Revenue from fixed (wired) Internet services	none
		Indicator 66: Revenue from other wireless-broadband services	none
		Indicator 67: Revenue from leased lines	none
		Indicator 68: Revenue from fixed value-added telecommunication services	none
	Indicator 69: Other telecommunication revenue	none	
	Indicator 70: Revenue from international inbound roaming	none	
INVESTMENT		Indicator 71: Annual investment in telecommunication services	none
		Indicator 72: Annual investment in non-tangible assets	none
		Indicator 73: Annual foreign investment in telecommunications	none
PUBLIC ACCESS		Indicator 74: Percentage of localities with telephone service	none
		Indicator 75: Public payphones	none
		Indicator 76: PWLAN access points	none

ITU-D TELECOMMUNICATION/ICT INDICATORS			Same or potentially similar to (NRI2012):
3	N/A	11	
CATEGORY	SUB-CATEGORY	INDICATOR	
<b>BROADCASTING AND OTHER INDICATORS</b>		Indicator 77: Multichannel TV subscriptions	none
		Indicator 78: Terrestrial multichannel TV subscriptions	none
		Indicator 79: Direct-to-home (DTH) satellite antenna subscriptions	none
		Indicator 80: Homes passed by cable TV	none
		Indicator 81: Leased-line subscriptions	none
<b>PAY TV</b>		IPTV subscriptions	none
		Satellite TV subscriptions	none
		Cable TV subscriptions	none
		Other TV subscriptions	none

**Source:**

[https://www.itu.int/pub/D-IND-ITC\\_IND\\_HBK-2011](https://www.itu.int/pub/D-IND-ITC_IND_HBK-2011)



# Appendix II:

## **Technical Notes**





## Structure of the Network Readiness Index

Network readiness is a multi-dimensional concept. The NRI is therefore a composite index that has been constructed on the basis of several levels. The first level consists of four pillars that make up the fundamental dimensions of network readiness: Technology, People, Governance, and Impact. Each of these pillars is divided into three sub-pillars that constitute the second level:

- **Technology:** Access, Content, Future Technologies
- **People:** Individuals, Businesses, Governments
- **Governance:** Trust, Regulation, Inclusion
- **Impact:** Economy, Quality of Life, SDG Contribution

The third, and final, level consists of individual indicators that have been distributed across the different sub-

pillars and pillars. Any given indicator thus belongs to a pillar and a sub-pillar. For that reason, each indicator is identified by three digits, where the first digit refers to the pillar, the second digit concerns the sub-pillar, and the third digit denotes the indicator. For instance, indicator 1.2.3 refers to the third indicator (Intellectual property receipts) that is placed in the second sub-pillar (Content), which, in turn, belongs to the first pillar (Technology).

A total of 62 indicators have been identified for the NRI 2019. Of these indicators, 40 are hard/quantitative data, 12 are index/composite indicator data, and 10 are survey/qualitative data.

The complete structure of the NRI with its respective pillars, sub-pillars, and indicators is shown on the next page.

## Computation of the NRI

The computation of the NRI is based on successive aggregations of scores, from the indicator level (i.e., the most disaggregated level) to the overall NRI score. In general, the unweighted arithmetic mean has been used to aggregate (i) individual indicators within each sub-pillar, (ii) sub-pillars within each pillar, and (iii) the pillars comprising the overall index. The one exception is the Content sub-pillar because indicator 1.2.1 Digital participation and content creation, is itself a sub-index made up of three variables (GitHub commits, Wikipedia

edits, and domain registrations). In order to ensure that the variables of this sub-index are given equal weight as the other two indicators of the Content sub-pillar, a weighted arithmetic mean has been applied whereby indicator 1.2.1 Digital participation and content creation has a weight of 0.6, and the other two indicators have weights of 0.2 each.

## Country and data coverage

The inclusion of countries and indicators is based on the double threshold approach. In terms of country coverage, this means that only countries with data available for at least 70% of all indicators are included in the NRI. In addition, countries need to pass a sub-pillar level data availability of at least 40%. In terms of indicator coverage,

it means that only indicators with data available for at least 50% of all countries are included in the NRI. Missing values are denoted as “n/a” and are not taken into account in the computation of scores.

## Network Readiness Index 2019

**A. TECHNOLOGY PILLAR**

<b>1st sub-pillar: Access</b>
1.1.1 Mobile tariffs
1.1.2 Handset prices
1.1.3 Internet access
1.1.4 4G mobile network coverage
1.1.5 Fixed-broadband subscriptions
1.1.6 International Internet bandwidth
1.1.7 Internet access in schools
<b>2nd sub-pillar: Content</b>
1.2.1 Digital participation and content creation
1.2.2 Mobile app development
1.2.3 Intellectual property receipts
<b>3rd sub-pillar: Future Technologies</b>
1.3.1 Availability of latest technologies
1.3.2 Company investment in emerging technology
1.3.3 Government procurement of advanced technology products
1.3.4 ICT PCT patent applications
1.3.5 Computer software spending
1.3.6 Robot density

**B. PEOPLE PILLAR**

<b>1st sub-pillar: Individuals</b>
2.1.1 Internet users
2.1.2 Active mobile-broadband subscriptions
2.1.3 Use of virtual social networks
2.1.4 Tertiary enrollment
2.1.5 Adult literacy rate
2.1.6 ICT skills
<b>2nd sub-pillar: Businesses</b>
2.2.1 Firms with websites
2.2.2 Internet shopping
2.2.3 Professionals
2.2.4 Technicians and associate professionals
2.2.5 Extent of staff training
2.2.6 R&D expenditure by businesses
<b>3rd sub-pillar: Governments</b>
2.3.1 Government online services
2.3.2 Publication and use of open data
2.3.3 ICT use and government efficiency
2.3.4 R&D expenditure by governments and higher education

**C. GOVERNANCE PILLAR**

<b>1st sub-pillar: Trust</b>
3.1.1 Rule of law
3.1.2 Software piracy rate
3.1.3 Secure Internet servers
3.1.4 Cybersecurity
3.1.5 Online trust and safety
<b>2nd sub-pillar: Regulation</b>
3.2.1 Regulatory quality
3.2.2 Ease of doing business
3.2.3 Legal framework's adaptability to digital business models
3.2.4 E-commerce legislation
3.2.5 Social safety net protection
3.2.6 ICT regulatory environment
<b>3rd sub-pillar: Inclusion</b>
3.3.1 E-participation
3.3.2 Socioeconomic gap in use of digital payments
3.3.3 Availability of local online content
3.3.4 Gender gap in Internet use
3.3.5 Rural gap in use of digital payments

