

# Chapter 5. Global trends in e-government

## 5.1 Introduction

The 2030 Agenda for Sustainable Development introduces the concept of data-driven governance and highlights the challenge to “increase significantly the availability of high-quality, timely, reliable and disaggregated data by 2030”.<sup>1</sup> This chapter presents a data-driven analysis of the key trends of e-government development in 2018 based on the assessment of the E-Government Development Index (EGDI). It also describes and analyzes global trends in electronic and mobile service delivery and sheds light on the distribution of online services by income level and sectors.

It starts by briefly analyzing the ranking of the 193 United Nations Member States according to EGDI subgroups (Very-High, High, Middle, and Low). The analysis also presents major drivers of EGDI such as progress in online transactional services delivery, trends in open government data and mobile services, and public engagement in the delivery of innovative public services. Multiple linkages to the sustainable development goals (SDGs) are highlighted relating to key services across selected goals and targets, such as health, education, social protection, gender equality, and decent work and employment. Also highlighted are the five key dimensions in Goal 16, including effectiveness, inclusion, openness, trustworthiness, and accountability. Selected themes or proxy themes related to e-government and sustainable development are also globally analyzed, including open government data, mobile-government and e-participation.

The sections below present the 2018 Survey findings by EGDI rankings at the global level. Where relevant, additional insights are provided based on comparisons of data from the 2014, 2016 and 2018 Surveys and relevant correlations between EGDI and its components, country income group classifications, and organization of e-services by sectors.

## 5.2 E-government rankings in 2018

The 2018 United Nations E-Government Survey is the tenth edition of tracking e-government development achieved by all Member States of the United Nations since the 2001 benchmarks. The Survey is not designed to capture e-government development in absolute terms. Rather, it aims to give an indicative assessment of the diffusion of e-government through performance rating of national governments relative to one another. As explained in the Methodology note (See Annexes), the E-Government Development Index is a weighted average of normalized scores on the three most important dimensions of e-government: the scope and quality of online services as indicated by the Online Service Index (OSI), the status of the development of telecommunication infrastructure rated through



Photo credit: pixabay.com

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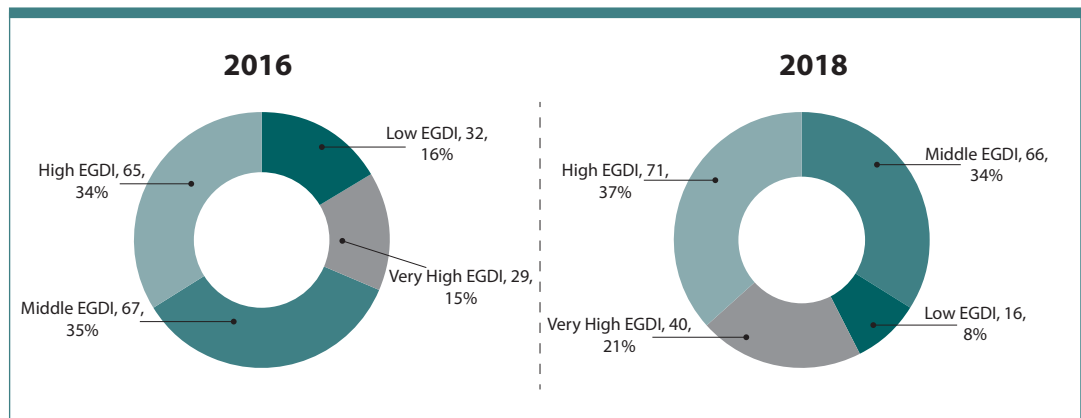
the Telecommunication Infrastructure Index (TII) and the inherent human capital scored through the Human Capital Index (HCI). Each of these indices is by itself a composite measure that can be extracted and analyzed independently. The composite value of each component index is then normalized to fall between the range of 0 to 1 and the overall EGDI is derived by taking the arithmetic average of the three component indices.

### 5.2.1 E-government development at a glance

E-government has been growing rapidly over the past 17 years since the first attempt of the United Nations to benchmark the state of e-government in 2001. The 2018 Survey highlights a persistent positive global trend towards higher levels of e-government development. In this edition, 40 countries score "Very-High", with EGDI values in the range of 0.75 to 1.00, as compared to only 10 countries in 2003, and 29 countries in 2016. Since 2014, all 193 Member States have been delivering some form of online presence.

Figure 5.1 shows the percentages of the different groupings based on EGDI in 2018 compared to 2016. Table 5.1 lists all countries grouped by E-Government Development Index (EGDI) levels in alphabetical order.

**Figure 5.1** Number of countries grouped by E-Government Development Index (EGDI) in 2016 and 2018



#### **High and Very-High EGDI Group**

Notably, in 2018, there are more countries with High-and Very-High-EGDI or values between 0.50 and 1.00; and the share of countries in High and Very-High-EGDI level groups has increased by 3 and 6 per cent respectively. As a result, the cumulative percentage of countries with High and Very-High levels of e-government development has reached 58 per cent, close to two-thirds of the United Nations Member States.

About one-quarter of countries in the High-EGDI and Very-High-EGDI groups had transitioned to a higher EGDI level: from Middle- to High-EGDI, 17 out of 71 countries and High- to Very High-EGDI, 11 out of 40 countries. It is interesting to note that eight of the 17 new countries that moved from the Middle- to High-EGDI level group in 2018 belong to the small island developing States (SIDS) group, indicating that many SIDS are already well advanced in implementing e-government policies and strategies and incorporating these into their development plans and policies.

The other nine out of the 17 countries that transitioned from Middle- to High-EGDI level group include five from Asia (India, Indonesia, Iran, Maldives, Kyrgyzstan), three from the Pacific (Fiji, Palau, Tonga) and one from Africa (Ghana). Ghana is the only African country that made this transition, in part, by streamlining its institutional and policy frameworks to capitalize on ICT innovations. Since 2017, it has also been investing in improving online services delivery (see Box 5.1 below).

### Box 5.1 e-Ghana and e-Transform projects

Ghana's economy experienced dramatic growth in 2017 when its GDP increased by 8.5 percent, compared with 3.7 percent in 2016<sup>2</sup>. The government of Ghana made significant contributions towards the development of ICTs under the e-Ghana and e-Transform projects. The Ghana Shared Growth and Development Agenda (GSGDA) incorporates an ICT strategy which implies increasing use of ICT across economic sectors, e-government, in implementing the National Electronic Security system and the proliferation of other ICT-related mechanisms for public benefit<sup>3</sup>. Various projects conducted by the National Information Technology Agency and the Ghana Investment Fund for Electronic Communication<sup>4</sup> are ensuring stable growth in the use of ICTs and are creating a favorable environment for further development and deployment of e-government mechanisms<sup>5</sup>. All these initiatives are securing Ghana's commitment towards the attainment of SDGs.



Source:  
<http://www.un-page.org/files/public/gsgda.pdf>

The Latin America and the Caribbean (LAC) countries are demonstrating remarkable progress in advancing positions in the EGDI. In the 2018 Survey, eight countries in the region jumped to the High-EGDI group, reflecting improved online presence boosted by strategies linking digital policies to national development.

### **Middle-EGDI Group**

While the number of countries in the Middle-EGDI level group with scores between 0.25 and 0.50 remained almost unchanged at 66 countries in 2018 compared to 67 in 2016, a significant improvement on e-government development is observed, as 18 or one-third of those countries have transitioned from a previous lower level. Only two countries (Democratic People's Republic of Korea and Sudan) have fallen from Middle- to Low-EGDI level due to adverse political, socio-economic and natural conditions. Twelve of the 18 countries are from Africa (Benin, Burkina Faso, Burundi, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Gambia, Liberia, Madagascar, Malawi, Mozambique, Sierra Leone), while two are from Asia (Afghanistan, Myanmar). The other three countries are part of SIDS (Haiti, Sao Tome and Principe, and Solomon Islands).

### **Low-EGDI Group**

As evidence of the advancement of e-government development in the last two years, countries in the Low-EGDI level that scored 0.25 or lower have dropped by a significant 50 per cent or 16 countries compared to 32 countries in 2016. But despite some development gains and major investments made in several countries, the e-government divide and digital divides persist. Fourteen countries in the Low-EGDI group are African and belong to the least developed countries. Within these countries, there is a high risk that the divide could deepen between people who have access to the Internet and online services and those who do not.

Table 5.1 Countries grouped by EGDI levels

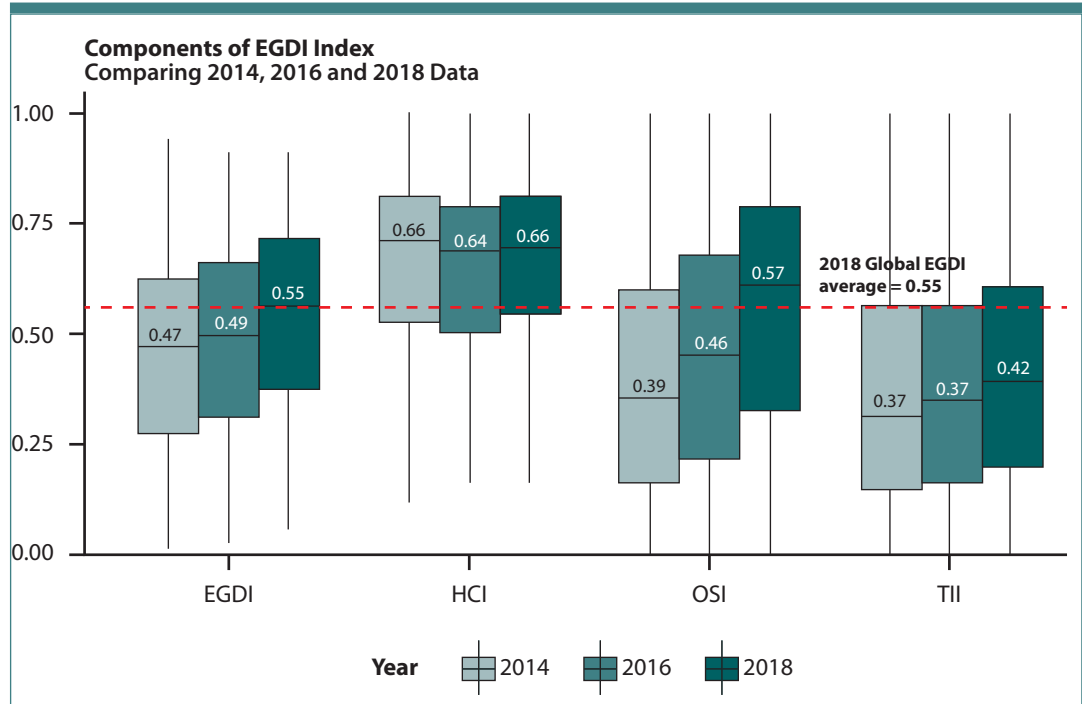
Very High EGDI 2018 (Greater than 0.75)	High EGDI 2018 (Between 0.50 and 0.75)	Middle EGDI 2018 (Between 0.25 to 0.50)	Low EGDI 2018 (Less than 0.25)
Australia	Albania	Afghanistan (+)	Central African Republic
Austria	Andorra	Algeria	Chad
Bahrain	Antigua and Barbuda (+)	Angola	Comoros
Belarus (+)	Argentina	Bangladesh	Democratic People's Republic of Korea (-)
Belgium	Armenia	Belize	Djibouti
Canada	Azerbaijan	Benin (+)	Equatorial Guinea
Cyprus (+)	Bahamas	Bhutan	Eritrea
Denmark	Barbados	Botswana	Guinea
Estonia	Bolivia (Plurinational State of) (+)	Burkina Faso (+)	Guinea-Bissau
Finland	Bosnia and Herzegovina	Burundi (+)	Mali
France	Brazil	Cambodia	Mauritania
Germany	Brunei Darussalam	Cameroon	Niger
Greece (+)	Bulgaria	Cabo Verde	Somalia
Iceland	Chile	Congo (+)	South Sudan
Ireland	China	Côte d'Ivoire (+)	Sudan (-)
Israel	Colombia	Cuba	Yemen
Italy	Costa Rica	Democratic Republic of the Congo (+)	Central African Republic
Japan	Croatia	Egypt	
Kazakhstan (+)	Czech Republic	Eswatini	
Liechtenstein (+)	Dominica (+)	Ethiopia	
Lithuania	Dominican Republic (+)	Gabon	
Luxembourg	Ecuador	Gambia (+)	
Malta (+)	El Salvador (+)	Guatemala	
Monaco (+)	Fiji (+)	Guyana	
Netherlands	Georgia	Haiti	
New Zealand	Ghana (+)	Honduras	
Norway	Grenada	Iraq	
Poland (+)	Hungary	Jamaica	
Portugal (+)	India (+)	Kenya	
Republic of Korea	Indonesia (+)	Kiribati	
Russian Federation (+)	Iran (Islamic Republic of) (+)	Lao People's Democratic Republic	
Singapore	Jordan	Lesotho	
Slovenia	Kuwait	Liberia (+)	
Spain	Kyrgyzstan (+)	Libya	
Sweden	Latvia	Madagascar (+)	
Switzerland	Lebanon	Malawi (+)	
United Arab Emirates	Malaysia	Marshall Islands	
United Kingdom of Great Britain and Northern Ireland	Maldives (+)	Micronesia	

Very High EGDI 2018 (Greater than 0.75)	High EGDI 2018 (Between 0.50 and 0.75)	Middle EGDI 2018 (Between 0.25 to 0.50)	Low EGDI 2018 (Less than 0.25)
United States of America	Mauritius	Mozambique (+)	
Uruguay (+)	Mexico	Myanmar (+)	
	Mongolia	Namibia	
	Montenegro	Nauru	
	Morocco	Nepal	
	Oman	Nicaragua	
	Palau (+)	Nigeria	
	Panama (+)	Pakistan	
	Paraguay (+)	Papua New Guinea (+)	
	Peru	Rwanda	
	Philippines	Saint Lucia	
	Qatar	Samoa	
	Republic of Moldova	Sao Tome and Principe (+)	
	Romania	Senegal	
	Saint Kitts and Nevis	Sierra Leone (+)	
	Saint Vincent and the Grenadines (+)	Solomon Islands (+)	
	San Marino	Suriname	
	Saudi Arabia	Syrian Arab Republic	
	Serbia	Tajikistan	
	Seychelles	Timor-Leste	
	Slovakia	Togo	
	South Africa	Turkmenistan	
	Sri Lanka	Tuvalu	
	Thailand	Uganda	
	The former Yugoslav Republic of Macedonia	United Republic of Tanzania	
	Tonga (+)	Vanuatu	
	Trinidad and Tobago	Zambia	
	Tunisia	Zimbabwe	
	Turkey		
	Ukraine		
	Uzbekistan		
	Venezuela (Bolivian Republic of)		
	Viet Nam		

**Note:** Countries with superscript (+) have advanced from a lower EGDI group to a higher EGDI group (e.g., from low-EGDI to middle-EGDI); countries with superscript (-) have dropped from a higher EGDI group to a lower EGDI group (e.g. from high-EGDI to middle-EGDI).

The average world EGDI has been increasing from 0.47 in 2014 to 0.55 in 2018 due to the continuous improvement of its subcomponent indices (see Figure 5.2). It is important to note that the improvement of the OSI Online Service Index average is the fastest - from 0.39 to 0.57 or by an average of 40 per cent. This suggests that globally, there has been steady progress in improving e-government and public services provision online.

Figure 5.2 Breakdown of EGDI Indices comparing data from 2014, 2016 and 2018



### 5.2.2 The leading e-government developed countries

In presenting the 2018 ranking, it is pertinent to reiterate that the E-Government Development Index is a normalized broad relative index. Dropping a few positions in rankings does not necessarily imply that a country had underperformed in that specific two-year survey period. Nor does higher ranking always mean better or more desirable outcomes, especially if it refers to a country belonging to the same EGDI level. Hence, analysts and policy-makers should caution against misinterpreting, even slightly, changes in ranking among closely ranked countries. Every country should determine the level and extent of its digital government objectives based on its specific national development context, capacity, strategy and programmes and never on an arbitrary assumption of its future position in the ranking. EGDI is a powerful and reliable benchmarking tool for development but only if it is used as a snapshot performance indicator and not an award conferred to worldwide leadership positions or outstanding advancements against the performance of others.

The list of the top-ranking countries in e-government development according to the findings of the 2018 Survey, are presented in Table 5.2 with corresponding EGDI values and its three components—OSI, TII and HCI. All the top 29 countries with Very-High-EGDI scores in 2016 remained in the same group in 2018.