**D. IMPACT PILLAR**

<b>1st sub-pillar: Economy</b>
4.1.1 Medium and high-tech industry
4.1.2 High-tech exports
4.1.3 PCT patent applications
4.1.4 Labor productivity per employee
<b>2nd sub-pillar: Quality of Life</b>
4.2.1 Happiness
4.2.2 Freedom to make life choices
4.2.3 Income inequality
4.2.4 Healthy life expectancy at birth
<b>3rd sub-pillar: SDG Contribution</b>
4.3.1 Access to basic services
4.3.2 Pollution
4.3.3 Road safety
4.3.4 Reading proficiency in schools
4.3.5 Math proficiency in schools
4.3.6 Use of clean fuels and technology

## Treatment of series with outliers

The presence of outliers in an indicator can potentially bias rankings. Therefore, outliers should be detected and removed before the normalization of scores. To do so, a rule of thumb is applied whereby an absolute value of skewness greater than 2 and kurtosis greater than 3.5 indicates the presence of outliers. The treatment of outliers is carried out in one of two ways. First, indicators that have no more than four outliers are winsorized, whereby the value affecting the distribution is assigned the next highest/lowest value method. The Winsorization process continues until the reported skewness and/or kurtosis fall within the ranges specified above.

Second, indicators with at least five outliers are transformed by natural logarithms according to the following formula:

$$\ln \left[ (max \times factor - 1) \times \frac{(value - min)}{(max - min)} + 1 \right]$$

For the NRI 2019, outliers were detected in seven indicators. Three indicators had fewer than five outliers, and four indicators had five outliers or more.

## Normalization

The indicators need to be normalized in order to make them comparable for data aggregation. The NRI applies the Min-Max normalization method so that all values fall into the [0, 100] range, with higher scores representing better outcomes. Most indicators are “goods” in that higher values indicate higher outcomes. For these indicators, the following normalization formula is applied:

$$100 \times \frac{(value - min)}{(max - min)}$$

For those indicators where higher values imply worse outcomes (i.e. “bads”), the following reverse normalization formula is applied:

$$100 \times \frac{(max - value)}{(max - min)}$$

## References

- Groeneveld, R. A. & Meeden, G. (1984). Measuring skewness and kurtosis. *Journal of the Royal Statistical Society, Series D (The Statistician)*, 33, 391–399.
- OECD & EC JRC (2008). *Handbook on constructing composite indicators: Methodology and user guide*. Paris: OECD, available at <http://www.oecd.org/std/42495745.pdf>

## Notes

- <sup>1</sup> Adopted from Groeneveld & Meeden (1984).
- <sup>2</sup> 1.3.6 Robot density; 3.3.4 Gender gap in Internet use; and 4.1.2 High-tech exports.
- <sup>3</sup> 1.1.6 International Internet bandwidth; 1.2.3 Intellectual property receipts; 1.3.4 ICT PCT patent applications; and 3.1.3 Secure Internet servers.
- <sup>4</sup> For the NRI 2019, reverse normalisation was needed for four indicators: 3.1.2 Software piracy rate; 4.2.3 Income inequality; 4.3.2 Pollution; and 4.3.3 Road safety.



# Appendix III:

## Sources and Definitions



# 1st pillar: Technology

## 1.1 ACCESS

### 1.1.1 Mobile tariffs

#### Mobile tariffs sub-index | 2018

This indicator is based on the Mobile tariffs sub-index that is included in the Affordability pillar of *the Mobile Connectivity Index* published by the GSM Association. The sub-index relates to the cost of three different basket profiles that are partly distinguished by monthly usage allowance (100MB, 500MB, and 1 GB, respectively). The tariffs are given as a percentage of monthly GDP per capita. The main source for the data is Tarifica (<https://tarifica.com/>).

Source: GSM Association, *The GSMA Mobile Connectivity Index 2019* (<http://www.mobileconnectivityindex.com>)

### 1.1.2 Handset prices

#### Cost of cheapest internet-enabled device (% of monthly GDP per capita) | 2018

This is one of the indicators included in the Affordability pillar of *the Mobile Connectivity Index* published by the GSM Association. It relates to the cheapest smartphone or feature phone that allow users access to the Internet. The main source for the data is Tarifica (<https://tarifica.com/>).

Source: GSM Association, *The GSMA Mobile Connectivity Index 2019* (<http://www.mobileconnectivityindex.com>)

### 1.1.3 Internet access

#### Estimated proportion of households with Internet access at home (%) | 2018

The share of households with Internet access at home via a fixed or mobile network. Household with Internet access is defined as the Internet being available for use by all members of the household at any time. This indicator can include both estimates and survey data corresponding to the proportion of individuals using

the Internet based on results from national household surveys. The number should reflect the total population of the country or at least individuals of 5 years and older.

Source: International Telecommunication Union (ITU), *ITU World Telecommunication/ICT Indicators database 2019* (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)

### 1.1.4 4G mobile network coverage

#### Population covered by at least an LTE/WiMAX mobile network (%) | 2018

This indicator measures the percentage of inhabitants out of the total population who are within range of an advanced mobile-cellular signal, such as LTE/LTE-Advanced and mobile WiMAX/WirelessMAN networks, irrespective of whether or not they are subscribers.

Source: International Telecommunication Union (ITU), *ITU World Telecommunication/ICT Indicators database 2019* (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)

### 1.1.5 Fixed-broadband subscriptions

#### Fixed-broadband subscriptions that are equal to or above 10 Mbit/s (% of total subscriptions) | 2018

This indicator refers to the number of fixed subscriptions by residences and organisations to high-speed access to the public Internet (a TCP/IP connection) at downstream speeds equal to or greater than 10 Mbit/s, expressed as a percentage of total fixed-broadband subscriptions.

Source: International Telecommunication Union (ITU), *ITU World Telecommunication/ICT Indicators database 2019* (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)

### 1.1.6 International Internet bandwidth

#### International Internet bandwidth per Internet user (bit/s) | 2018

This indicator refers to the usage of all international links including fiber-optic cables, radio links and traffic processed by satellite ground stations and teleports to orbital satellites.