Table 5.2 Leading countries in e-government development

Country Name	Region	OSI	HCI	TII	EGDI	2016 Rank	2018 Rank	EGDI Group change
Denmark	Europe	1.0000	0.9472	0.7978	0.9150	9	1	None
Australia	Oceania	0.9722	1.0000	0.7436	0.9053	2	2	None
Republic of Korea	Asia	0.9792	0.8743	0.8496	0.9010	3	3	None
United Kingdom of Great Britain and Northern Ireland	Europe	0.9792	0.9200	0.8004	0.8999	1	4	None
Sweden	Europe	0.9444	0.9366	0.7835	0.8882	6	5	None
Finland	Europe	0.9653	0.9509	0.7284	0.8815	5	6	None
Singapore	Asia	0.9861	0.8557	0.8019	0.8812	4	7	None
New Zealand	Oceania	0.9514	0.9450	0.7455	0.8806	8	8	None
France	Europe	0.9792	0.8598	0.7979	0.8790	10	9	None
Japan	Asia	0.9514	0.8428	0.8406	0.8783	11	10	None
United States of America	Americas	0.9861	0.8883	0.7564	0.8769	12	11	None
Germany	Europe	0.9306	0.9036	0.7952	0.8765	15	12	None
Netherlands	Europe	0.9306	0.9206	0.7758	0.8757	7	13	None
Norway	Europe	0.9514	0.9025	0.7131	0.8557	18	14	None
Switzerland	Europe	0.8472	0.8660	0.8428	0.8520	28	15	None
Estonia	Europe	0.9028	0.8818	0.7613	0.8486	13	16	None
Spain	Europe	0.9375	0.8885	0.6986	0.8415	17	17	None
Luxembourg	Europe	0.9236	0.7803	0.7964	0.8334	25	18	None
Iceland	Europe	0.7292	0.9365	0.8292	0.8316	27	19	None
Austria	Europe	0.8681	0.8505	0.7716	0.8301	16	20	None
United Arab Emirates	Asia	0.9444	0.6877	0.8564	0.8295	29	21	None
Ireland	Europe	0.8264	0.9626	0.6970	0.8287	26	22	None
Canada	Americas	0.9306	0.8744	0.6724	0.8258	14	23	None
Italy	Europe	0.9514	0.8341	0.6771	0.8209	22	24	None
Liechtenstein	Europe	0.7986	0.8237	0.8389	0.8204	32	25	H to VH
Bahrain	Asia	0.7986	0.7897	0.8466	0.8116	24	26	None
Belgium	Europe	0.7569	0.9740	0.6930	0.8080	19	27	None
Monaco	Europe	0.6250	0.7901	1.0000	0.8050	31	28	H to VH
Portugal	Europe	0.9306	0.8170	0.6617	0.8031	38	29	H to VH
Malta	Europe	0.8403	0.7973	0.7657	0.8011	30	30	H to VH
Israel	Asia	0.8264	0.8635	0.7095	0.7998	20	31	None
Russian Federation	Europe	0.9167	0.8522	0.6219	0.7969	35	32	H to VH
Poland	Europe	0.9306	0.8668	0.5805	0.7926	36	33	H to VH
Uruguay	Americas	0.8889	0.7719	0.6967	0.7858	34	34	H to VH
Greece	Europe	0.8194	0.8867	0.6439	0.7833	43	35	H to VH
Cyprus	Asia	0.7847	0.8083	0.7279	0.7736	64	36	H to VH
Slovenia	Europe	0.7986	0.8923	0.6232	0.7714	21	37	None
Belarus	Europe	0.7361	0.8681	0.6881	0.7641	49	38	H to VH
Kazakhstan	Asia	0.8681	0.8388	0.5723	0.7597	33	39	H to VH
Lithuania	Europe	0.7986	0.8323	0.6293	0.7534	23	40	None

Eight of the 11 new countries that joined the Very-High EGDI group in 2018 are from Europe (Belarus, Greece, Liechtenstein, Malta, Monaco, Poland, Portugal and the Russian Federation) while two are from Asia (Cyprus and Kazakhstan). Uruguay is the only Latin American country and one of the three countries from the Americas in this group, the other two being the United States and Canada. Eight of these 11 countries have significantly improved their online presence and services as reflected in their respective OSI scores.

All but two of the 40 countries in the Very-High-EGDI level group are high-income countries;<sup>6</sup> Belarus and Kazakhstan are upper-middle-income countries. As evidenced in previous editions of the Survey (United Nations, 2012, 2014 and 2016), the per capita income of a country, indicating economic capacity, has a strong influence on national e-government development.

### Box 5.2 Belarus e-government development



Belarus transitioned from High-EGDI in 2016 to Very-High-EGDI in 2018. This could be attributed to its National Strategy for Sustainable Social and Economic Development for the period up to 2030 incorporating several initiatives related to ICT development in various sectors of its economy. For example, the Strategy of Informatization of the Republic of Belarus for the period 2016 – 2022 was implemented in 2015 with the purpose of enhancing ICTs in the provision of e-government services. Another initiative, the State Program for the Development of the Digital Economy and the Information Society for 2016-2020 defines the vision for the “digital transformation” of the Belarusian economy and ensures the effective implementation of digital tools. This program was designed to digitalize already existing processes in healthcare, public procurement, education, among others. Presidential decrees and resolutions of the Council of Ministers contribute towards the coherent functioning of e-government services in the Republic of Belarus.

Source: <http://www.economy.gov.by/ru/>

### *The 10 top countries leading e-government development*

Among the top 10 countries, Denmark ranks highest according to the 2018 Survey. In the independent assessment conducted by UNDESA on the provision of online services, Denmark got the highest score. Since 2016, Denmark has been implementing its Digital Strategy 2016-2020<sup>7</sup>, setting the course for Danish public-sector digitization efforts as well as their interaction with businesses and industry. This strategy is aimed at building the basis for a strong and secure digital Denmark. Denmark has also made digital government-citizen interactions mandatory without excluding those unable to use digital services. Along with the private sector, public institutions at local, regional and central-government levels are taking advantage of the opportunities provided by digitization.

Australia ranks second in 2018 retaining its position in 2016. Notably, Australia leads the chart in human capital development and is in the top 10 in online services. The Australian Government is working to deliver the Digital Transformation Agenda. A Digital Transformation Roadmap issued in November 2016 sets out the goals of the Agenda, and snapshots of expected deliverables are being updated regularly<sup>8</sup>.

The Republic of Korea also remains in the third spot, as in 2016. The country performed well in online service and technology infrastructure, but its human capital development was relatively low compared to other top ranked countries. The country facilitates convenient, efficient, and transparent government in enhancing citizens' satisfaction and government productivity and is constantly improving to provide better government services to its citizens in the face of rapid technology changes. An increasing number of developing countries have requested the Government of the



Republic of Korea to share its know-how in digital government strategies<sup>9</sup> resulting in e-government capacity-building and the training of more than 4,820 public officials from other countries in the past 10 years.

The United Kingdom ranks fourth in the 2018 Survey, a few spots down from being the top-ranking country in 2016. The drop is due to a relative decrease in the ranking of its human capital and online service indices. The British Government is providing more integrated online services through its one-stop platform GOV.UK. Its Government Transformation Strategy published in 2017<sup>10</sup> is setting the course for further e-government development through business transformation, growing the right people, culture and skills, building better tools, processes and governance for civil servants, making better use of data and creating shared platforms, components and reusable business capabilities.

In the fifth place, Sweden stepped up one position compared to its ranking in 2016, owing to relatively high scores in both human capital and technical infrastructure indices. In 2017, the Government presented a strategy outlining the focus of the Government's digital policy—how it will contribute to competitiveness, full employment, and economic, social and environmentally sustainable development. The strategy aims for Sweden to become the world leader in harnessing the opportunities of digital transformation.<sup>11</sup> Sweden has high rates of mobile broadband take-up and its market is characterized by a rapidly growing consumer demand for fast broadband. Ninety-one percent of Swedes are online and three-quarters of them have basic digital skills.

Finland stepped down from the fifth place in 2016 to sixth in 2018. Finland has been scoring consistently well in human capital and online service indices, while its technical infrastructure is relatively low compared to other high ranked countries. Its National Knowledge Society Strategy has been focusing on the provision of multichannel, interactive e-services together with interoperability of information systems in the public administration. According to its Strategic Government Programme in 2016<sup>12</sup>, public services will be designed to be user-oriented and primarily digital, so as to achieve the desired productivity leap in public administration. Digitalization is a cross-cutting theme in the Government strategy. Principles for client-oriented public services are being drawn up and the public sector is being encouraged to commit to automation and the digitalization of their practices.

Singapore stepped down from the fourth place in 2016 to the seventh in 2018. Singapore ranks second in online service delivery index together with United States behind Denmark. It dropped a few positions from 2016 due to its human capital index and technological infrastructure indices. The Singaporean Government had an e-government plan since the 1980s. In 2014, it announced its goal of becoming a Smart Nation, of which Digital Government is an integral aspect<sup>13</sup>. Singapore has been embracing e-government as a whole-of-government approach in its national development strategy. Its small population and land area, accompanied by a very high human development and high GNI per capita, allow the government to develop a full suite of online services for its citizens, businesses and visitors. Additionally, the high mobile and smartphone penetration rate in Singapore is enabling the government to provide e-access to citizens through seamless m-government applications with faster, easier and more convenient use of available online resources, especially in government-to-citizen (G2C) and government-to-business (G2B) transactions<sup>14</sup>.

New Zealand scores well in both online services and human capital, ranking eight in EGDI in 2018 the same as in 2016. Alongside its ICT strategy<sup>15</sup>, the Government of New Zealand has established a Digital Economy Work Programme ensuring that agencies are collectively focusing on the right initiatives, in the right areas. The government is supporting the growth of New Zealand's digital sector, the uptake and smart use of ICT across its economy, the citizens' secure use of digital technologies

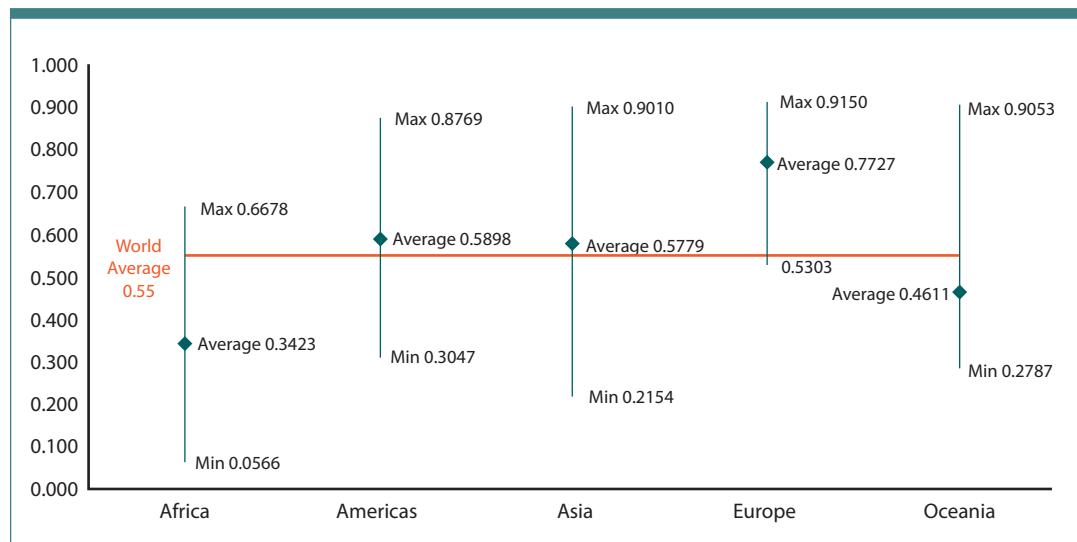
to support their personal, development and learning, access job opportunities, run businesses, and trade goods and services all over the world. More importantly, it charges the Government to use digital technologies for efficiency and to reduce paper-based processes<sup>16</sup>.

France improved its ranking from the tenth position in 2016 to ninth in 2018. Among factors contributing to improved scores is governments vision to achieve digital transformation of the public service with an objective of 100% dematerialized public service by 2022. In October 2017 France has launched Public Action 2022: for a transformation of the public service<sup>17</sup> aiming, among others, to simplify and digitize administrative processes. The government of France has also launched a Coordinated Development Program of the Digital Territorial Administration (DCANT<sup>18</sup>) to build a common foundation of applications, digital bricks, repositories and shared frameworks to accelerate digital transformation and scale up digital transformation.

Japan completes the group of the top 10 leading countries moving up from eleventh position in 2016 to tenth position in 2018. It scored high in technology infrastructure and online service, which drove it to the top 10 performance country list, even though its human capital index was comparatively low compared to other top-ranking countries. In Japan, the Government is promoting initiatives such as online use of administrative procedures, electronic provision of government information, optimization of work and systems, improvement of government e-procurement, and information security measures<sup>19</sup>. Japan also has a “Digital Government Strategy” and a “Basic Plan for the Advancement of Utilizing Public and Private Sector Data”. One of the three pillars of “Digital Government Strategy” is a platform for public-private partnerships aligned with SDG 8—promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all<sup>20</sup>.

At a glance, the regional EGDI averages in 2018 mirror those of previous Surveys. In 2018, Europe (0.7727) continues to lead with the highest regional EGDI, followed by the Americas (0.5898), Asia (0.5779), Oceania (0.4611) and finally Africa (0.3423). Examining previous trends, there has been no change in regional positions since 2003.

Figure 5.3 Regional averages with maximum and minimum values of EGDI in 2018

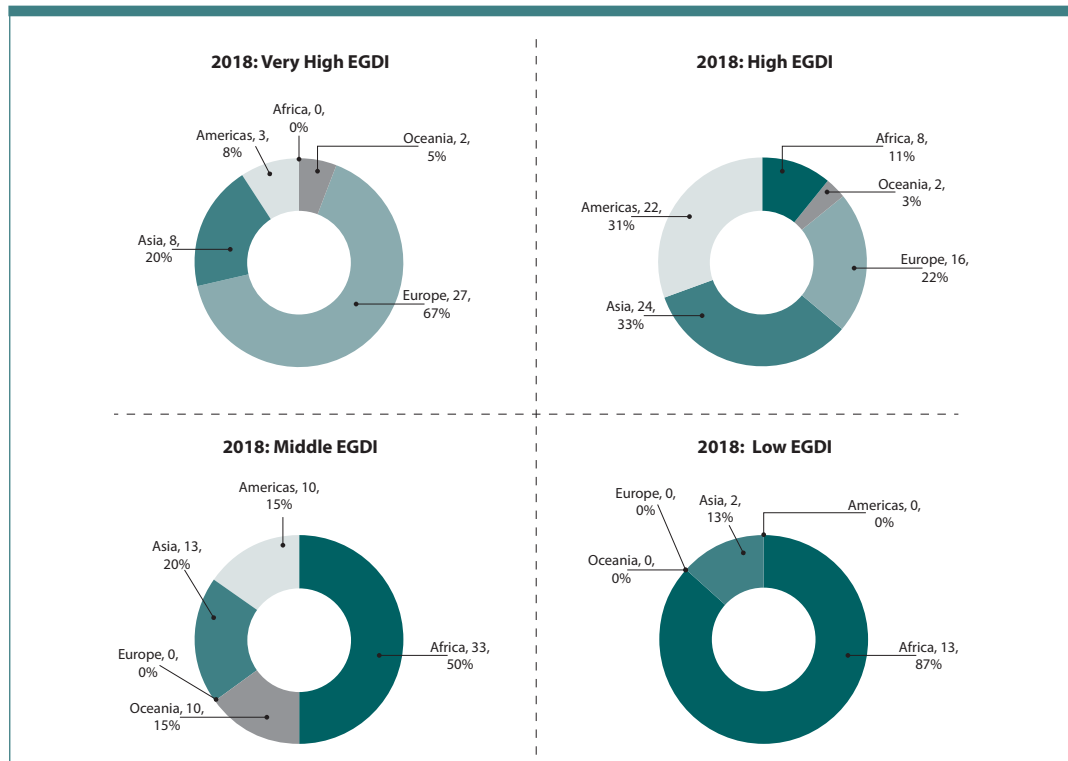


More specifically, as shown in Figure 5.4, in the Very-High-EGDI group, 67 per cent of all countries are from Europe, followed by Asia (20 per cent), Americas (8 per cent) and Oceania (5 per cent). In the High-EGDI group, the leaders are Asia and Americas regions (33 per cent and 31 per cent respectively), followed by Europe (22 per cent), Africa (11 per cent), and Oceania (3 per cent). In the Middle-EGDI group, African countries comprise 50 per cent, the geographic distribution of countries from Americas and Oceania is similar (15 per cent), and Asia takes up to 20 per cent of the share in the group. No European country is in the Middle and Low EGDI-level groups. The majority of 15 countries in Low-EGDI-level group are from Africa (87 per cent) followed by 2 countries in Asia (13 per cent).

The Africa region overall lags in e-government development compared to the rest of the world. While the share of African countries with improved EGDI scores expanded in 2018, the upward movement has mainly been from low to middle EGDI-level groups. The number of African countries within High-EGDI level group remains at the relatively modest count of six, including Ghana, Mauritius, Morocco, Seychelles, South Africa, and Tunisia. Except Ghana, all other five countries were in this group in 2016.

The regional average EGDI scores for countries in Africa and Oceania are significantly lower than the world average, comprising 0.3423 for Africa and 0.4611 for Oceania. Australia and New Zealand are the only two countries in Oceania that have high EGDI scores of 0.9053 and 0.8806 respectively. The scores for the other 12 countries range between 0.2787 to 0.5348, below the world average, even though they have as high level of human development as in the Americas and Asia. The HCI for these countries ranges from 0.4732 to 0.8462 with an average of 0.6637. Their e-government advancement is stalled due to relatively poor telecommunications infrastructure, with TII scores ranging from 0.0773 to 0.3562.

Figure 5.4 Regional distribution by EGDI level, 2018



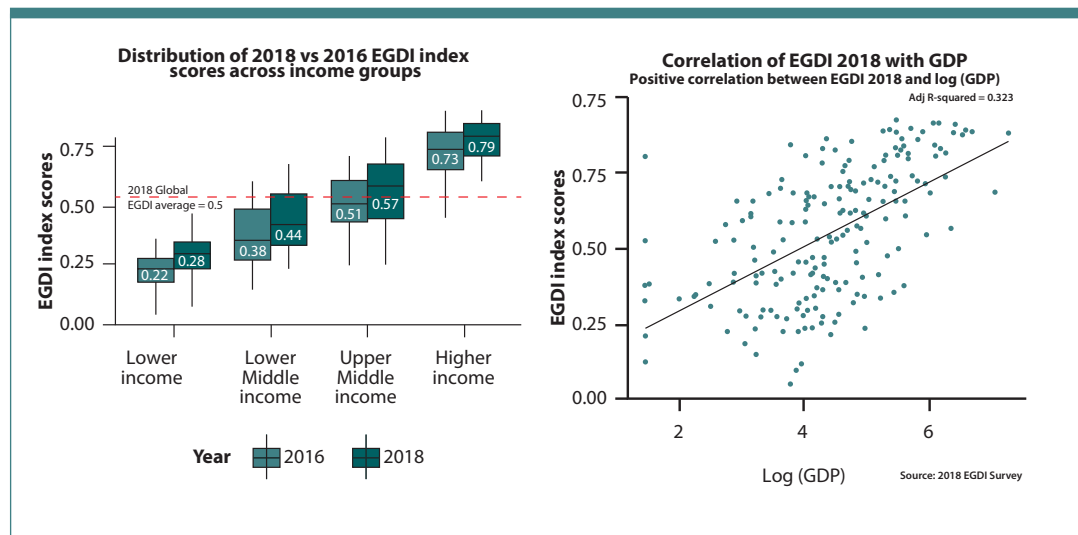
Similarly, only 4 countries out of 54 in Africa score higher than the world average of 0.55, whereas 14 countries, namely Central African Republic, Chad, Comoros, Djibouti, Equatorial Guinea, Eritrea, Guinea, Guinea-Bissau, Mali, Mauritania, Niger, Somalia, South Sudan, and Sudan have very low EGDI scores. These are also low-income countries, which face significant constraints in socio-economic development, creating additional pressure for prioritizing and allocating resources for e-government development.