Source: International Telecommunication Union (ITU), *ITU World Telecommunication/ICT Indicators database 2019* (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)

### 1.1.7 Internet access in schools

#### Proportion of primary schools with access to Internet for pedagogical purposes (%) | 2018

The share of primary schools with access to the Internet via fixed narrowband, fixed broadband, or via mobile network. That Internet is for pedagogical purposes means that it enhances teaching and learning and that it provides pupils with access to a number of communications services through various devices.

Source: UNESCO Institute for Statistics, *UIS.Stat* (<http://data.uis.unesco.org/>)

## 1.2 CONTENT

### 1.2.1 Digital participation and content creation

#### DKEI digital participation and content creation sub-index | 2012

This indicator is a sub-index comprised of three variables: GitHub commits, Wikipedia edits, and top-level domain registrations. The sub-index has been constructed by Ojanperä et al. (2019) as a measure of digital capacities and skills in a country. They use it to estimate a Digital Knowledge Economy Index, whereby they complement the World Bank's Knowledge Economy Index by adding the sub-index as a fifth dimension.

Source: Ojanperä, S., Graham, M., & Zook, M. (2019). The Digital Knowledge Economy Index: Mapping Content Production: *The Journal of Development Studies*, 55(12), 2626–2643 (<https://doi.org/10.1080/00220388.2018.1554208>)

### 1.2.2 Mobile apps development

### Number of active mobile applications developed per person | 2018

This indicator is included in *the Mobile Connectivity Index* published by the GSM Association. It is one of four indicators that make up the Local Relevance sub-index that, in turn, is part of the Content & Services pillar. The original data is sourced from AppFigures (<https://appfigures.com/>).

Source: GSM Association, *The GSMA Mobile Connectivity Index 2019* (<http://www.mobileconnectivityindex.com>)

### 1.2.3 Intellectual property receipts

#### Charges for the use of intellectual property not included elsewhere, receipts (% of total trade) | 2018

This indicator is based on receipts related to four sub-items of charges for the use of intellectual property not included elsewhere: franchises and trademarks licensing fees, licenses for the use of outcomes of research and development, licenses to reproduce and/or distribute computer software, and licenses to reproduce and/or distribute audiovisual and related products. The data refers to the three-year average as a percentage of total trade. The product category follows the Extended Balance of Payments Services Classification (EBOPS 2010), which is based on the sixth edition of the IMF Balance of Payments and International Investment Position Manual (BPM6).

Source: World Trade Organization, *Trade in Commercial Services database* (<https://data.wto.org/>)

## 1.3 FUTURE TECHNOLOGIES

### 1.3.1 Availability of latest technologies

#### In your country, to what extent are the latest technologies available? [1 = not at all; 7 = to a great extent] | 2016-17 weighted average

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement The Global Competitiveness Report in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2016–2017 (<http://reports.weforum.org>)



### 1.3.2 Company investment in emerging technology

**Average answer to the question: In your country, to what extent do companies invest in emerging technologies (e.g. Internet of Things, advanced analytics and artificial intelligence, augmented virtual reality and wearables, advanced robotics, 3D printing)? [1 = not at all; 7 = to a great extent] | 2017-18 weighted average**

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement The Global Competitiveness Report in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2017–2018 (<http://reports.weforum.org>)

### 1.3.3 Government procurement of advanced technology products

**In your country, to what extent do government purchasing decisions foster innovation? [1 = not at all; 7 = to a great extent] | 2016-17 weighted average**

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement The Global Competitiveness Report in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2016–2017 (<http://reports.weforum.org>)

### 1.3.4 ICT PCT patent applications

**Number of applications for information and communication technology-related patents filed under the Patent Cooperation Treaty (PCT) (per million population) | 2016**

This indicator refers to the count of applications filed under the Patent Cooperation Treaty (PCT) in the technology domain of information and communication technologies by priority date and inventor nationality. The count is divided by million population. The classification for ICT-related patents is based on the International Patent Classification (IPC), as described in Inaba and Squicciarini (2017).

Source: World Intellectual Property Organization (WIPO) PCT Data, sourced from Organisation for Economic Co-operation and Development (OECD), *Patent Database* (<http://www.oecd.org/sti/inno/intellectual-property-statistics-and-analysis.htm>). Population data sourced from World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>). The IPC classification is discussed in Inaba, T. and M. Squicciarini (2017), "ICT: A new taxonomy based on the international patent classification", *OECD Science, Technology and Industry Working Papers*, No. 2017/01, OECD Publishing, Paris (<https://doi.org/10.1787/ab16c396-en>)

### 1.3.5 Computer software spending

**Total computer software spending (% of GDP) | 2018**

*Computer software spending* includes the total value of purchased or leased packaged software such as operating systems, database systems, programming tools, utilities, and applications. It excludes expenditures for internal software development and outsourced custom software development. The data are a combination of actual figures and estimates. Data are reported as a percentage of GDP.

Source: IHS Markit, *Information and Communication Technology Database* (<https://www.ihsmarkit.com/index.html>). Sourced from INSEAD, Cornell University, and World Intellectual Property Organization, The Global Innovation Index 2019 (<https://www.globalinnovationindex.org>)

### 1.3.6 Robot density

**Number of robots in operation per 10,000 employees in the manufacturing industry | 2019**

Robot density refers to the estimated number of multipurpose industrial robots per 10,000 persons employed in the manufacturing industry (ISIC rev.4: C). The International Federation of Robotics (IFR) collects country-level data on operational stock of industrial robots and, for some countries, computes robot densities. The computed robot densities are published in the annual *World Robotics report*.

Source: Data on robot density and operational stock of industrial robots for 2019 kindly provided by the International Federation of Robotics (IFR, <https://ifr.org>). Data on employment in manufacturing in the countries for which IFR has not computed robot densities are sourced from the International Labour Organization, *ILOSTAT* (<https://ilostat ilo.org/>)

## 2nd pillar: People

### 2.1 INDIVIDUALS

#### 2.1.1 Internet users

##### Individuals using the internet (%) | 2018

Internet users refers to the proportion of individuals who used the Internet in the last 12 months. Data are generally based on national household surveys where the percentage should reflect the total population of the country.

Source: International Telecommunication Union (ITU), *ITU World Telecommunication/ICT Indicators database 2019* (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)

#### 2.1.2 Active mobile-broadband subscriptions

##### Active mobile-broadband subscriptions (per 100 inhabitants) | 2018

This indicator refers to the sum of active handset-based and computer-based mobile-broadband subscriptions to the public Internet, where users have accessed the Internet in the last three months. It covers actual subscribers, not potential subscribers, even though the latter may have broadband-enabled handsets.