In the Americas and Asia, the overall progress in e-government development is slow but noticeable. Two-thirds of the countries in Asia (31 out of 47) and almost half of the countries in the Americas (15 out of 32) score above the world average EGDI. In the Americas, Bolivia, El Salvador, Paraguay, Saint Vincent and the Grenadines rose from Middle- to High-EGDI, and Haiti from Low- to Middle-EGDI, in the last two years. In Asia, six countries recorded an improvement in their e-presence and provision of public services online— Pakistan, Nepal, Indonesia, from Middle- to High-OSI and Cambodia, Timor Leste and Tajikistan, from Low to Middle-OSI level.

### 5.2.3 National Income and e-Government Development

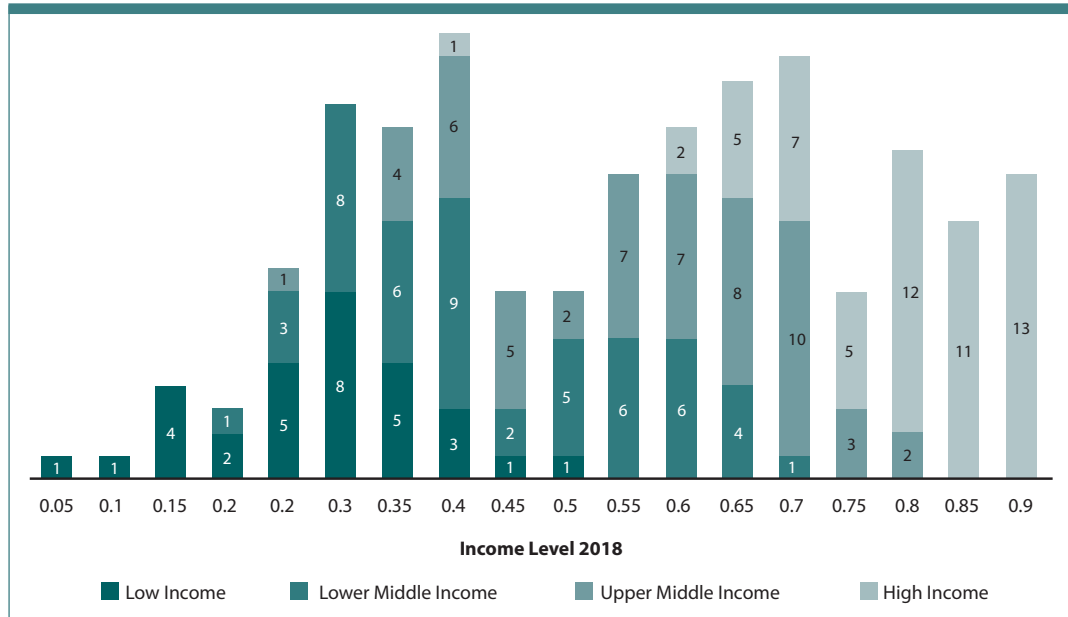
The average EGDI scores and its component indices have improved over time for all income groups, as shown in Figure 5.5. Moreover, there is a positive correlation between the country's income level and its e-government ranking, as presented in Figure 5.6. Most countries in high and upper middle-income groups tend to have higher than average EGDI scores with the only exception being Equatorial Guinea, which has a low EGDI score (0.2298) despite being an upper middle-income country. This trend is consistent with findings from previous Surveys. High-income countries progress faster by expanding the scope and quality of their online services (OSI) with already advanced levels telecommunications infrastructure and human capital development.

Figure 5.5 Correlation between EGDI and Income groups and GDP



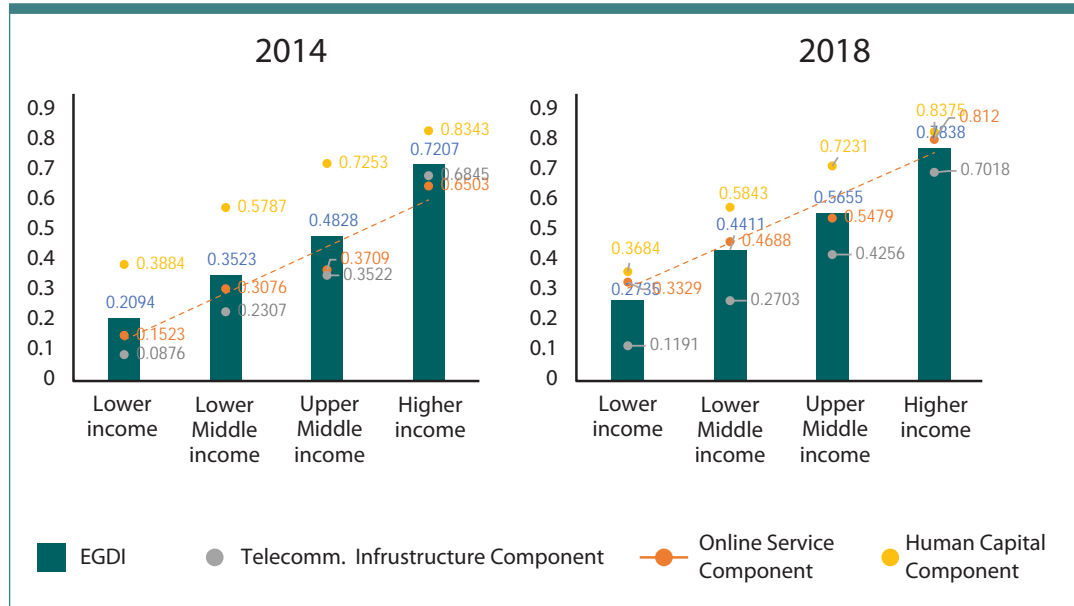
This is not universal, however. Twenty-two upper middle-income countries and 39 lower-middle income countries have EGD scores ranging from 0.2154 to 0.5390, which is below the global EGD average of 0.55. On the other hand, 10 countries in the lower middle-income group have scores above the global EGD average — Armenia (0.5944), Georgia (0.6893), India (0.5669), Kyrgyzstan (0.5835), Philippines (0.6512), Republic of Moldova (0.6590), Sri Lanka (0.5751), Ukraine (0.6165), Uzbekistan (0.6207) and Viet Nam (0.5931). For these lower and upper-middle income countries, where telecommunications infrastructure permits, the efforts directed at improving online services delivery greatly enhance their e-government development overall.

Figure 5.6 Distribution of OSI values by income groups, 2018



It is important to note that in 2018, for the first time, the main contributor towards improving EGD scores in all income groups is OSI (see Figure 5.7). Based on previous Survey results, high-income countries were expected to perform well on all EGD components compared to other groups. Likewise, the gap between the component HCI, OSI, and TII scores is relatively narrower for high-income countries that already enjoy rather high levels of development of human capital and telecommunications infrastructure. For the low and middle-income countries, however, the ascending trend of TII and OSI scores over the last four years is encouraging. This suggests a continuous expansion of online services availability and quality leading to an overall improvement in e-government development (see Section 5.3.1. below for further details on key trends in transactional online services delivery).

Figure 5.7 EGDl and its component indices for 2014 and 2018



### 5.3 Progress in online service delivery

The Online Services Index component of the E-Government Development Index is a composite indicator measuring the use of ICTs by governments in delivering public services at the national level. It is based on a comprehensive survey of the online presence of all 193 Member States. The Survey assesses the technical features of national websites as well as e-government policies and strategies applied in general and by specific sectors in delivering services. The results are tabulated and presented as a set of standardized index values on a scale from zero to one, with one corresponding to the highest rated online services and zero to the lowest. As with the EGDl itself, the index values are not intended as absolute measurements. Rather, they capture the online performance of countries relative to each other at a particular point in time. Because the index is a comparative tool, a high score is an indication of best current practice rather than perfection. Similarly, a very low score, or a score that has not changed since the Survey's last edition in 2016, does not mean there has been no progress in e-government development.

Table 5.3 presents the OSI level grouping with corresponding EGDl level for 193 United Nations Member States.

Table 5.3 Countries grouping by Level of Online Service Index (OSI), 2018

Very High OSI		High OSI		Middle OSI		Low OSI	
Corresponding EGDl level		Corresponding EGDl level		Corresponding EGDl level		Corresponding EGDl level	
Australia	Very High	Albania	High	Afghanistan	Medium	Algeria	Medium
Austria	Very High	Andorra	High	Angola	Medium	Botswana	Medium
Bahrain	Very High	Argentina	High	Antigua and Barbuda	High	Cambodia	Medium
Bangladesh	Medium	Armenia	High	Belize	Medium	Central African Republic	Low
Belgium	Very High	Azerbaijan	High	Benin	Medium	Chad	Low
Brazil	High	Bahamas	High	Bhutan	Medium	Comoros	Low
Bulgaria	High	Barbados	High	Bosnia and Herzegovina	High	Congo	Medium
Canada	Very High	Belarus	Very High	Burundi	Medium	Côte d'Ivoire	Medium
Chile	High	Bolivia (Plurinational state of)	High	Cameroon	Medium	Democratic People's Republic of Korea	Low
China	High	Brunei Darussalam	High	Cape Verde	Medium	Democratic Republic of the Congo	Medium

Very High OSI		High OSI		Middle OSI		Low OSI	
Corresponding EGD level		Corresponding EGD level		Corresponding EGD level		Corresponding EGD level	
Colombia	High	Burkina Faso	Medium	Cuba	Medium	Equatorial Guinea	Low
Cyprus	Very High	Costa Rica	High	Djibouti	Low	Eritrea	Low
Denmark	Very High	Croatia	High	Fiji	High	Gabon	Medium
Estonia	Very High	Czech Republic	High	Gambia	Medium	Guinea-Bissau	Low
Finland	Very High	Dominica	High	Grenada	High	Lao People's Democratic Republic	Medium
France	Very High	Dominican Republic	High	Guinea	Low	Lesotho	Medium
Germany	Very High	Ecuador	High	Guyana	Medium	Libya	Medium
Greece	Very High	Egypt	Medium	Haiti	Medium	Marshall Islands	Medium
India	High	El Salvador	High	Iraq	Medium	Mauritania	Low
Ireland	Very High	Ethiopia	Medium	Jamaica	Medium	Micronesia	Medium
Israel	Very High	Georgia	High	Jordan	High	Myanmar	Medium
Italy	Very High	Ghana	High	Kiribati	Medium	Nauru	Medium
Japan	Very High	Guatemala	Medium	Lebanon	High	Niger	Low
Kazakhstan	Very High	Honduras	Medium	Liberia	Medium	Sao Tome and Principe	Medium
Kuwait	High	Hungary	High	Madagascar	Medium	Solomon Islands	Medium
Liechtenstein	Very High	Iceland	Very High	Malawi	Medium	Somalia	Low
Lithuania	Very High	Indonesia	High	Maldives	High	South Sudan	Low
Luxembourg	Very High	Iran (Islamic Republic of)	High	Mali	Low	Sudan	Low
Malaysia	High	Kenya	Medium	Mozambique	Medium	Turkmenistan	Medium
Malta	Very High	Kyrgyzstan	High	Namibia	Medium	Tuvalu	Medium
Mexico	High	Latvia	High	Nicaragua	Medium	Yemen	Low
Netherlands	Very High	Mauritius	High	Palau	High		
New Zealand	Very High	Monaco	Very High	Papua New Guinea	Medium		
Norway	Very High	Mongolia	High	Saint Lucia	Medium		
Oman	High	Montenegro	High	Saint Vincent and the Granadines	High		
Peru	High	Morocco	High	Samoa	Medium		
Philippines	High	Nepal	Medium	San Marino	High		
Poland	Very High	Nigeria	Medium	Senegal	Medium		
Portugal	Very High	Pakistan	Medium	Sierra Leone	Medium		
Qatar	High	Panama	High	Suriname	Medium		
Republic of Korea	Very High	Paraguay	High	eSwatini	Medium		
Republic of Moldova	High	Romania	High	Syrian Arab Republic	Medium		
Russian Federation	Very High	Rwanda	Medium	Tajikistan	Medium		
Saudi Arabia	High	Saint Kittis and Nevis	High	Timor-Leste	Medium		
Singapore	Very High	Serbia	High	Tonga	High		
Slovenia	Very High	Seychelles	High	Vanuatu	Medium		
South Africa	High	Slovakia	High	Venezuela (Bolivian Republic of)	High		
Spain	Very High	Sri Lanka	High	Zambia	Medium		
Sweden	Very High	Thailand	High	Zimbabwe	Medium		
Switzerland	Very High	The former Yugoslav Republic of Macedonia	High				
Tunisa	High	Togo	Medium				
Turkey	High	Trinidad and Tobago	High				
United Arab Emirates	Very High	Uganda	Medium				
United Kingdom of Great Britain and Northern Ireland	Very High	Ukraine	High				
United States of America	Very High	United Republic of Tanzania	Medium				
Uruguay	Very High	Vietnam	High				
Uzbekistan	High						

As highlighted in earlier sections, the progress in online services provision correlates positively with the overall improvement of EDGI scores globally. The EDGI and OSI levels, as seen in Table 5.3, coincide for 62 per cent of the Member States, although there are also divergences where OSI levels are higher or lower than EDGI levels.

Of the 57 countries with Very High-OSI level, 19 are in the High-EGDI group— Brazil, Bulgaria, Chile, China, Colombia, India, Kuwait, Malaysia, Mexico, Oman, Peru, Philippines, Qatar, Republic of Moldova, Saudi Arabia, South Africa, Tunisia, Turkey, and Uzbekistan. In most of these countries, the human capital development indices are quite high (ranging from 0.5484 to 0.8339), but telecommunications infrastructure is unevenly developed (TII ranging from 0.2009 to 0.7394), resulting in lower EDGI scores despite having relatively advanced levels of online services delivery. The same is true for 13 countries with High OSI scores in the Middle EGDI group: Burkina Faso, Egypt, Ethiopia, Guatemala, Honduras, Kenya, Nepal, Nigeria, Pakistan, Rwanda, Togo, Uganda, and United Republic of Tanzania. Their average HCI score (0.7555) is significantly higher than their average TII score (0.4592).

Bangladesh is a notable example of a country with a Very High-OSI (0.7847) but a much lower EDGI score (0.4862), placing the country in the Middle-EGDI level group. The EDGI score for Bangladesh was pulled down by low levels of development in TII and HCI.

Three countries with High OSI scores, on the other hand, are in the Very High-EGDI level group: Iceland (EGDI=0.8316), Monaco (EGDI=0.8050) and Belarus (EGDI=0.7641). This suggests that the improvement of their e-government slightly outpaces online services delivery as they already enjoy rather high levels of telecommunications infrastructure and human capital development.

For the 36 countries that have higher OSI levels compared to their EDGI standing, their e-government advancement is constrained by the relatively slower progress in telecommunications infrastructure and human capital development. Investment in human capital and telecommunications infrastructure is important for many reasons, but primarily because it allows expanded access to online services for all population groups, including the most vulnerable, such as the poor, as well as people living in remote areas, women, older persons, persons with disabilities, youth, and those with limited digital literacy.

From the regional perspective, European countries form a majority in Very High and High OSI level groups (36 per cent) followed by Asia (28 per cent), Americas (20 per cent), Africa (13 per cent) and Oceania (2 per cent). While this is consistent with previous surveys, it is important to note the positive trends in advancement of online services in all regions. In Africa, for instance, 57 per cent of countries moved upwards and changed their position in OSI level standing. Most of them moved up from Low to Middle (Burundi, Djibouti, Gambia, Guinea, Liberia, Madagascar, Malawi, Mali, Mozambique, and Sierra Leone); six countries stepped up from Middle to High (Ghana, Egypt, Nigeria, Rwanda, Seychelles and Togo) and two countries rose from High to Very High (South Africa and Tunisia). Two countries - Benin and Burkina Faso recorded significant progress by moving two steps up from Low to High OSI level grouping. Altogether, 16 countries in Europe, 13 in the Americas, 21 in Asia, and 4 in Oceania improved their standing in online services delivery.



### 5.3.1 Trends in Transactional Online Services

All 193 Member States had national portals and back-end systems automating core administrative tasks, improving the availability of public services and promoting transparency and accountability. Although not all countries provide transactional online services, the coverage and availability of services in countries that do provide these services has increased from 18 per cent to 47 per cent in all service categories compared to 2016 (see Table 5.4 below). The three most commonly used online services in 2018 were paying for utilities (140 countries), submitting income taxes (139 countries), and registering new businesses (126 countries).

**Table 5.4** Trends in transactional online services

Trends of transactional services online, 2014, 2016 and 2018	2014	2016	2018	Increase in percent of countries offering the service	
				2016 to 2018	2014 to 2018
Pay for utilities	41	104	140	26%	71%
Submit income taxes	73	114	139	18%	47%
Register a business	60	97	126	23%	52%
Pay fines	42	76	111	32%	62%
Apply for a birth certificate	44	55	86	36%	49%
Apply for marriage certificate	39	53	82	35%	52%
Register a motor vehicle	33	47	76	38%	57%
Apply for drivers licence	29	38	62	39%	53%
Apply for personal identity card	27	31	59	47%	54%

Identity registration at birth is a United Nations proclaimed human right being tracked by the 2030 Agenda target 16.9 (A/RES/70/1). In the period 2014-2018, the number of countries where citizens can apply for birth registration online has been rising significantly, almost doubling from 44 in 2016 to 86 in 2018. Still, this comprises only 45 per cent of the total United Nations Member States, and the service is not available to many of the world's poorer countries. Only 15 out of 31 countries in the Low-OSI level group and 23 out of 51 countries in Middle OSI level group offer online birth registration.

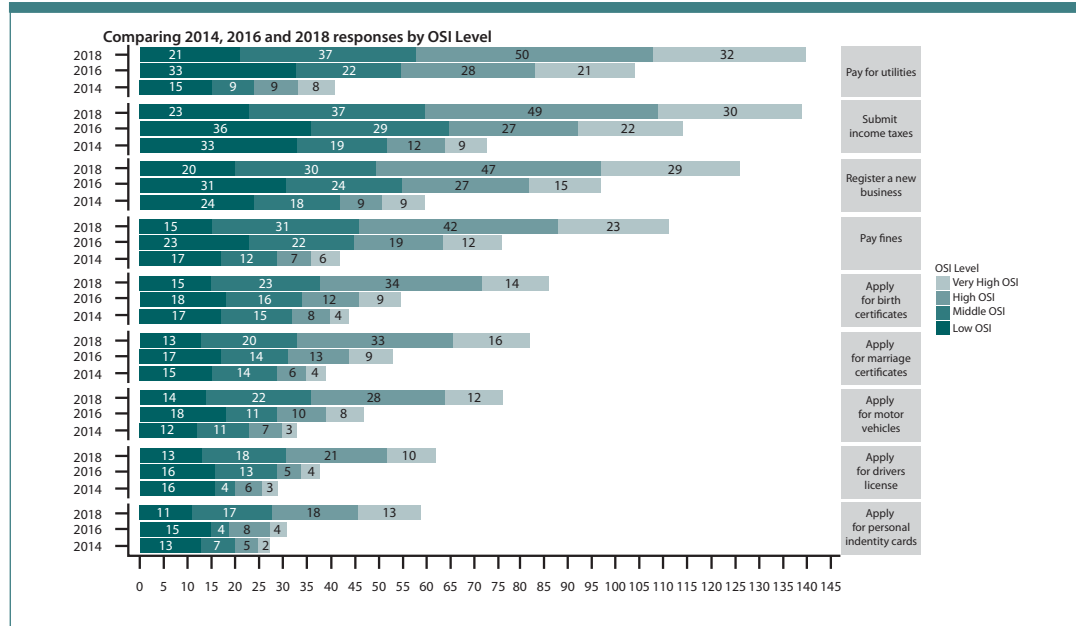
#### Box 5.3 Uruguay: Democratizing access to all government services

The Government of Uruguay committed to the digitalization of all services by 2020 as a presidential goal. As part of this strategy, all services should be started online by the last quarter of 2016, for example, filling out a form or scheduling an appointment. Following an international prize-winning enterprise architecture, services such as e-forms, e-notifications, epayments are being digitized using shared and reusable components, making them more user-friendly through standardization. One of these components is the "single-sign-in" allowing citizens to log in to all government services with a single user ID and password or by using the digital signature integrated into the Uruguayan ID card. The national portal currently in beta phase, is being transformed to GUB.UY to simplify interaction with the government through new integrated services already available such as the one-stop application tracking the status of every government service or the one-stop agenda for scheduling appointments. All these are being coordinated by the Agency for eGovernment and Information and Knowledge Society (Agesic) from the Office of the President, as part of the Uruguayan digital policy of transforming with equity.



Source: <https://www.agesic.gub.uy/>

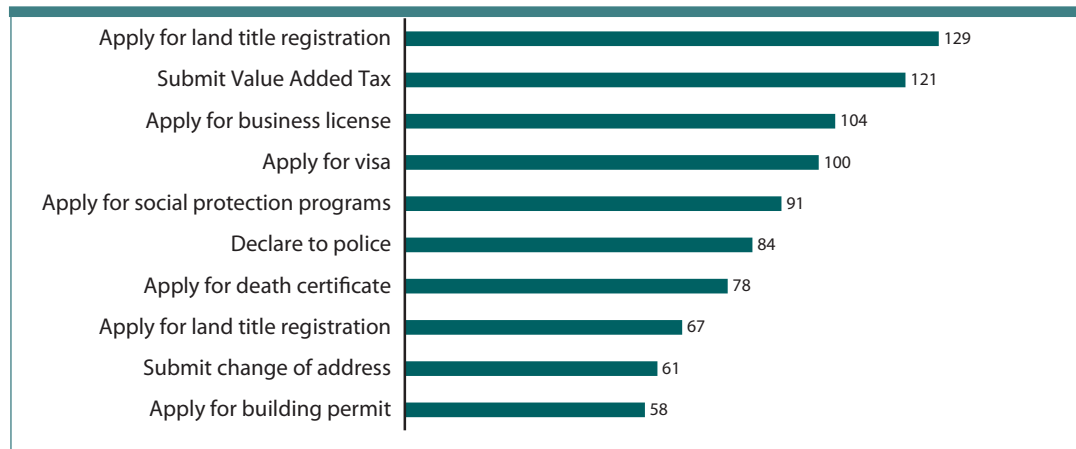
Figure 5.8 Trends in transactional services online



The trend of improvement in providing online services have been steady over the last four years in all OSI level groups including in 31 countries with Low-OSI level scores in 2018; 23 countries (or 74 per cent) are providing at least one kind of online service. The most commonly offered services among the Low-OSI level countries are submitting income taxes online (23 countries), paying for utilities (21 countries), registering a new business (20 countries), applying for birth certificates online and paying fines online (15 countries), registering vehicles online (14 countries), applying for marriage certificates and driving licenses (13 countries), for death certificates (12 countries), and for personal identification cards (11 countries).

Even though the share of Low-OSI countries providing online services in 2018 may seem relatively smaller compared to 2016 (see Figure 5.8 above), the reason for this is that the number of countries with Low OSI scores has significantly decreased from 53 to 31 in 2018 too. Further, four countries in the Low OSI group provide all the online services listed above, namely: Lesotho, Federated State of Micronesia, Sao Tome and Principe and Yemen.

Figure 5.9 Number of countries offering new transactional services assessed in 2018 survey

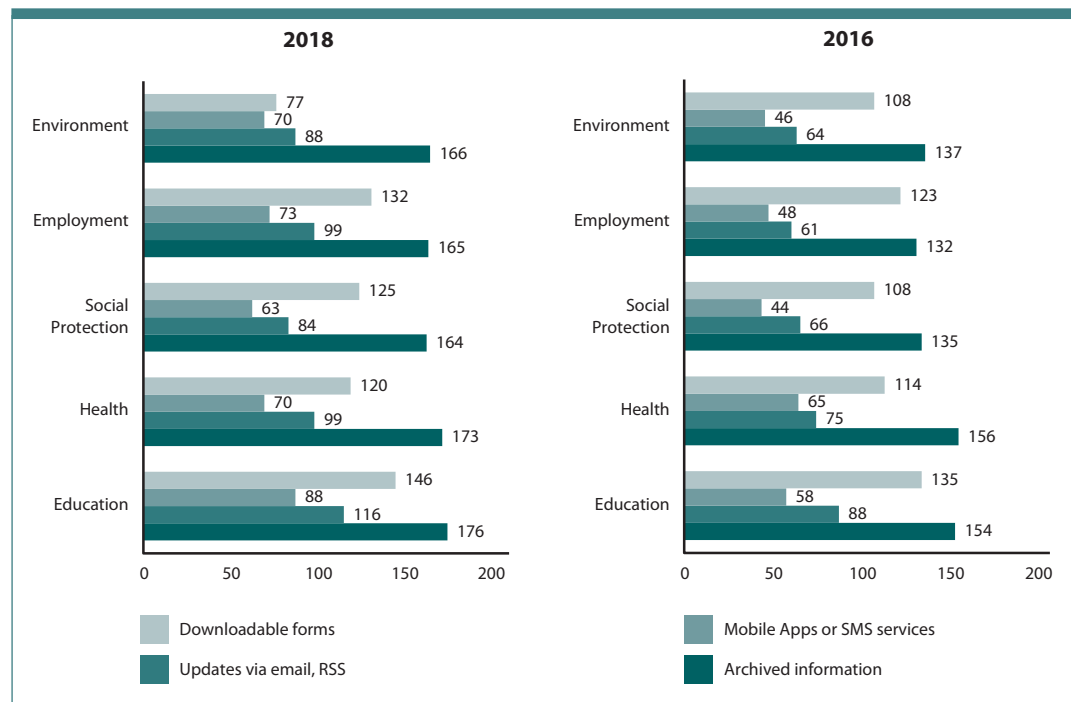


The 2018 Survey also tracked the expansion of online services globally and took note of new services being offered (see Figure 5.9) The top three new services for 2018 are applying for land title registration (129 countries), submitting value added taxes (121 countries) and applying for business licenses (104 countries).

### 5.3.2 Distribution of online services by sector

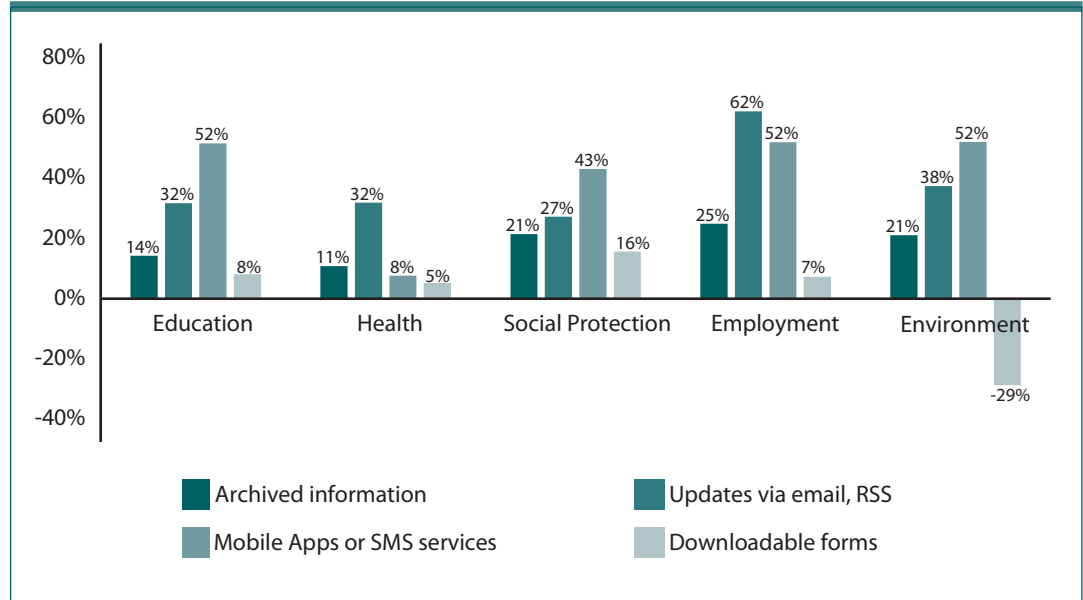
Various government sectors are continuing to adopt and use digital technologies—the Internet, mobile phones and other tools—to collect, store, analyze and share information digitally. According to the 2018 Survey, the number of countries providing online services through emails, SMS/RSS feed updates, mobile Apps and downloadable forms has increased in all sectors but the environment (see Figure 5.10). For instance, 176 countries are providing archived information online in education sector compared to 154 in 2016. Similarly, mobile Apps and SMS services in health sector are offered in 70 countries compared to 65 in 2016.

Figure 5.10 Types of online services by sector, 2016 and 2018



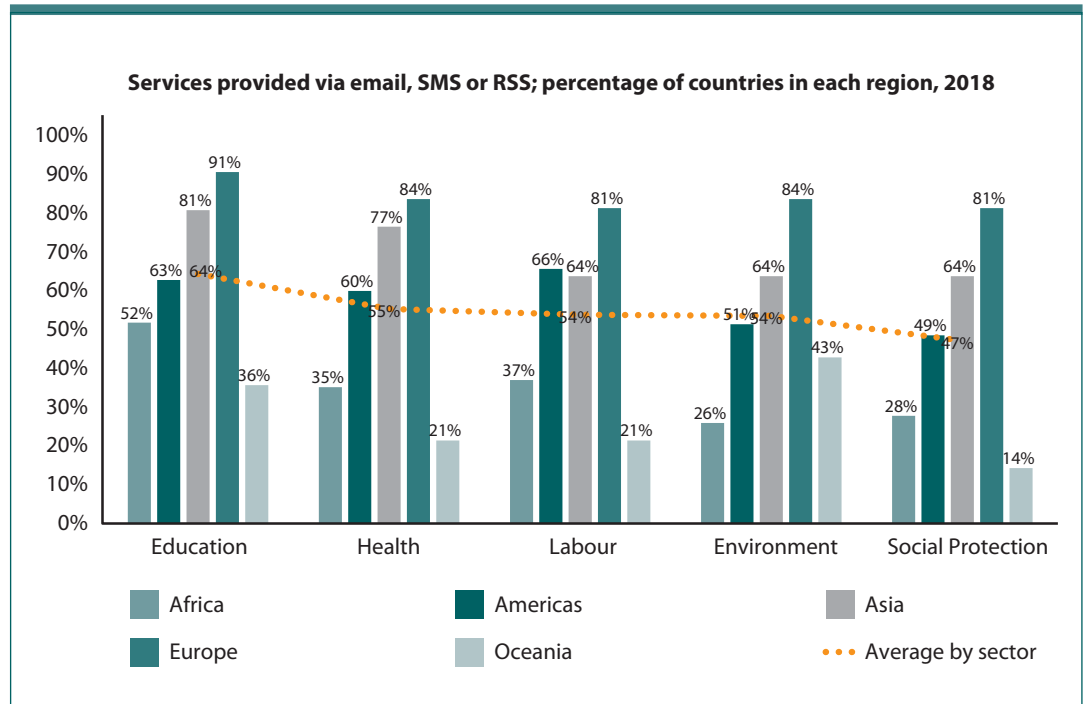
As shown on Figure 5.11, Services provided through mobile Apps are growing fastest, at 52 per cent, in the education, employment, environment sectors. Updates via email and RSS have increased the most, at 62 per cent, in the employment sector, followed by the environment sector, at 38 per cent. Interestingly, fewer countries offer downloadable forms in the environment sector in 2018 compared to 2016.

Figure 5.11 Changes in sector-specific online service provision, percentage



The regional distribution of countries that provide online services via email, SMS or RSS in the abovementioned sectors is as follows (see Figure 5.12): in average, 86 per cent of countries in Europe, 71 per cent in Asia, 59 per cent in Americas, 36 per cent in Africa, and 30 per cent in Oceania. Most frequently, the online services offered are in education (64 per cent in average), followed by health (55 per cent), labor (54 per cent), environment (54 per cent) and social protection (47 per cent).

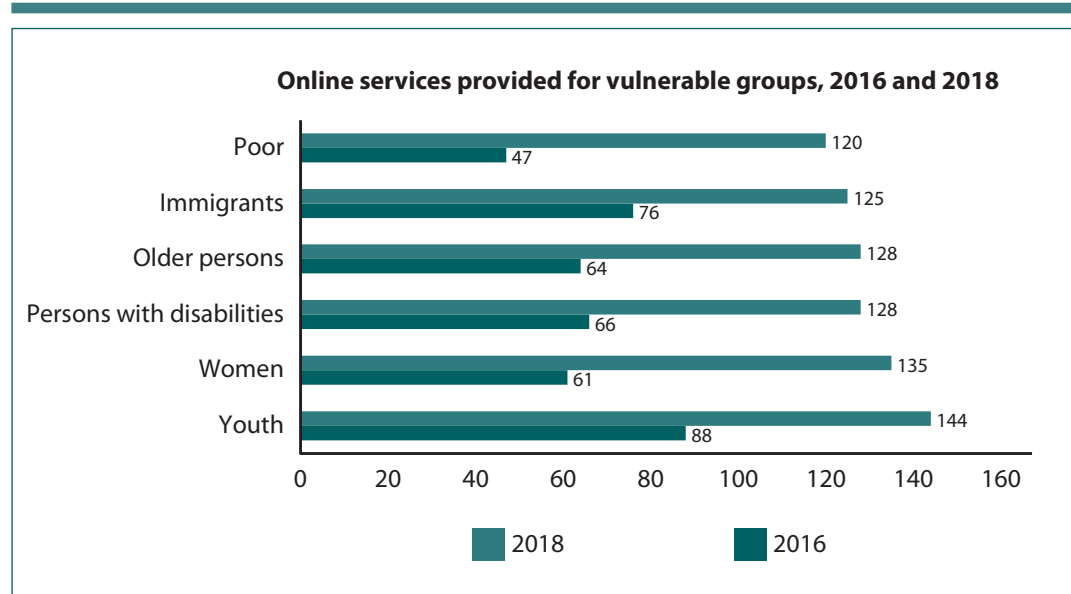
Figure 5.12 Services provided via email, SMS or RSS, percentage of countries in each region, 2018



### 5.3.3 Targeted services for vulnerable groups

One positive trend recorded in 2018 Survey is that increasingly more countries are providing online services targeting the most vulnerable groups. As illustrated in Figure 5.13, since 2016, the number of countries providing services to the poor has almost tripled, while those providing services tailored to the youth, women, migrants, refugees, older persons and persons with disabilities have nearly doubled. More specifically, services for young people were offered in 144 countries compared to 88 in 2016; services for women were offered in 135 countries compared to 61 countries previously; services for immigrants was available in 126 countries in 2018, up from 72 in 2016; while services for seniors and persons with disabilities doubled from 64/66 in 2016 to 128 countries in 2018.