Source: International Telecommunication Union (ITU), *ITU World Telecommunication/ICT Indicators database 2019* (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)

#### 2.1.3 Use of virtual social networks

##### Number of active social media users (% of population) | 2018

This indicator refers to the penetration of active social media users, expressed as a percentage of total population. The original data comes from a variety of sources, including company statements and reports in reputable media.

Source: We Are Social and Hootsuite (2019) *Global Digital Report 2019* (<https://wearesocial.com/global-digital-report-2019>)

#### 2.1.4 Tertiary enrolment

##### Gross enrolment ratio, tertiary education (%) | 2018

Tertiary enrolment refers to the ratio of total tertiary enrolment, regardless of age, to the population of the age group that officially corresponds to the tertiary level of education. Tertiary education, whether or not to an advanced research qualification, normally requires as a minimum condition of admission the successful completion of education at the secondary level. The tertiary level is based on International Standard Classification of Education (ISCED) levels 5–8.

Source: UNESCO Institute for Statistics, *UIS.Stat* (<http://data.uis.unesco.org/>)

#### 2.1.5 Adult literacy rate

##### Adult literacy rate (%) | 2018

Adult literacy rate is defined as the percentage of the population aged 15 years and over who can both read and write with understanding a short, simple statement on his/her everyday life.

Source: UNESCO Institute for Statistics, *UIS.Stat* (<http://data.uis.unesco.org/>)

#### 2.1.6 ICT skills

##### Proportion of youth and adults with ICT skills (%) | 2018

This indicator relates to three types of ICT skills: using basic arithmetic formulae in a spreadsheet; finding, downloading, installing and configuring software; and writing a computer programme using a specialised programming language. The data are the computed averages of the three ICT skills, which refer to the proportion of youth and adults that have undertaken certain computer-related activities in a given time period (e.g. last three months).

Source: UNESCO Institute for Statistics, *UIS.Stat* (<http://data.uis.unesco.org/>)

## 2.2 BUSINESSES

### 2.2.1 Firms with website

#### Firms with website (% of total) | 2018

The data for this indicator are based on enterprise surveys conducted by the OECD and the World Bank. The former source is used for OECD countries and accession countries or key partners, while the latter source is used for all other countries.

Source: OECD (2019) ICT Access and Use by Businesses, *OECD Telecommunications and Internet Statistics* (database) (<https://doi.org/10.1787/9d2cb97b-en>); World Bank, Enterprise Surveys ([www.enterprisesurveys.org](http://www.enterprisesurveys.org))

### 2.2.2 Internet shopping

#### Used the Internet to buy something online in the past year (%) | 2017

This indicator refers to the percentage of respondents aged at least 15 years old who have used the Internet in the past year to buy something online. The data stem from a triennial survey that is carried out in more than 140 economies.

Source: World Bank, *Global Findex* database (<https://globalfindex.worldbank.org/>)

### 2.2.3 Professionals

#### Professionals (%) | 2018

Professionals refers to the number of professionals as a share of the total workforce. The employment by occupation is based on the International Standard Classification of Occupation (ISCO) Revision 2008 (data based on ISCO Rev. 1988 is used for those countries where ISCO Rev. 2008 is not available). It includes physical, mathematical, and engineering science professionals; life science and health professionals; teaching professionals; and other professionals (business, legal, archivists, librarians, social science, religious professionals and writers and creative or performing artists).

Source: International Labour Organization, *ILOSTAT* (<https://ilostat.ilo.org/>)

### 2.2.4 Technicians and associate professionals

#### Technicians and associate professionals (%) | 2018

This indicator refers to the number of technicians and associate professionals as a share of the total workforce. The employment by occupation is based on the International Standard Classification of Occupation (ISCO) Revision 2008 (data based on ISCO Rev. 1988 is used for those countries where ISCO Rev. 2008 is not available). It includes physical and engineering science associate professionals, life science and health associate professionals, teaching associate professionals, and other associate professionals (finance and sales, social work, artistic, entertainment and sports, religious associate professionals, police inspectors and detectives, administrative, customs, and tax and related government associate professionals).

Source: International Labour Organization, *ILOSTAT* (<https://ilostat.ilo.org/>)

### 2.2.5 Extent of staff training

#### Average answer to the question: In your country, to what extent do companies invest in training and employee development? [1 = not at all; 7 = to a great extent] | 2017-18

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2016–2017 (<http://reports.weforum.org>)

### 2.2.6 R&D expenditure by businesses

#### Gross domestic expenditure on R&D performed by business enterprise (% of GDP) | 2017

This indicator refers to business enterprise expenditure on research and development (R&D) as a percentage of GDP. The sector comprises both private enterprises and public enterprises. R&D expenditure is defined as all current expenditure plus gross fixed capital expenditure for R&D performed by businesses, whatever the source of funds.

Source: UNESCO Institute for Statistics, *UIS.Stat* (<http://data.uis.unesco.org/>)

## 2.3 GOVERNMENTS

### 2.3.1 Government online services

#### Government Online Service Index | 2018

The Government Online Service Index (OIS) is one of the three main components of the E-Government Development Index (EGDI) constructed and published by United Nations Department of Economic and Social Affairs. The OIS assesses the quality of government's delivery of online services on a 0-to-1 (best) scale. The assessment is carried out by researchers, who evaluate "each country's national website in the native language, including the national portal, e-services portal and e-participation portal, as well as the websites of the related ministries of education, labor, social services, health, finance and environment as applicable".

Source: United Nations Department of Economic and Social Affairs (UNDESA), UN E-Government Knowledgebase (<https://publicadministration.un.org/egovkb/en-us/>)

### 2.3.2 Publication and use of open data

#### Open Data Barometer | 2016

This indicator refers to the 4th edition of the Open Data Barometer, which is an index that provides a measure of how governments publish and use open data in three dimensions: readiness, implementation, and impact.

Source: World Wide Web Foundation (2017), *Open Data Barometer 4th Edition – Global Report* (<https://opendatabarometer.org/4thedition/>)

### 2.3.3 ICT use and government efficiency

#### In your country, to what extent does the use of ICTs by the government improve the quality of government services to the population? [1 = Not at all; 7 = To a great extent] | 2016-17 weighted average

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2016–2017 (<http://reports.weforum.org>)

### 2.3.4 R&D expenditure by governments and higher education

#### Gross domestic expenditure on R&D performed by government and higher education institutions (% of GDP) | 2018

This indicator refers to the combined expenditure by governments and higher education institutions on research and development (R&D) as a percentage of GDP. The government sector comprises all units of central, regional, and municipal government, but excludes public enterprises (which fall under the business enterprise category). Higher education institutions are those that primarily focus on providing formal tertiary education (i.e. levels 5–8 of the International Standard Classification of Education, ISCED). R&D expenditure is defined as all current expenditure plus gross fixed capital expenditure for R&D performed by government and higher education institutions, whatever the source of funds.