Figure 5.13 Online services provided for vulnerable groups, 2016 and 2018



Online service delivery for all vulnerable groups in Europe has been growing, reaching almost universal coverage across the region or 81-89 per cent of all European countries. The percentage of countries offering services to vulnerable groups also rose from 69 to 86 per cent in the Americas, from 70 to 79 per cent in Asia, from 33 to 57 per cent in Africa, and from 4 to 15 per cent in Oceania.

Table 5.5 Online services provided to vulnerable groups, regional distribution, 2018

	Africa (54)		Americas (35)		Asia (47)		Europe (43)		Oceania (14)	
	number	percent	number	percent	number	percent	number	percent	number	percent
Poor people	20	37.0%	27	77.1%	33	70.2%	38	80.9%	2	4.3%
Persons with disabilities	18	33.3%	28	80.0%	36	76.6%	42	89.4%	4	8.5%
Older persons	20	37.0%	27	77.1%	37	78.7%	39	83.0%	5	10.6%
Immigrants	20	37.0%	24	68.6%	37	78.7%	39	83.0%	5	10.6%
Women	27	50.0%	28	80.0%	37	78.7%	39	83.0%	4	8.5%
Youth	31	57.4%	30	85.7%	34	72.3%	42	89.4%	7	14.9%

### 5.3.4 Key Dimensions of Governance for Sustainable Development

In promoting peaceful and inclusive societies for sustainable development, the 2030 Agenda places critical attention on building effective, accountable, inclusive institutions at all levels, as stated in Goal 16. In implementing the 2030 Agenda vision to lift people out of poverty and provide opportunities for prosperity to all while protecting our planet, the public institutions shall expand the access to quality public services, particularly for vulnerable groups.

In achieving progress in building such institutions, it is important to strengthen the trust in authorities and State institutions, as well as increase transparency and openness in governance processes. The use of information and communication technologies (ICTs) in government can effectively support an integrated and inclusive implementation of SDGs and can provide necessary tools to enable policy integration across economic, social and environmental dimensions. It can also eliminate “silos” in various sectors of the government helping institutions to join forces in pursuit of common objectives. It can help by providing online access to information generated by the government, and by reengineering information flows and decision-making processes for greater public participation in decision-making processes. All these efforts lead to increased transparency, accountability, effectiveness and inclusiveness.

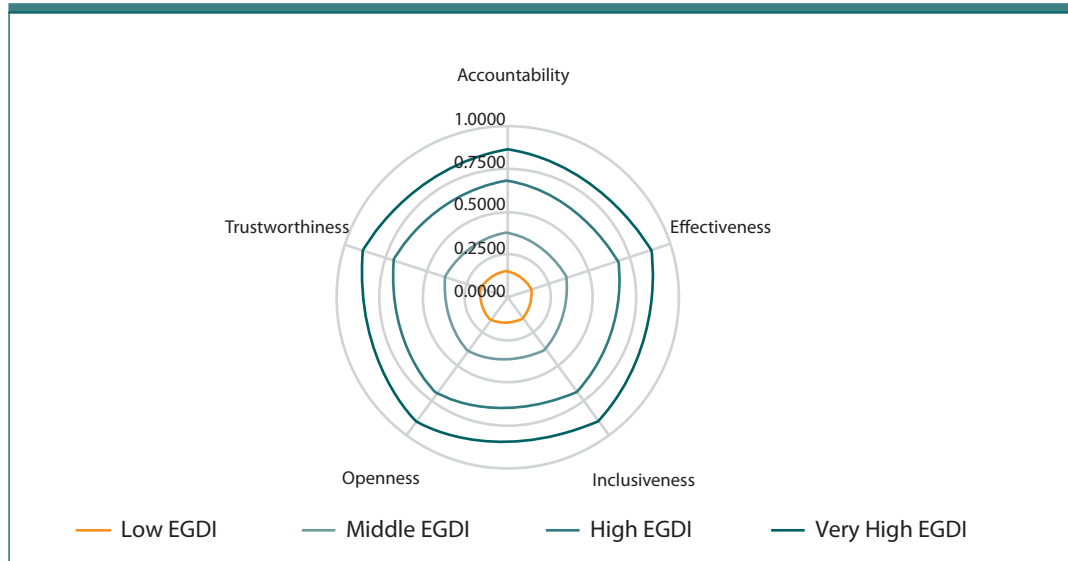
The E-government Survey 2018 has analyzed governments’ efforts across the globe towards increasing accountability, effectiveness, inclusiveness, openness and transparency by assessing multiple features of the government platforms and their online services. This is contributing to enhancement of these key governance principles. For instance, detailed information in government websites about institutional arrangements, the availability of mechanisms for providing feedback or filing complaints about the quality of services provided, the ability to contact government agencies directly, among others, are contributing to transparency and openness of governments. Likewise, availability of legal information and state regulations preventing discrimination, protecting against misuse of personal data, and ensuring digital/cyber security for all citizens help to improve transparency and trustworthiness.

Increasingly, more governments give importance to disclosing information about procurement processes. In their efforts to strengthen accountability and openness, they offer online tools for monitoring and evaluating procurement contracts, tender results and primary government expenditures. To foster inclusiveness and effectiveness, governments are forging public-private partnerships offering more innovative public services online. They are also engaging in public e-consultations, organizing online deliberations on key strategic and policy issues, publishing the results of such e-consultations online, and creating targeted services for vulnerable groups.

Among the mechanisms for keeping public servants and institutions accountable is the availability of online reporting of cases on unethical behavior or corruption among public servants. People’s ability to report their grievances, cases of discrimination, and legal violations are among the new features that governments are employing to improve accountability and effectiveness of public services delivery. All these measures are contributing towards achieving the 2030 Agenda’s vision for accountable, effective and inclusive governance. The sections below highlight some of the 2018 Survey’s findings on these key attributes of e-governance.

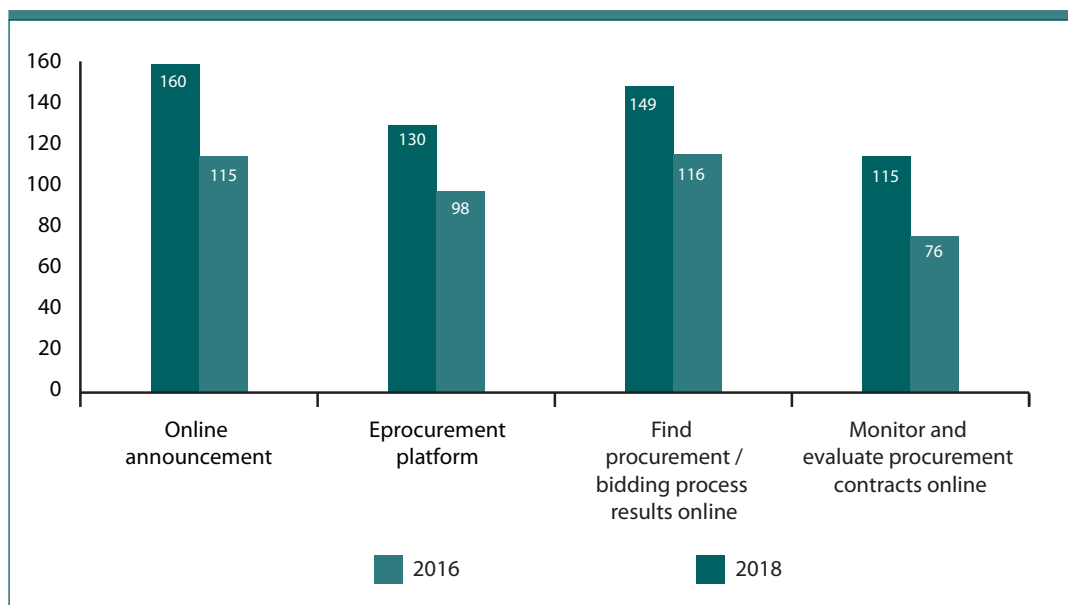
By and large, the countries with Very High EGDI level offer the most comprehensive websites and online services in keeping with these governance principles (see Figure 5.14). The countries in the Low EGDI group tend to cover lesser aspects of accountability, effectiveness, inclusiveness, openness and trustworthiness.

Figure 5.14 The aspects of governance assessed on websites, by EGD level group, 2018



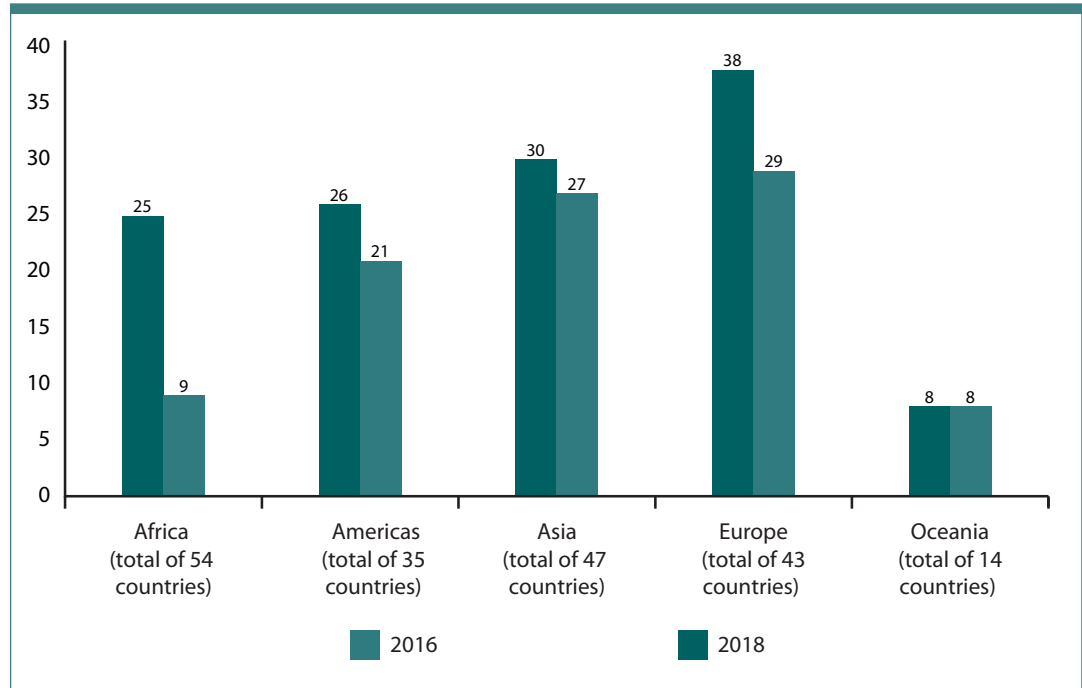
One of the indicators of openness, transparency and accountability on the part of government is the provision of public mechanisms to participate in e-procurement and public bidding processes. This may include the availability of e-procurement platforms, public announcements about e-procurement processes and bidding results, as well as online mechanisms to monitor and evaluate e-procurement contracts. The 2018 Survey shows that 130 out of 193 United Nations Member States have e-procurement platforms compared to only 98 in 2016 (see Figure 5.15). In 2018, more than two-thirds of the Member States are providing online announcements and sharing the results of the bidding processes, as well as providing information for monitoring and evaluating public procurements contracts, which is a significant increase from 40 to 59 per cent of countries offering the same set of services in 2016.

Figure 5.15 Number of countries offering tools related to e-procurement out of 193 countries, 2016 and 2018



Similarly, by announcing government vacancies online and sharing information about employment opportunities with the public sector, governments are increasing transparency in recruitment and encouraging greater participation. Increasingly, more countries are now offering such features in government websites compared to 2016, as shown on Figure 5.16 summarizing the findings of 2018 Survey.

Figure 5.16 Government vacancies online, 2016 and 2018



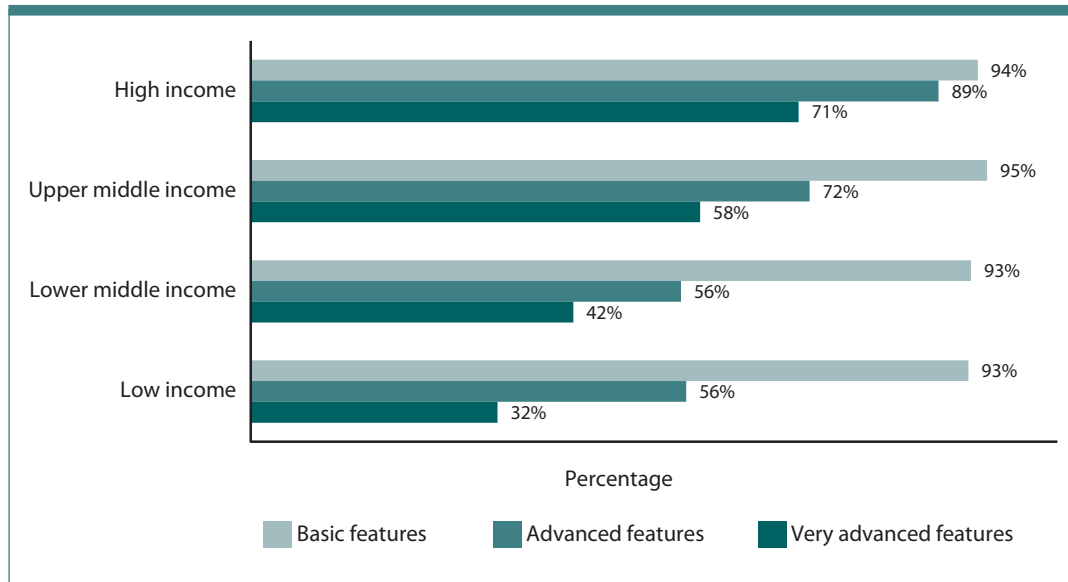
### 5.3.5 Global disparities in e-government services

ICT-supported and innovative delivery of public services are primarily aiming to ensure the universality of basic services to the poorest and most vulnerable—leaving no one behind. In many parts of the world, especially in developing countries, public service delivery applications are still lacking. While some countries and governments are now fully exploiting ICTs, large disparities remain among regions and countries on how ICTs are being harnessed to deliver public services, innovate service delivery for targeted populations or designing different types of services. Many low-income countries are still utilizing more basic levels of ICTs, resulting in lack of reach and quality of public services, lack of efficiency and effectiveness in service provision.

Figure 5.17 compares the deployment of basic, advanced and very advanced features in national e-government portals by country income. Most government portals are now adopting the basic features covering ease of finding the portal, availability of basic searches, site map and contact us features—all of which are being regularly updated. However, lower and low-income countries lag considerably behind in offering more advanced features such as help, frequently asked questions or FAQs, feedback options, links to one-stop-shop options, social media, and automatic web adaption to any device, as well as very advanced features for searching, availability of tutorials, help-desk, facility to report unethical or corrupt behavior, and ability to propose new open datasets.



Figure 5.17 Availability of basic, advanced and very advanced services on national e-government portals by country income

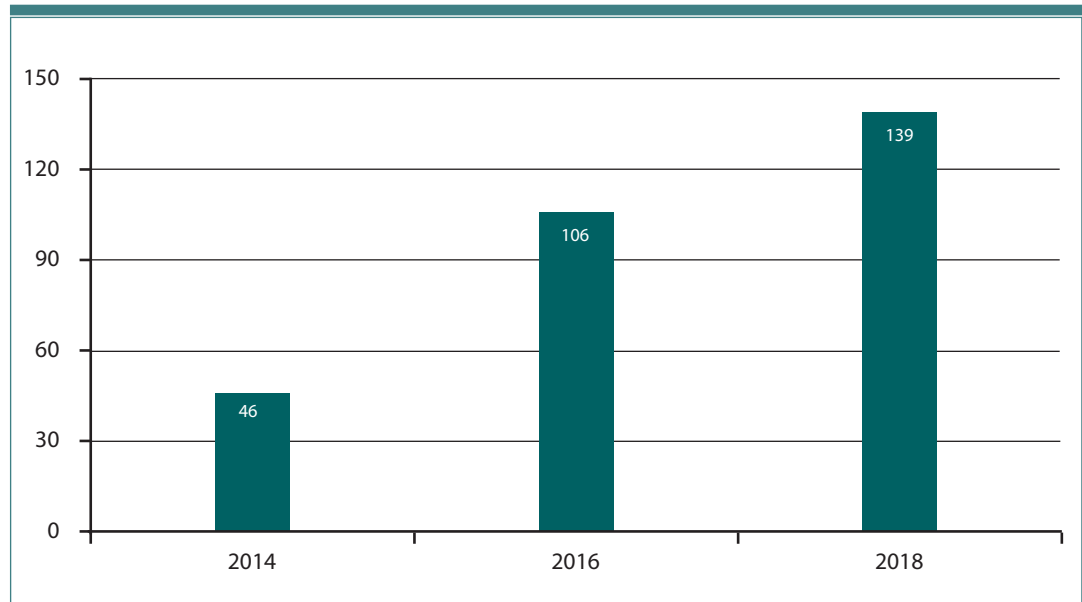


## 5.4 Trends in Open Government Data

Open government data (OGD) contributes to the achievement of the 2030 Agenda for Sustainable Development in more ways than one. Apart from generating better data for tracking sustainable development progress, it is supporting the attainment of Goal 16 — to build effective, accountable and inclusive institutions at all levels. Open government data is significantly increasing transparency leading to increased accountability and trust in governments and public institutions. Publicly available and reusable open data is fueling participation and collaboration among actors in the public, private and civil society sectors. It is also helping to improve service delivery in many sectors crucial to sustainable development such as education, health, environment, social protection and welfare and finance. Many countries have dedicated portals sharing data in open formats, often referred to as “Open Government Data portals”. Many others have OGD catalogues listing all available datasets usually organized by theme, for example, environment, spending, health, among others, and/or by ministry. OGD are typically available in the national portal or the OGD portal.