Source: UNESCO Institute for Statistics, *UIS.Stat* (<http://data.uis.unesco.org/>)

## 3rd pillar: Governance

### 3.1 TRUST

#### 3.1.1 Rule of law

##### Rule of law indicator | 2018

The rule of law indicator ‘reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence’. Scores are standardized to a scale from -2.5 (worst) to 2.5 (best).

Source: World Bank, *Worldwide Governance Indicators 2019 Update* ([www.govindicators.org](http://www.govindicators.org))

#### 3.1.2 Software piracy rate

##### Unlicensed software units (% of total software units installed) | 2017

This measure covers piracy of all packaged software that runs on personal computers (PCs), including desktops, laptops, and ultra-portables, including netbooks. This includes operating systems; systems software such as databases and security packages; business applications; and consumer applications such as games, personal finance, and reference software. The study does not include software that runs on servers or mainframes, or software loaded onto tablets or smart phones.

Source: BSA | The Software Alliance (2018) *Software Management: Security Imperative, Business Opportunity. BSA Global Software Survey* ([https://gss.bsa.org/wp-content/uploads/2018/05/2018\\_BSA\\_GSS\\_Report\\_en.pdf](https://gss.bsa.org/wp-content/uploads/2018/05/2018_BSA_GSS_Report_en.pdf))

#### 3.1.3 Secure Internet servers

##### Secure Internet servers (per million population) | 2018

*Secure Internet servers* are servers using encryption technology in Internet transactions.

Source: World Bank, *World Development Indicators* (<http://data.worldbank.org/data-catalog/world-development-indicators>)

#### 3.1.4 Cybersecurity

##### Global Cybersecurity Index | 2018

The Global Cybersecurity Index (GCI) provides a measure of the level of cybersecurity commitments of countries. It is a composite index made up of 25 indicators that are distributed across five main pillars: Legal Measures, Technical Measures, Organizational Measures, Capacity Building Measures, and Cooperation Measures. Scores are standardized to a scale of 0-1.

Source: ITU (2019) *Global Cybersecurity Index (GCI) 2018* ([https://www.itu.int/dms\\_pub/itu-d/opb/str/D-STR-GCI.01-2018-PDF-E.pdf](https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-GCI.01-2018-PDF-E.pdf))

#### 3.1.5 Online trust and safety

##### Trust & Safety sub-index | 2018

The Trust & Safety sub-index is one of three components that make up the Readiness pillar of *the Inclusive Internet Index 2019*. The sub-index measures Internet safety and cultural acceptance of the Internet based on the weighted average of six indicators: Privacy regulations, Trust in online privacy, Trust in Government websites and apps, Trust in Non-government websites and apps, Trust in information from social media, and e-Commerce safety. Scores are standardized to a scale of 0-100.

Source: The Economist Intelligence Unit, *Inclusive Internet Index 2019*, (<https://theinclusiveinternet.eiu.com/>)

### 3.2 REGULATION

#### 3.2.1 Regulatory quality

##### Regulatory quality indicator | 2018

The regulatory quality indicator captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Scores are standardized to a scale from -2.5 (worst) to 2.5 (best).

Source: World Bank, *Worldwide Governance Indicators 2019 Update* ([www.govindicators.org](http://www.govindicators.org))

### 3.2.2 Ease of doing business

#### Ease of doing business index | 2019

The ease of doing business index aggregates a country's percentile rankings on 10 topics covered in the World Bank's *Doing Business* report series. The topics are: starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency. A high ranking indicates that the regulatory environment is more conducive to setting up business.

Source: World Bank, *Doing Business 2020: Comparing Business Regulation in 190 Economies* (<https://www.doingbusiness.org/en/reports/global-reports/doing-business-2020>)

### 3.2.3 Legal framework's adaptability to digital business models

**In your country, how fast is the legal framework of your country adapting to digital business models (e.g. e-commerce, sharing economy, fintech, etc.)? (1=Not fast at all; 7=Very fast) | 2016-17 weighted average**

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement The Global Competitiveness Report in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2016–2017 (<http://reports.weforum.org>)

### 3.2.4 E-commerce legislation

#### Global Cyberlaw Tracker | 2019

This indicator refers to countries' adoption of e-commerce legislation. *The Global Cyberlaw Tracker* provides information on whether a country has adopted legislation (or has a draft law pending adoption) in four areas: electronic transactions, consumer protection, privacy and data protection, and cybercrime. Scores range from 0 (no legislation) to 4 (adopted legislation in all four areas).

Source: United Nations Conference on Trade and Development (UNCTAD), *Global Cyberlaw Tracker* ([https://unctad.org/en/Pages/DTL/STI\\_and\\_ICTs/ICT4D-Legislation/eCom-Global-Legislation.aspx](https://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/eCom-Global-Legislation.aspx))

### 3.2.5 Social safety net protection

**In your country, to what extent does a formal social safety net provide protection to the general population from economic insecurity in the event of job loss or disability? [1 = Not at all; 7 = Provides full protection] | 2017-18 weighted average**

The World Economic Forum's Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2017–2018 (<http://reports.weforum.org>)

### 3.2.6 ICT Regulatory Environment

#### ICT Regulatory Tracker | 2018

This indicator is based on a composite index—the *ICT Regulatory Tracker*—that provides a measure of the existence and features of ICT legal and regulatory frameworks. The index covers 50 indicators that are distributed across four pillars: Regulatory Authority, Regulatory Mandate, Regulatory Regime, and Competition Framework. Scores are standardized to a scale of 0-2.

Source: International Telecommunication Union (ITU), *ICT Regulatory Tracker 2018* (<https://www.itu.int/net4/itu-d/irt/>)

## 3.3 INCLUSION

### 3.3.1 E-participation

#### E-Participation Index | 2018

The E-Participation Index assesses, on a 0-to-1 (best) scale, the quality, relevance, and usefulness of government websites in providing online information and participatory tools and services to their citizens. Within the E-Participation Index, countries are benchmarked in three areas: e-information, e-consultation, and e-decision-making. As such, the index indicates both the capacity and the willingness of the state in encouraging the citizen in promoting deliberative, participatory decision-making in public policy and of the reach of its own socially inclusive governance program.