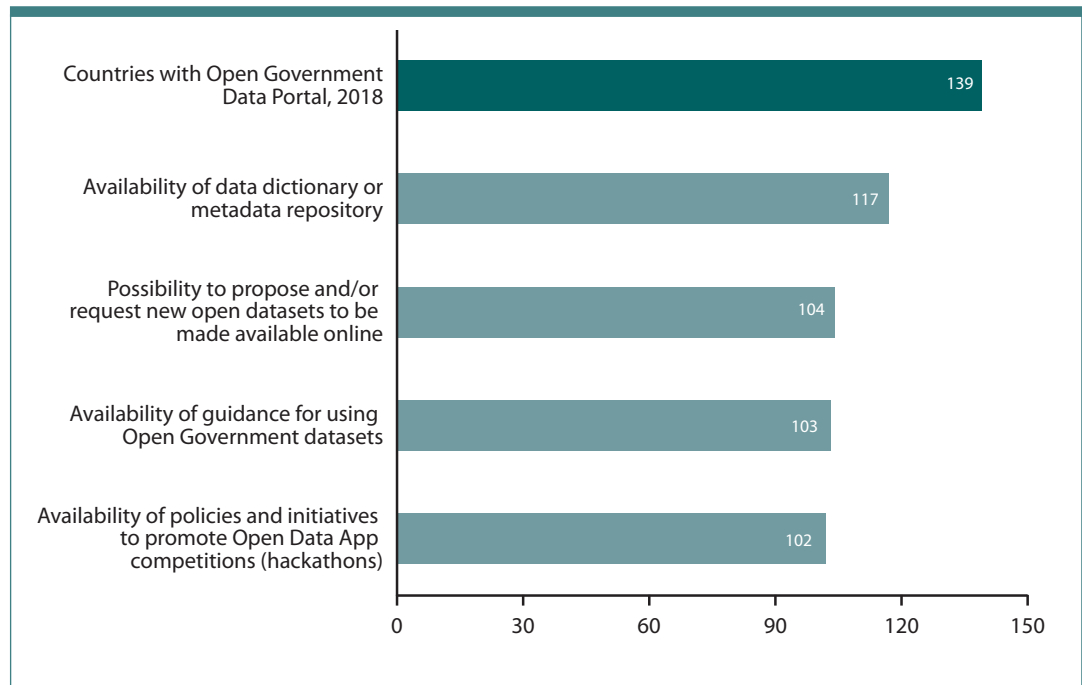
The 2018 Survey tracks the progress of making OGD available to the public through government websites, dedicated portals, and OGD catalogues. As highlighted in Figure 5.18, the number of countries with OGD portals has reached 139, comprising 72 per cent of the United Nations Member States, a significant improvement compared to only 46 countries in 2014 and 106 in 2016. By and large, 84 per cent of these portals also have a directory or metadata repositories describing the data underlying concepts, methodology and structure.

Figure 5.18 Countries with Open Government Data Portal and/or Catalogues in 2014, 2016 and 2018



The functionality of OGD portals is also improving. About 74 per cent of countries that have OGD portals and websites are also providing guidance on using and navigating the complex datasets, encouraging users to request new datasets, initiating hackathons and promoting use of public open data in creating online Apps. This trend is significant and encouraging, given that in 2016 only 24 to 50 per cent of countries did the same.

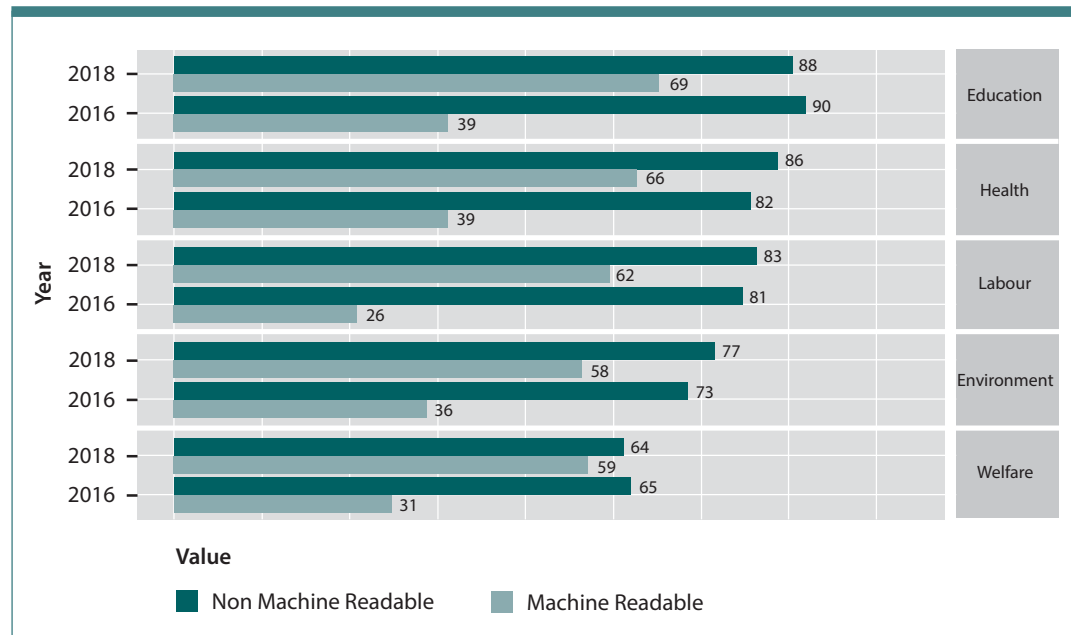
Figure 5.19 Functionalities of Open Government Data Portals, 2018



Open data can be considered as such when information is released in a machine-readable format, there are no legal barriers to access, the information is free of charge and is available in widespread type or open standard files. Making data both human- and machine-readable is an important step towards greater utilization of open government data.

Figure 5.20 below presents the number of countries providing data in machine readable and non-readable formats about the education, health, social welfare, labor and environment sectors. Compared to 2016, it is increasingly common to find sector-specific information in dedicated government websites. However, data are often in non-machine-readable formats, for example, in PDF. While the data being provided in non-machine-readable formats has doubled in the past two years across various sectors, machine-readable datasets are increasing incrementally.

Figure 5.20 Trends in open government data, by sector, 2016 and 2018

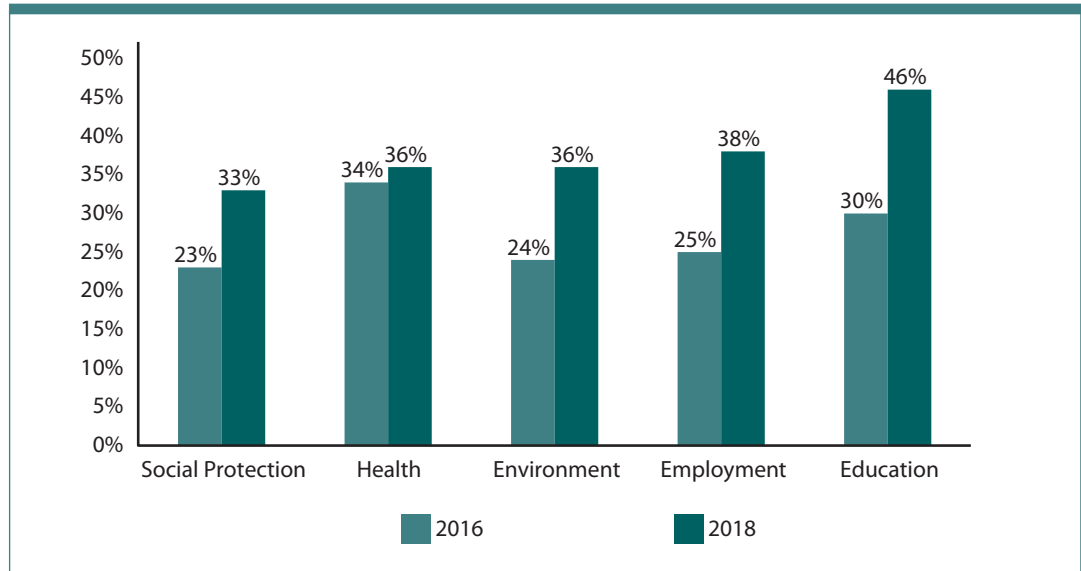


## 5.5 Trends in mobile service delivery

With the continuous increase in mobile broadband coverage, mobile data traffic, and the rising number of smartphone subscriptions worldwide, accounting for all mobile phone subscriptions<sup>21</sup>, governments around the world are actively adapting e-government services to mobile platforms to enable delivery of public services anytime and anywhere.

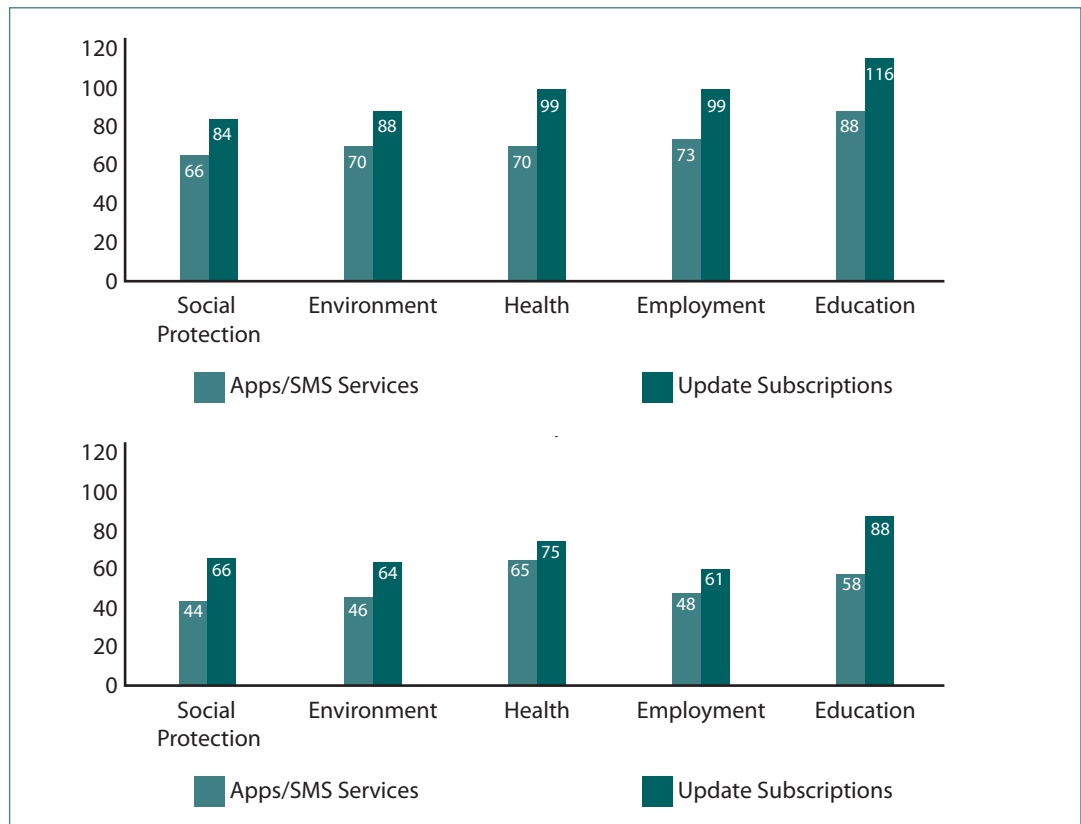
In 2018, the percentage of countries among the 193 Member States providing updates via email, or rich site summary (RSS) feeds has increased in all sectors compared to 2016. The highest number of countries are offering mobile services or applications (Apps) in education at 46 per cent, followed by 38 per cent in employment, 36 per cent in health and environment, and 33 per cent in social protection sectors.

Figure 5.21 Trends in Mobile Apps and SMS Services usage by sectors in 2016 and 2018



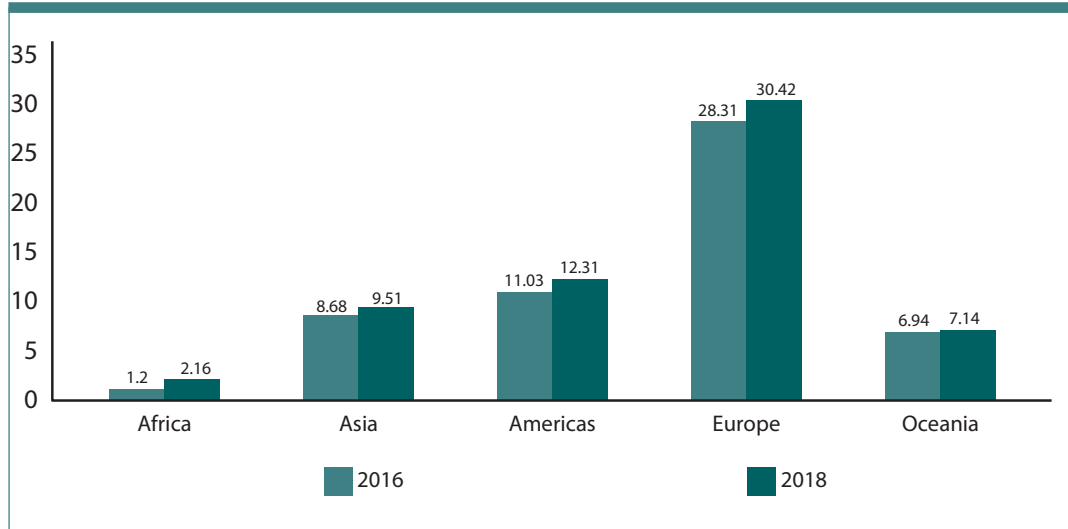
The increasing use of email and RSS, as well as mobile Apps and short messaging system (SMS) services by governments signify the commitment to utilize technology to benefit the people. Updates subscriptions are expanding faster, but the availability of mobile Apps and SMS services is also growing significantly, especially in the education sector with 88 countries offering such services compared to 58 in 2016.

Figure 5.22 Mobile Services Delivery by Sector



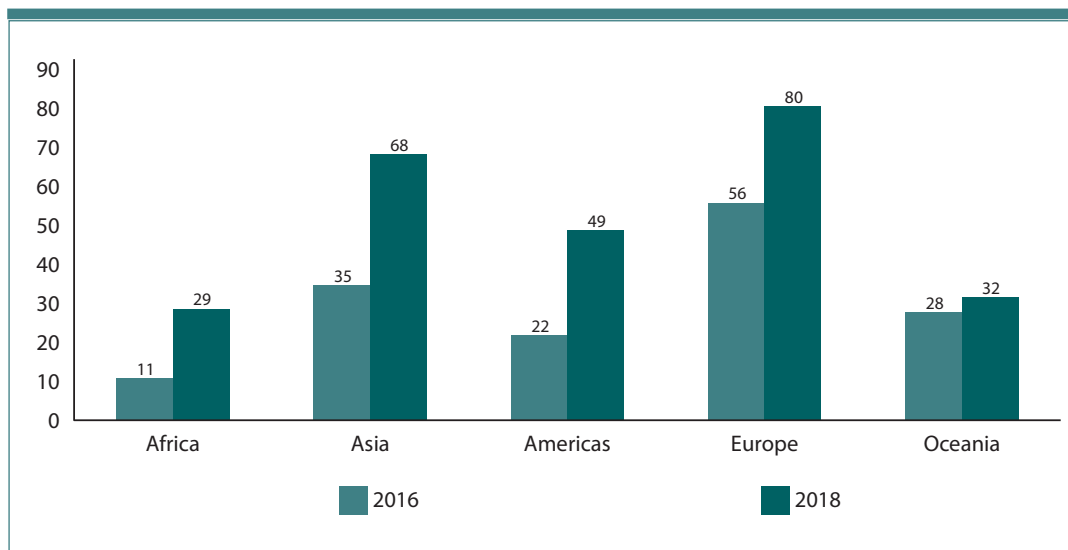
The expansion of mobile services is linked to the increased subscription of mobile phones and fixed broadband across all regions. As shown in Figure 5.23, the accessibility and subscription of fixed broadband has grown by an average of 1-2 per cent in all regions. For every 100 persons, usage grew in Africa from 1.2 users to 2.16 users; in Asia, from 8.68 users to 9.51 users; in the Americas, from 11.03 users to 12.31 users; in Europe, from 28.31 to 30.42; and in Oceania, from 6.94 to 7.14.

Figure 5.23 Trends in fixed broadband subscriptions in 2016 and 2018



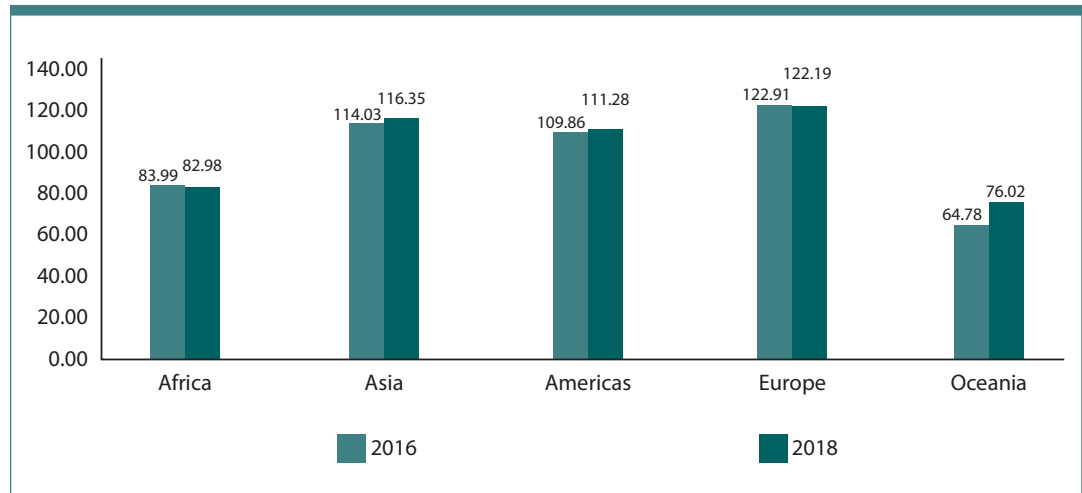
Wireless-broadband subscriptions across the regions has been increasing briskly in the last two years. The number of subscriptions per 100 persons in Africa jumped from 10.75 in 2016 to 28.62 in 2018 even as the region remains in the lower end. Asia and Americas experienced more than a two-fold increase in wireless broadband subscriptions reaching 68.15 and 48.74 subscriptions per 100 inhabitants in 2018 respectively. The Oceania had a modest increase from 27.74 in 2016 to 31.56 in 2018. Europe with an overall subscription rate of 80.45 in 2018 is at the most advanced level globally.