Source: United Nations Department of Economic and Social Affairs (UNDESA), UN E-Government Knowledgebase (<https://publicadministration.un.org/egovkb/en-us/>)

### 3.3.2 Socioeconomic gap in use of digital payments

#### Difference between rich and poor income groups that made or received digital payments in the past year (% age 15+) | 2017

This indicator refers to the share of, respectively, the poorest 40 percent and richest 60 percent in a country that made or received digital payment in the past 12 months. Making a digital payment includes “using mobile money, a debit or credit card, or a mobile phone to make a payment from an account, or report using the internet to pay bills or to buy something online”. Receiving a digital payment includes receiving money “directly from or into a financial institution account or through a mobile money account”. Scores are calculated as the ratio of the share related to the poorest 40 percent over the share related to the richest 60 percent.

Source: World Bank, *Global Findex database* (<https://globalfindex.worldbank.org/>)

### 3.3.3 Availability of local online content

#### In your country, to what extent are Internet content and services tailored to the local population (e.g in the local language, meeting local demand)? (1=Not at all; 7=To a great extent) | 2016-17 weighted average

The World Economic Forum’s Executive Opinion Survey (EOS) is conducted on an annual basis to gather information from business leaders on topics for which hard data sources are scarce or nonexistent. It is part of the effort to supplement *The Global Competitiveness Report* in assessing issues that drive national competitiveness.

Source: World Economic Forum, Executive Opinion Survey 2016–2017 (<http://reports.weforum.org>)

### 3.3.4 Gender gap in Internet use

#### Difference between female and male population in using the Internet | 2018

This indicator refers to the share of, respectively, women and men in a country that use the Internet. Scores are calculated as the ratio of the share related to the female population over the share related to the male population.

Source: International Telecommunication Union (ITU), ITU World Telecommunication/ICT Indicators database 2019 (<http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx>)

### 3.3.5 Rural gap in use of digital payments

Difference between the rural population and the total population that made or received digital payments in the past year (% age 15+) | 2017

This indicator refers to the share of, respectively, the rural population and the total population in a country that made or received digital payment in the past 12 months. Making a digital payment includes “using mobile money, a debit or credit card, or a mobile phone to make a payment from an account, or report using the internet to pay bills or to buy something online”. Receiving a digital payment includes receiving money “directly from or into a financial institution account or through a mobile money account”. Scores are calculated as the ratio of the share related to the rural population over the share related to the total population.

Source: World Bank, *Global Findex database* (<https://globalfindex.worldbank.org/>)

## 4th pillar: Impact

### 4.1 ECONOMY

#### 4.1.1 Medium- and high-tech industry

##### Proportion of medium and high-tech industry value added in total value added (%) | 2016

This indicator refers to the ratio between the value added of medium and high-tech industry and the total value added of manufacturing, expressed as a percentage. The manufacturing sector relates to sector D in the International Standard Industrial Classification of all Economic Activities (ISIC) revision 3 (1990) or sector C in ISIC revision 4 (2008). The definition of medium and high-tech industry is based on the R&D intensity of economic activities. See United Nations (2019) or Galindo-Rueda & Verger (2016) for details on the classification.

Source: United Nations Industrial Development Organization (UNIDO), *UNIDO CIP 2018 Database* (<https://stat.unido.org>), sourced from United Nations, Open SDG Data Hub (<http://www.sdg.org>). United Nations (2019), *Metadata for Indicator 9.b.1 Proportion of medium and high-tech industry value added in total value added* (<https://unstats.un.org/sdgs/metadata/files/Metadata-09-0B-01.pdf>). Galindo-Rueda, F. and F. Verger (2016). OECD Taxonomy of Economic Activities Based on R&D Intensity, *OECD Science, Technology and Industry Working Papers*, 2016/04, OECD Publishing, Paris (<http://dx.doi.org/10.1787/5jlv73sqqp8r-en>)

#### 4.1.2 High-tech exports

##### High technology manufactures exports (% of total exports of manufactured goods) | 2018

*High-value exports* refers to high technology manufactures (electronic and electrical and other), as calculated according to the Lall classification, over exports of all manufactured goods.

Source: World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>). The classification of exports is based on Lall, S. (2000), *The Technological Structure and Performance of Developing Country Manufactured Exports*, Oxford Development Studies, 28(3), 1985–1989

#### 4.1.3 PCT patent applications

##### Number of applications filed under the Patent Cooperation Treaty (PCT) (per million population)

This indicator refers to the total count of applications filed under the Patent Cooperation Treaty (PCT), by priority date and inventor nationality, using fractional count if an application is filed by multiple inventors. The count is divided by million population.

Source: World Intellectual Property Organization (WIPO) PCT Data, sourced from Organisation for Economic Co-operation and Development (OECD), *Patent Database* (<http://www.oecd.org/sti/inno/intellectual-property-statistics-and-analysis.htm>). Population data sourced from World Bank, *World Development Indicators* (<http://data.worldbank.org/data-catalog/world-development-indicators>)

#### 4.1.4 Labour productivity per employee

##### Labour productivity per person employed (2018 US\$) | 2019

The Conference Board provides two calculations of its estimates on output, labour and labour productivity: an original version based on official GDP data and an adjusted version based on GDP growth and levels that take into account rapidly falling ICT prices. *Labour productivity per employee* is based on the estimates of the adjusted version.

Source: The Conference Board, Total Economy Database™ (Adjusted version) ([www.conference-board.org/data/economydatabase](http://www.conference-board.org/data/economydatabase))

### 4.2 QUALITY OF LIFE

#### 4.2.1 Happiness

##### Happiness score (life ladder) | 2018

Happiness refers to the national average response to the following survey question included in the Gallup World



Poll: “Please imagine a ladder, with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?” The indicator is also referred to as *the Cantril life ladder, life ladder or subjective well-being*.

Source: The Gallup World Poll (2006–2018) (<https://www.gallup.com/analytics/232838/world-poll.aspx>), sourced from Helliwell, J., Layard, R., & Sachs, J. (2019). *World Happiness Report 2019*, New York: Sustainable Development Solutions Network (<https://worldhappiness.report/>)

#### 4.2.2 Freedom to make life choices

##### Freedom to make life choices score | 2018

*Freedom to make life choices* refers to the national average response to the following survey question included in the Gallup World Poll: “Are you satisfied or dissatisfied with your freedom to choose what you do with your life?”