Figure 5.24 Trends in active wireless-broadband subscriptions in 2016 and 2018



The trend of mobile phone subscription per 100 inhabitants for the last two years, according to ITU data as shown in Figure 5.25 below, is increasing in Asia, Americas and Oceania, but is slightly decreasing in Africa and Europe.

Figure 5.25 Trends in mobile phone subscriptions in 2016 and 2018



## 5.6 E-participation: public engagement for innovative public e-services delivery

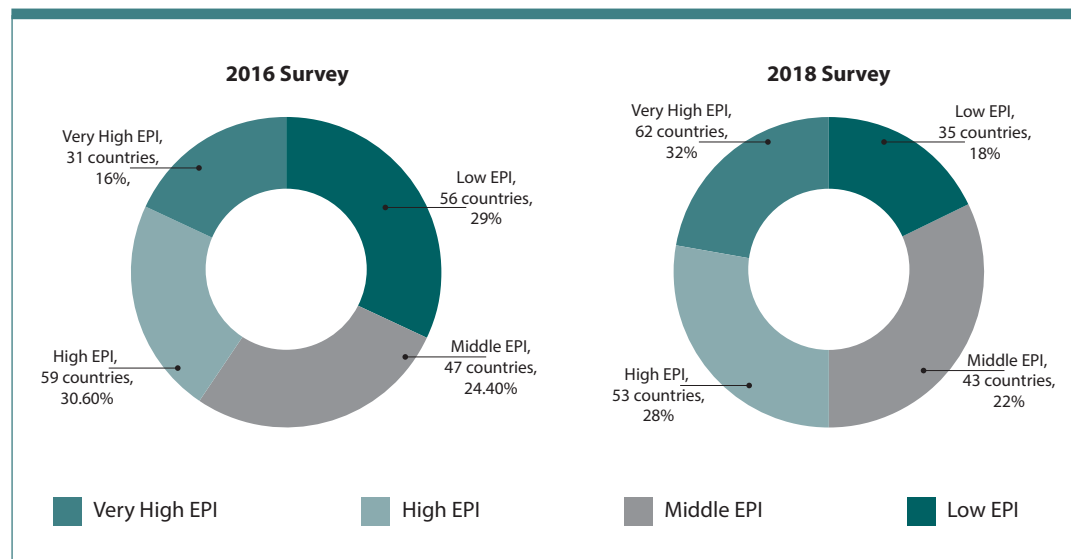
### 5.6.1 E-participation concepts and features

E-participation is defined “as the process of engaging citizens through ICTs in policy, decision-making, and service design and delivery so as to make it participatory, inclusive, and deliberative” (United Nations, 2013). As in previous Surveys, the 2018 Survey measures e-participation through the E-Participation Index (EPI) based on: (i) e-information – availability of online information; (ii) e-consultation – online public consultations, and (iii) e-decision-making – directly involving citizens in decision processes. The Survey assesses the availability of e-participation tools on national government portals for each of the above criteria. It is noted in the 2018 Survey that more and more governments are encouraging citizens and businesses to collaborate by contributing ideas and providing feedback.

The 2030 Agenda<sup>22</sup> calls for equitable, tolerant, open and socially inclusive world in which the needs of the most vulnerable are met. In line with this, new questions were introduced in 2018 assessing the participation of vulnerable groups through provision of targeted information, including in open formats, as well as the support being provided to these groups in terms of policies, budget, and legislation. Table 5.6 below summarizes the main e-participation features assessed in the 2018 Survey.

**Table 5.6 Summary of assessed e-participation features**

<ul style="list-style-type: none"> <li>• Availability of sources of archived information (policies, budget, legal documents, budgets, etc.); use of digital channels (including mobile devices/platforms) and open data technologies in the areas of education, health, finance, social welfare, labour, environment.</li> </ul>
<ul style="list-style-type: none"> <li>• Availability of online information on citizens' rights to access government information (such as Freedom of Information Act or Access to Information Act)</li> </ul>
<ul style="list-style-type: none"> <li>• Evidence about government partnership/collaboration with third parties (civil society, private sector) in providing services</li> </ul>
<ul style="list-style-type: none"> <li>• Evidence about free access to government online services through the main portal, kiosks, community centers, post offices, libraries, public spaces or free WiFi</li> </ul>
<ul style="list-style-type: none"> <li>• Availability of open datasets (in machine-readable non-proprietary formats), related policies/ guidance</li> </ul>
<ul style="list-style-type: none"> <li>• Evidence about collaborative co-production, crowdfunding</li> </ul>
<ul style="list-style-type: none"> <li>• Evidence about engaging citizens in consultation/communication to improve online/mobile services and raise citizens' satisfaction</li> </ul>
<ul style="list-style-type: none"> <li>• Evidence about engaging citizens in consultation/communication on education, health, finance, social welfare, labor, environment</li> </ul>
<ul style="list-style-type: none"> <li>• Availability of "personal data protection" legislation online</li> </ul>
<ul style="list-style-type: none"> <li>• Evidence about opportunities for the public to propose new open datasets to be available online</li> </ul>
<ul style="list-style-type: none"> <li>• Availability of e-participation policies/mission statements</li> </ul>
<ul style="list-style-type: none"> <li>• Availability of public procurement notifications and tender results online</li> </ul>
<ul style="list-style-type: none"> <li>• Availability of online tools (on the national portal) to seek public opinion and other input in raw (non-deliberative) form policy formation</li> </ul>
<ul style="list-style-type: none"> <li>• Evidence on decisions made that included results from online consultation with citizens in the education, health, finance, social welfare, labor, and environment sectors</li> </ul>
<ul style="list-style-type: none"> <li>• Evidence about governments' publishing outcomes of policy consultations online</li> </ul>

**Figure 5.26 Number of countries grouped by EPI levels in 2016 and 2018**

Comparing the results from 2016 and 2018 Surveys, the number of countries with Very-High EPI level has doubled from 31 to 62. The number of countries with High-, Middle- and Low-EPI levels decreased slightly because many of them had transitioned to higher EPI level groups. Total number of countries with low EPI decreased from 56 to 35. This positive trend along with improvements in other digital indexes showcases countries' commitments in implementing further tools for engaging citizens.

### 5.6.2 Global and regional rankings

According to the 2018 Survey, Denmark, Finland, Republic of Korea are ranked as global leaders on e-participation while Netherlands, Australia, Japan, New Zealand, United Kingdom, United States and Spain are following closely behind (see Table 5.7 below).

Table 5.7 Top 10 Performers in 2018

Rank	Country Name	EPI score
1	Denmark	1
1	Finland	1
1	Republic of Korea	1
4	Netherlands	0.9888
5	Australia	0.9831
5	Japan	0.9831
5	New Zealand	0.9831
5	Spain	0.9831
5	United Kingdom of Great Britain and Northern Ireland	0.9831
5	United States of America	0.9831

The countries that are leading in e-participation are implementing different initiatives. For example, in Denmark, e-participation is part of the country's Digital Strategy for 2016-2020<sup>23</sup>. In Australia, all agencies designing new or redeveloping public-facing services must meet the Australian Digital Service Standard, including criteria "9" which ensures the proposed service is accessible to all users, regardless of their ability and environment<sup>24</sup>. Japan has the "Digital Government Idea Box 2017" as a venue to widely discuss e-governance issues with its citizens and realize higher quality e-services.

Table 5.8 Countries grouped by E-participation Index levels

Very High EPI (Greater than 0.75)	High EPI (Between 0.50 and 0.75)	Middle EPI (Between 0.25 and 0.50)	Low EPI (Less than 0.25)
Albania	Andorra	Afghanistan	Algeria
Australia	Argentina	Angola	Botswana (-)
Austria	Armenia	Antigua and Barbuda (+)	Cambodia
Bahrain (+)	Azerbaijan	Belize	Chad
Bangladesh (+)	Bahamas	Benin (+)	Comoros
Belarus (+)	Barbados (+)	Bosnia and Herzegovina	Congo
Belgium (+)	Bhutan (+)	Burundi (+)	Côte d'Ivoire

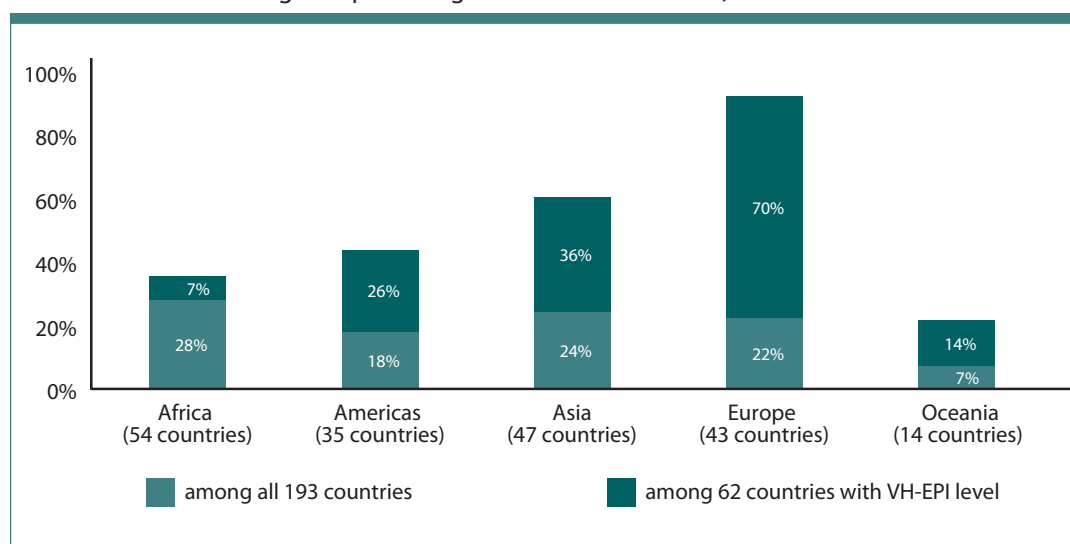


Very High EPI (Greater than 0.75)	High EPI (Between 0.50 and 0.75)	Middle EPI (Between 0.25 and 0.50)	Low EPI (Less than 0.25)
Brazil (+)	Bolivia	Cabo Verde	Democratic People's Republic of Korea
Bulgaria (+)	Brunei Darussalam	Cameroon (+)	Democratic Republic of the Congo
Canada	Burkina Faso	Central African Republic (+)	Equatorial Guinea
Chile (+)	Czech Republic	Cuba	Eritrea
China	Dominica (+)	Djibouti (+)	Gabon
Colombia	Dominican Republic	Eswatini	Guinea-Bissau
Costa Rica (+)	Ecuador	Fiji	Lao People's Democratic Republic (-)
Croatia	Egypt	Gambia (+)	Lesotho
Cyprus (+)	El Salvador	Grenada	Libya
Denmark	Ethiopia	Guinea (+)	Malawi (-)
Estonia	Georgia	Guyana	Mali
Finland	Ghana	Haiti (+)	Marshall Islands
France	Guatemala	Iraq	Mauritania
Germany	Honduras	Jamaica	Micronesia (Federated States of)
Greece (+)	Hungary	Jordan	Myanmar
India	Iceland	Kiribati	Nauru
Ireland (+)	Indonesia	Lebanon	Niger
Israel	Iran (Islamic Republic of)	Liberia	Papua New Guinea
Italy	Kenya	Madagascar (+)	Saint Lucia
Japan	Kuwait	Maldives (+)	Sao Tome and Principe
Kazakhstan (+)	Kyrgyzstan	Mozambique (+)	Solomon Islands
Lithuania	Latvia	Namibia (+)	Somalia
Luxembourg (+)	Liechtenstein	Nicaragua	South Sudan
Malaysia (+)	Mauritius	Nigeria	Sudan (-)
Malta	Monaco	Palau (+)	Suriname (-)
Mexico	Mongolia	Samoa	Turkmenistan
Morocco	Montenegro (-)	San Marino (+)	Tuvalu
Nepal (+)	Pakistan	Sierra Leone (+)	Yemen
Netherlands	Panama (+)	Syrian Arab Republic	Algeria
New Zealand	Paraguay	Tajikistan (+)	Botswana (-)
Norway	Qatar	Timor-Leste	Cambodia
Oman (+)	Romania (+)	Tonga	Chad
Peru (+)	Saint Kitts and Nevis	Vanuatu (+)	Comoros
Philippines (+)	Saint Vincent and the Grenadines	Venezuela	Congo
Poland	Saudi Arabia	Zambia	Côte d'Ivoire
Portugal (+)	Senegal	Zimbabwe	Democratic People's Republic of Korea
Republic of Korea	Seychelles		Democratic Republic of the Congo

Very High EPI (Greater than 0.75)	High EPI (Between 0.50 and 0.75)	Middle EPI (Between 0.25 and 0.50)	Low EPI (Less than 0.25)
Republic of Moldova (+)	Sri Lanka		Equatorial Guinea
Russian Federation (+)	Thailand		Eritrea
Rwanda (+)	The former Yugoslav Republic of Macedonia		
Serbia	Togo		
Singapore	Trinidad and Tobago		
Slovakia (+)	Uganda		
Slovenia (+)	Ukraine		
South Africa (+)	United Republic of Tanzania		
Spain	Viet Nam		
Sweden			
Switzerland (+)			
Tunisia (+)			
Turkey (+)			
United Arab Emirates (+)			
United Kingdom of Great Britain and Northern Ireland			
United States of America			
Uruguay (+)			
Uzbekistan (+)			

Note: Countries with superscript (+) have advanced from a lower EPI group to a higher EPI group (e.g., from low-EPI to middle-EPI); countries with superscript (-) have dropped from a higher EPI group to a lower EPI group (e.g. from high-EPI to middle-EPI).

Figure 5.27 Distribution of 62 countries with Very-High EPI level by region, 2018 (compared with the regions' percentage in total 193 countries)



As seen in Figure 5.27, only 22 per cent of the countries in the world are in Europe, while European countries contribute 70 per cent in the group of 62 countries with Very-High EPI levels. Asia follows with the largest proportion of 36 per cent in the same Very High-EPI level group while comprising 24 per cent of the 193 Member States. Americas' share in the group is 26 per cent, Oceania's share is 14 per cent, and Africa's share is 7 per cent.

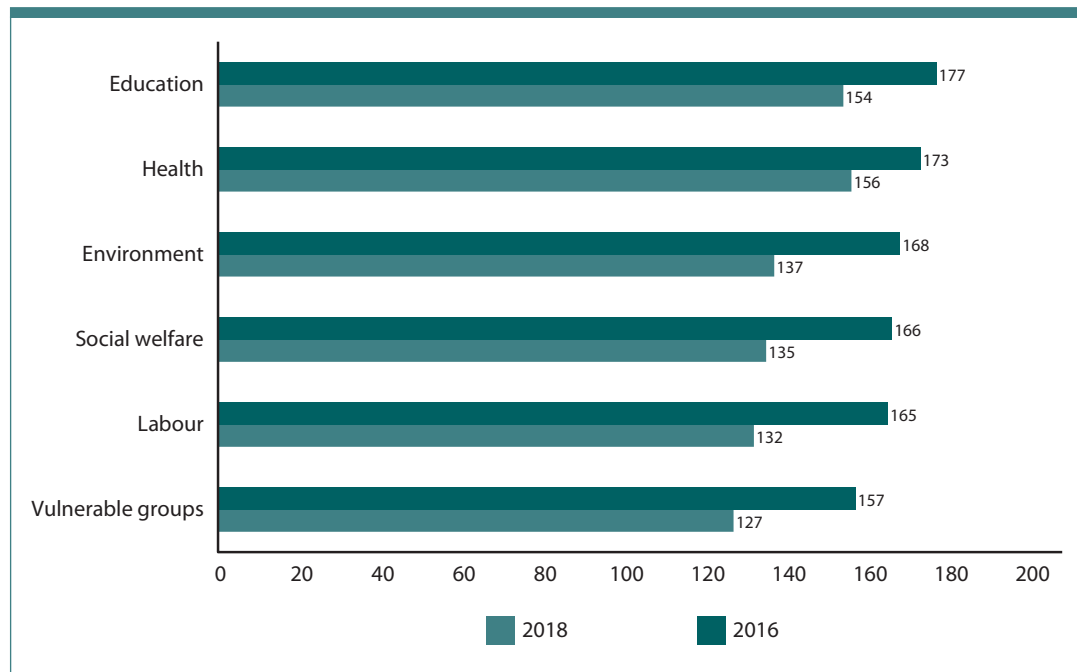
**Table 5.9** Countries that have advanced more than 30 positions in the 2018 EPI ranking

Country	Change in rank	2016 EPI	2018 EPI
Burkina Faso	+56	143	87
Dominica	+50	156	106
Philippines	+48	67	19
Panama	+48	114	66
Haiti	+47	164	117
Peru	+46	82	36
Belarus	+43	76	33
Central African Republic	+40	191	151
Cyprus	+38	84	46
Iran (Islamic Republic of)	+38	149	111
Sierra Leone	+38	167	129
Djibouti	+38	191	153
South Africa	+37	76	39
Antigua and Barbuda	+36	157	121
Saint Kitts and Nevis	+35	133	98
Guinea	+35	173	138
Nepal	+34	89	55
Oman	+33	76	43
Bangladesh	+33	84	51
Slovakia	+32	82	50
Rwanda	+32	91	59
Greece	+31	65	34
Switzerland	+31	72	41
Bahamas	+30	122	92
Tuvalu	+30	191	161

### 5.6.3 E-information

The first level of e-participation is e-information. Governments are providing people with information through ICT channels to help them make more informed choices at the next stage of consultation. E-information is critical because without access to publicly held information, participation cannot be evidence-based, fully relevant, or significant. As seen in Figure 5.28 below, Member States are sharing an increasing amount of information with their citizens mostly in the education and health sectors followed closely by other sectors.