Source: The Gallup World Poll (2006–2018) (<https://www.gallup.com/analytics/232838/world-poll.aspx>), sourced from Helliwell, J., Layard, R., & Sachs, J. (2019). *World Happiness Report 2019*, New York: Sustainable Development Solutions Network (<https://worldhappiness.report/>)

#### 4.2.3 Income inequality

##### Gini index | 2017

The Gini index is a measure of income inequality in an economy. Technically, it is based on a Lorenz curve that “plots the cumulative percentages of total income received against the cumulative number of recipients” and where the Gini index refers to the area between the Lorenz curve and the (hypothetical) line of perfect equality. The scale of the Gini index ranges from 0 (perfect equality) to 100 (perfect inequality).

Source: World Bank, World Development Indicators (<http://data.worldbank.org/data-catalog/world-development-indicators>)

#### 4.2.4 Healthy life expectancy at birth

##### Healthy life expectancy at birth (years) | 2016

This indicator is defined as the “average number of years that a person can expect to live in ‘full health’ by taking into account years lived in less than full health due to disease and/or injury”. The number of years lost due to ill health in a country is estimated by the disability rate per capita (adjusted for independent comorbidity), broken down by age and sex.

Source: World Health Organization, *Global Health Observatory (GHO) database* (<https://www.who.int/gho>)

### 4.3 SDG CONTRIBUTION

#### 4.3.1 Access to basic services

##### Population with access to basic sanitation services and basic drinking water services (%) | 2015

This indicator refers to the average of the percentage of the population using at least basic sanitation services and the percentage of the population using at least basic drinking water services. Basic sanitation services relate to “improved sanitation facilities that are not shared with other households”, while the definition for basic drinking water services is “drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip”. The measure is based on SDG indicator “1.4.1 Proportion of population living in households with access to basic services”, which is one of the official indicators for “SDG 1: End poverty in all its forms everywhere” and, specifically, “Target 1.4: By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance”.

Source: World Bank, World Development Indicators based on WHO/UNICEF Joint Monitoring Programme (JMP) for Water Supply, Sanitation and Hygiene (<http://data.worldbank.org/data-catalog/world-development-indicators>)

#### 4.3.2 Pollution

##### Annual mean levels of fine particulate matter in cities, urban population (micrograms per cubic meter) | 2016

*Pollution* refers to air pollution in urban areas, as measured by annual mean concentrations of fine

particulate matter that are less than 2.5 microns in diameters. The data on PM<sub>2.5</sub> concentrations come from fixed-site, population-oriented monitors in metropolitan areas. The country-level mean is a population-weighted average for the urban population. The indicator is one of the official measures for “SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable” and, specifically, for “Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management”.

Source: World Health Organization, *Global Health Observatory (GHO) database* (<https://www.who.int/gho>)

### 4.3.3 Road safety

#### Road traffic death rate (per 100,000 population) | 2016

Road safety refers to the estimated number of deaths that are due to road traffic injuries per 100,000 population. The indicator is one of the official measures for “SDG 3: Ensure healthy lives and promote well-being for all at all ages” and, specifically, for “Target 3.6: By 2020, halve the number of global deaths and injuries from road traffic accidents”.

Source: World Health Organization, *Global Health Observatory (GHO) database* (<https://www.who.int/gho>)

### 4.3.4 Reading proficiency in schools

#### Minimum proficiency in reading, lower primary education (%) | 2018

This indicator relates to the proportion of students in grades 2 or 3 that have at least minimum proficiency in reading. The level of minimum proficiency is measured through learning assessments and United Nations (2018) provides further details on what minimum proficiency levels are associated with different learning assessments. The indicator is one of the official measures for “SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” and, specifically, for “Target 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes”.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>). United Nations (2018) *Metadata for Indicator 4.1.1: Proportion of children and young people in grades 2/3 achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex* (<https://unstats.un.org/sdgs/metadata/files/Metadata-04-01-01A.pdf>)

### 4.3.5 Math proficiency in schools

#### Minimum proficiency in mathematics, lower primary education (%) | 2018

This indicator relates to the proportion of students in grades 2 or 3 that have at least minimum proficiency in mathematics. The level of minimum proficiency is measured through learning assessments and United Nations (2018) provides further details on what minimum proficiency levels are associated with different learning assessments. The indicator is one of the official measures for “SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” and, specifically, for “Target 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes”.

Source: UNESCO Institute for Statistics, UIS.Stat (<http://data.uis.unesco.org/>). United Nations (2018) *Metadata for Indicator 4.1.1: Proportion of children and young people in grades 2/3 achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex* (<https://unstats.un.org/sdgs/metadata/files/Metadata-04-01-01A.pdf>)

### 4.3.6 Use of clean fuels and technology

#### Proportion of population with primary reliance on clean fuels and technology (%) | 2017

This indicator is defined as “the number of people using clean fuels and technologies for cooking, heating and lighting divided by total population”, expressed as a percentage. By “clean” is meant meeting specific emission rate targets and fuel recommendations as set out in World Health Organization (2014). The indicator is one of the official measures for “SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all” and, specifically, for “Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services”.

Source: World Health Organization, *Global Health Observatory (GHO) database* (<https://www.who.int/gho>). World Health Organization (2014) *WHO guidelines for indoor air quality: household fuel combustion*, Geneva (<https://www.who.int/airpollution/publications/household-fuel-combustion>)

## About the authors



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Michael is an economist and independent consultant. Currently, he leads the analytical work of the Global Talent Competitiveness Index published by leading international business school INSEAD, where he is responsible for the calculation and analysis of country and city rankings. Prior to this role, he was a consultant and associate economic affairs officer at the United Nations Conference on Trade and Development (UNCTAD), working primarily on issues of trade and development related to the least developed countries and landlocked developing countries. Other past work experience includes consulting for the World Trade Organization and working as an analyst at the Swedish National Board of Trade, CUTS International, and Mintel International. He holds a Ph.D. in economics from the University of Geneva and a Master of International Law and Economics from the World Trade Institute (University of Bern).



### SOUMITRA DUTTA

Soumitra Dutta is a professor of management and the former founding dean of the Cornell SC Johnson College of Business (April 2016 to January 2018). Previously, he was the Anne and Elmer Lindseth Dean of the Samuel Curtis Johnson Graduate School of Management. Prior to coming to Cornell in 2012, he was on the faculty and leadership team of INSEAD. He currently also serves as the President and Co-Chair of the Portulans Institute. He is an authority on technology and innovation policy. He was the co-editor and author of *The Global Information Technology Report*, published by the World Economic Forum, and also the founder of *The Global Innovation Index*, published by the World Intellectual Property Organization—two influential reports in technology and innovation policy. Mr. Dutta is on the global boards of Sodexo and Dassault Systèmes. He is also a member of the Shareholder Council of Chicago-based ZS Associates. In addition, he is a member of the advisory boards of several business schools including HEC, Montreal; ESADE, Barcelona; and ESCP, Paris. He has co-founded two firms, including Fisheye Analytics, which the WPP group acquired. He is currently chair of the Board of Directors of the Global Business School Network, a Washington, D.C. based not-for-profit organization focused on improving management capacity in emerging markets. He was previously the chair of AACSB, the leading global body for the accreditation of business schools. Mr. Dutta is a member of the Davos Circle, an association of long-time participants in the World Economic Forum Annual Meeting in Davos, and has engaged in a number of multi-stakeholder initiatives to shape global, regional, and industry agendas. He is also currently the co-chair of the World Economic Forum's Global Future Council on Innovation Ecosystems. Mr. Dutta received a Bachelor of Technology in electrical engineering and computer science from the Indian Institute of Technology (IIT), New Delhi, a Master of Science in both business administration and computer science, and a PhD in computer science from the University of California at Berkeley. In 2017, he received the Distinguished Alumnus Award from his alma mater IIT Delhi.



## BRUNO LANVIN

Bruno Lanvin is INSEAD's executive director for global indices and Co-chair of the Portulans Institute. From 2007 to 2015, he was the executive director of INSEAD's eLab, managing INSEAD's teams in Paris, Singapore, and Abu Dhabi, and then executive director for INSEAD's European Competitiveness Initiative (IECI). From 2000 to 2007, Dr. Lanvin worked for the World Bank, where he was inter alia senior advisor for e-strategies and regional coordinator in Europe and Central Asia for ICT and e-government issues. He also headed the Capacity Building Practice of the World Bank's Global ICT Department and was chairman of the bank's e-Thematic Group. From June 2001 to December 2003, he was the manager of the Information for Development Program (infoDev) at the World Bank. In 2000, Dr. Lanvin was appointed executive secretary of the G8-DOT Force. Until then, he was head of electronic commerce in the United Nations Conference on Trade and Development (UNCTAD) in Geneva, and occupied various senior positions including chief of the cabinet of the director general of the United Nations in New York, and head of strategic planning and later chief of the SME Trade Competitiveness Unit of UNCTAD/SITE. He was the main drafter, team leader, and editor of *Building Confidence: Electronic Commerce and Development*, published in January 2000. Since 2002, he has been coauthoring *The Global Information Technology Report* (Cornell University-INSEAD-World Economic Forum), and is currently the co-editor of *The Global Innovation Index Report* (Cornell University-INSEAD-WIPO). In 2013, he created and launched the first edition of the *Global Talent Competitiveness Index (GTCI)*, and is still the co-editor of this annual report. He holds a Bachelor of Arts in mathematics and physics from the University of Valenciennes, France, a Master's of Business Administration from Ecole des Hautes Etudes Commerciales (HEC) in Paris, France, a PhD in economics from the University of Paris I (La Sorbonne) in France, and is an alumnus of INSEAD (IDP-C). A frequent speaker at high-level meetings, he advises several global companies and governments and has been a member of numerous boards for many years, including those of ICANN, IDA-Infocomm, GovTech, IP-Watch, AAID, and the Bin Rashid Foundation for Government Innovation.



## CAROLINA ROSSINI


Carolina Rossini has over 20 years of experience in technology law and policy, including ICT for development, internet, intellectual property, open innovation, and telecommunications. She is the co-founder and CEO of Portulans Institute, and the founder of iNova Partners Consulting—assisting non-profits in executing effective and long-term change and impact—and Yong Global Leader with the World Economic Forum. She serves on the advisory board of InternetLab (Brazil), Derechos Digitales (Chile), Lighthouse Collective (USA), Instituto EducaDigital (Brazil), and #IamtheCode (Global). She is a results-oriented, decisive leader with proven success in policy change and advocacy, strategic organizational impact, growth, and fundraising. Previously, she was the RightsCon director at Access Now, and she worked at Facebook as a global policy manager for connectivity and mobile. In the U.S., she also worked as the vice president for international policy at Public Knowledge, a project director at New America Foundation's Open Technology Institute, the international intellectual property director at Electronic Frontier Foundation (EFF), and a three-year fellow at Harvard University's Berkman Klein Center for Internet and Society. She served as an agenda council member at the World Economic Forum and is a World Economic Forum Young Global Leader. Back in Brazil, where she was born, she was an in-house counsel at Telefonica and a law lecturer at the Center for Technology and Society at Fundação Getúlio Vargas (CTS/FGV). Carolina has an LLM in intellectual property from Boston University, an MBA from IE Business School, an MA in international economic negotiations from UNICAMP/UNESP, and a JD from the University of Sao Paulo—USP.



**About the Network Readiness Index:** The Network Readiness Index (NRI) was first published in 2002 and provided a holistic framework for assessing the multi-faceted impact of ICT on society and the development of nations. Until 2016, the NRI was part of the Global Information Technology Report (GITR) published by the World Economic Forum (WEF), Cornell University, and INSEAD. The NRI anticipated various aspects that would become critical in the following years: early on, it identified three essential stakeholders for ICT: individuals/society, businesses, and governments, and it included elements of ICT application that were novel for the time. At a time when the primary concerns in ICT revolved around infrastructure issues, the NRI provided a forward-looking and a holistic perspective on the application of ICT within national economies.

The NRI rapidly developed into a global benchmark for the application and utilization of ICT. Many economies utilized the NRI to design their ICT strategies, and the NRI was used and frequently quoted by leaders from the public and private sectors. Over the ensuing two decades, the NRI framework underwent one major revision, which allowed an explicit focus on the impact of ICT. Despite the challenges inherent in collecting data from more than 120 economies, the NRI retained its extensive global coverage as the key metric of the use of ICT for development and competitiveness.

This year, the renewed and revised NRI covers more than 120 nations across 62 variants and is a publication of the Portulans Institute, whose co-founders - Bruno Lanvin and Soumitra Dutta - have also been the co-editors of the GITR in previous years.



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