Figure 5.28 Number of countries offering archived information in 2016 and 2018, by sector



#### Box 5.4 E-participation activities in Finland



Openness and democratic principles are key values and principles in Finland that are being applied in the digital era through the Openness of Government Act which was revised in 1999. Openness and citizen participation have been actively developed during the last decades. Good examples of these development work are the Government's Project Register (HARE), established in 1999; and the otakantaa.fi website, established in 2000 to promote public discussion on government proposals; Hear Citizens project (2000-2005); Government's Policy Programme on Citizen Participation (2003-2007) and the on-going Democracy Network established in 2007.

The government portal, [www.demokratia.fi](http://www.demokratia.fi), available in Finnish and Swedish languages only, allows any citizen to suggest initiatives or make comments to the national as well as local government. One of the key services is the Citizen's Initiative for a legislative proposal launched in fall of 2012. Initiatives that collect over 50,000 signatures at a given time are referred to the parliament to be assessed for legislative reform.

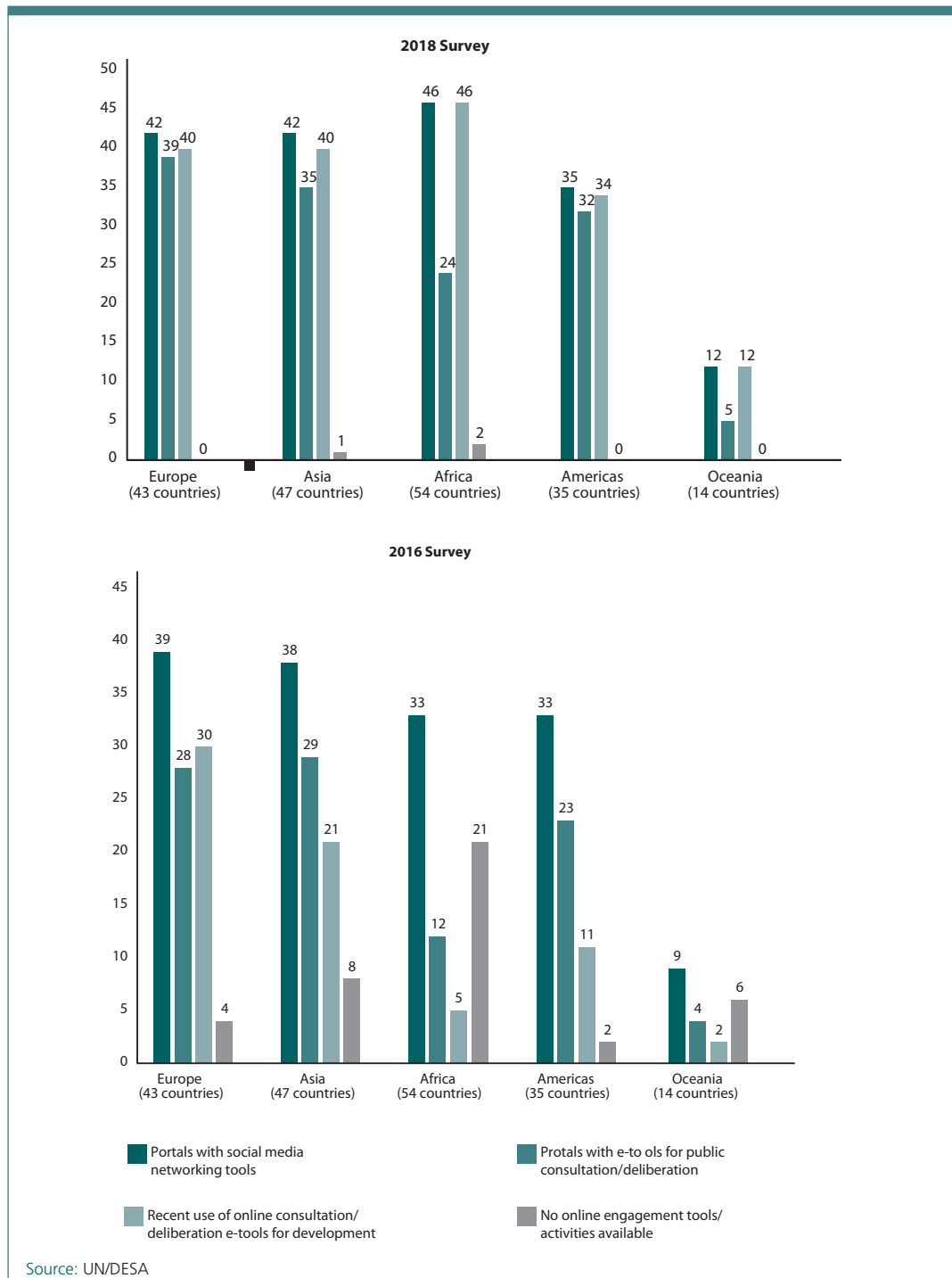
In 2015, the Government initiated a program helping those who are unable or are not accustomed to using digital services. The Ministry of Finance set up "HELP-project" to draft a proposal on ensuring availability of sufficient assistance for those who need help in using digital services. It also set up an Advisory Board, "Digitalization of everyday life", consisting of representatives from over 20 civil society organizations and the academe, to ensure the diverse needs of service users are considered in the implementation of the goal to digitize public services.

Source: UNDESA Member States Questionnaire 2018

### 5.6.4 E-consultation

The second level of the e-participation model is e-consultation. It means consulting the people is part of the process of crafting new policies, designing new services or projects. Consultation however, need not mean that the government is obligated to use the inputs received. Rather, it has the ability to leverage the information obtained to better respond to public sentiments on a particular subject.

Figure 5.29 Number of countries with online engagement tools on national portals and their usage



### Box 5.5 E-participation activities in Brazil



The third axis of the Digital Governance Strategy of Brazil is about social participation, and its objectives are: (1) Endorse the collaboration in the public policies cycle; (2) Amplify and drive social participation in the creation and improvement of digital public services; and (3) Improve the direct interaction between the government and society. Moreover, in 2014, the President signed Decree 8.243 establishing the National Social Participation Policy and creating the National System of Social Participation managed by the Secretary of Government of the Presidency of the Republic. Through its social participation platform, Participa.br, the initiative is engaging in the development of free software and in body communication tools, discussion forums, chat rooms, videos, maps, participation trails and other means of online social consultation. Since its creation, Participa.br ([www.participa.br](http://www.participa.br)) has been hosting over 200 participatory processes and more than 30 public government consultations.

The Brazilian open data policy, instituted by Decree No. 8.777 / 2016, has as its fundamental objectives: the promotion of transparency and social participation, the development of new and better government services, the increase of public integrity, and the promotion of entrepreneurship. The Federal Executive Branch of the Ministry of Planning coordinates this policy. To better promote social participation, Knowledge Networks were established through Ordinance No. 290 of 2016, inviting citizens, institutions and communities to become involved in thematic discussion groups, in the E-Government Portal. Also relevant are the network collaboration between government and society through the Ombudsman System, or e-Ouv, which receives information through a variety of channels; and the Consumer Portal, a site allowing consumers to evaluate services provided by companies. (<https://www.governoeletronico.gov.br/egd>)

Source: UNDESA  
Member States  
Questionnaire 2018

All regions made progress in deploying e-consultation tools in 2018 compared to 2016. For example, in Europe, all countries have online engagement tools or activities, 42 countries have social media networking tools; 39 countries have e-tools for public consultation or deliberation, and 40 countries made recent use of online consultation or deliberation. Among the regions, Africa made the largest progress in 2018. While in 2016, it was recorded that 21 national portals from Africa did not have any online engagement tools available. In 2018, only two countries remain without any kind of online tools for citizen engagement.

#### 5.6.5 E-decision-making

E-decision-making, the third level of the e-participation model, remains a serious challenge. It refers to a process in which people provide their own inputs into decision-making processes. Two examples are: (i) direct e-voting via secure systems and (ii) identifying preferred (popular) options and proposals by rating them through social media's "Like/Dislike" or "plus/minus" functions. While policy-making is the logical outcome of these type of public engagement activities, information gathering and consultations are equally valuable participation forms in their own right. Recently, policy discourse has been gaining special attention as new software tools are creating more complex and sophisticated systems of deliberation online.

**Box 5.6 Internet Voting in Estonia**

Internet voting (I-voting or online voting) is one of the options for elections in addition to other voting methods in Estonia. I-voting in this context means voting through the Internet, not voting by using a special voting device.

In 2012, an Electronic Voting Committee was established responsible for conducting Internet voting even as the National Electoral Committee retains a supervisory role. Internet voting was first introduced in the local elections of 2005, when more than 9 thousand voters cast their ballot via the Internet corresponding to about 2 per cent of all registered voters. Today, I-voting with binding results has been carried out eight times in Estonia:

- in the local elections in October 2005, October 2009 and October 2013;
- in the parliamentary elections in March 2007, March 2011 and March 2015; and
- in the European Parliament elections in June 2009 and May 2014..



Source: UNDESA  
Member States  
Questionnaire 2018

**Box 5.7 Digital Malta Strategy 2014-2020**

On 24 March 2014, the Government of Malta presented Digital Malta – the National Digital Strategy for 2014-2020. The seven-year strategy was launched by Prime Minister Joseph Muscat along with the Parliamentary Secretary for Competitiveness and Economic Growth.

E-Democracy is addressed in the Strategy whereby the “Government is committed to using ICTs to encourage citizens to take part in democratic decision-making. Initiatives will be implemented to enhance the visibility, transparency and accountability of government.”

The Government encourages the general public, civil society organizations, trade unions, business organizations, political parties, governmental institutions and other actors, to participate in online public consultation. The portal [http://meae.gov.mt/en/Public\\_Consultations/Pages/Home.aspx](http://meae.gov.mt/en/Public_Consultations/Pages/Home.aspx) lists all public consultations and their respective outcomes. Citizens can also subscribe for notification about consultations in their specific areas of interest.

Given the delicate responsibilities that fall under the Planning Authority’s remit, the Authority is conscious that informing and involving the public and all interested parties in policy making and decision taking are crucial to the holistic improvement of Malta’s island-environment.

As a matter of policy, the Government involves end-user communities in the development of online services as stated in Circular No. 17/2015 from the Office of the Prime Minister entitled “Online Public Services For Citizens and Businesses”.



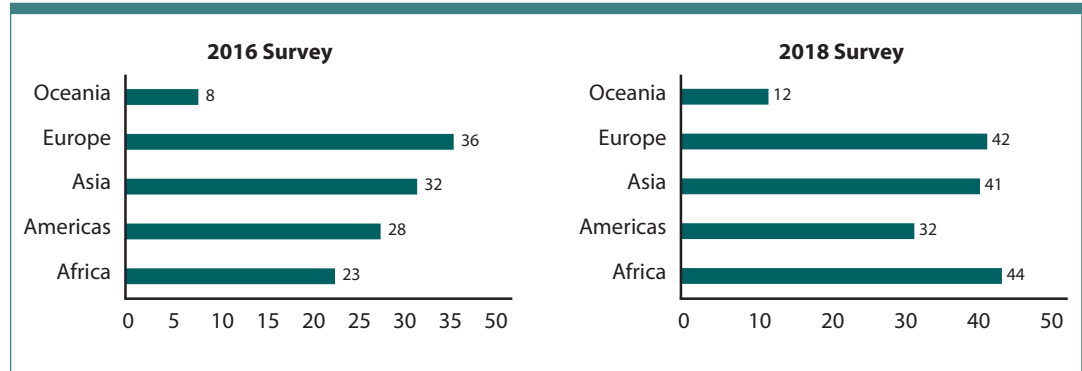
Source: UNDESA  
Member States  
Questionnaire 2018

**5.6.6 Innovative partnerships, crowdsourcing, and crowdfunding**

Innovative public-private partnerships (PPPs) have emerged as models for the provision of public services and social entitlements in areas such as education, health and environmental sustainability. As the 2030 Agenda states— in support of implementing its Goals and targets, there is a need to mobilize all available resources for intensive global engagement, to bring together Governments, the United Nations system, the private sector, civil society, and other stakeholders and actors. In this regard, the Survey checks the online services provided in partnership with civil society and/or the private sector. Figure 5.30 below shows the number of countries providing such services by region for 2016 and 2018. There is progress in all regions, particularly in Africa. The partnership usually

includes financial transactions such as payment of passport application fees in partnership with banks as in the case of Ghana and Cabo Verde.

Figure 5.30 Number of countries providing online services in partnership with civil society or private sector, by region, 2016 and 2018



## 5.7 Conclusions:

The key conclusions from this chapter are as follows:

- Countries are advancing towards higher levels of e-government signified by an upward movement of 46 countries from Low- to Middle- to High- and Very High-EGDI levels. The world average EGDI has been increasing from 0.47 in 2014 to 0.55 in 2018 due to the continuous improvement of its sub-indices in the last 4 years.
- The percentage of countries with High- and Very-High levels of e-government development is reaching 58 per cent or close to two-thirds of all United Nations Member States. The share of countries with Low-EGDI level, has dropped by a significant 50 percent, that is, 16 countries in 2018 compared to 32 in 2016.
- The regional distribution of e-government development in 2018 mirror those of previous Surveys. In 2018, Europe with 0.77 continues to lead with the highest regional EGDI, followed by the Americas with 0.59, Asia with 0.58, Oceania with 0.46 and Africa with 0.34.
- The overall progress of e-government development in the Americas and Asia is noteworthy. While in 2016 most countries in Latin America and the Caribbean had Middle-EGDI values, eight countries transitioned to High-EGDI level in 2018. Moreover, two-thirds of the countries in Asia, or 31 out of 47, and almost half of countries in Americas, that is, 15 out of 32, have averages above the world average EGDI scores.
- Despite some development gains and investments in technology in several countries, e-government divide and digital divide continue to persist. Fourteen countries with Low-EGDI values are African and belong to the least developed countries. Within these countries, there is high risk that the divide deepens between people who have access to the Internet and online services and those who do not.



- The improvement of the average score of the Online Service Index (OSI) was the fastest—from 0.39 to 0.57 or by an average of 40 per cent—suggesting that globally, there was a steady progress in improving e-government and public services provision online. It is important to note that for the first time, in 2018, the main contributor of EGDI score improvement in all income groups is OSI.
- Although not all countries provide transactional online services, the coverage and availability of services in countries that do provide has increased between 18 per cent to 47 per cent across all service categories. The three most commonly used online services are paying for utilities, available in 140 countries; submitting income taxes, available in 139 countries; and registering new businesses, which can be done in 126 countries.
- Improvement in providing online services has been steady over the last four years in all OSI level groups. Even among the 31 countries in the Low-OSI group in 2018, 23 countries, or 74 per cent, provide at least one kind of online service.
- The number of countries providing online services using emails, SMS/RSS feed updates, mobile Apps and downloadable forms has been increasing in all sectors. For instance, between 156 to 176 countries provide archived information online compared to 137 to 154 in 2016. Similarly, sector-specific mobile Apps and SMS services are now being offered in 70 to 88 countries compared to 46 to 65 countries in 2016.
- Provision of services through mobile Apps is growing fastest in the education, employment, environment sectors, increasing by 52 per cent. Email updates has increased the most, in the employment sector by 62 per cent, followed by the environment sector by 38 per cent.
- One positive trend recorded in 2018 Survey is that increasingly, more countries provide online services targeted to the most vulnerable groups. From the regional perspective, Europe continues to lead in online service delivery for all vulnerable groups reaching almost universal coverage across the region or 81-89 per cent of all European countries. The percentage of countries offering services to vulnerable groups ranges from 69 to 86 per cent in the Americas, from 70 to 79 per cent in Asia, from 33 to 57 per cent in Africa, and from 4 to 15 per cent in Oceania.
- The number of countries with Open Government Data (OGD) portals has reached 139, comprising 72 per cent of all United Nations Member States. Most of these portals, that is, 84 per cent, also have a directory or metadata repositories describing the data underlying concepts, methodology and structure. About 74 per cent of countries that have OGD portals and websites also provide guidance on using and navigating the complex datasets, encourage users to request new datasets, initiate hackathons and use public open data for creating online Apps. This trend is significant and encouraging, given that in 2016 only 24 to 50 per cent of the Member States offered these.
- In all sectors, the share of data provided in non-machine-readable formats has doubled, whereas the increase in machine-readable datasets is incremental.
- The percentage of countries among the 193 Member States providing updates via email, or RSS in 2018 continue to increase compared to 2016 in all sectors. The highest percentage of countries offering mobile services by sector was in education by 46 per cent, followed by 38 per cent in employment, by 36 per cent in health and environment, and by 33 per cent in social protection.

- There was progress in e-participation development in all regions. Comparing the results from 2016 and 2018, the number of countries with very-high EPI level doubled from 31 to 62.
- While all regions made progress in deploying e-consultation tools in 2018 compared to 2016, e-decision-making – the third level of the e-participation model – remains a serious challenge.

## References

- 1 General Assembly (2015). Resolution adopted by the General Assembly on 25 September 2015, A/RES/70/1, para 48. Available at: [http://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A\\_RES\\_70\\_1.pdf](http://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_RES_70_1.pdf)
- 2 The World Bank (2018). The World Bank in Ghana. Overview. Available at: <http://www.worldbank.org/en/country/ghana/overview#>
- 3 Government of Ghana – NDPC (2015). Ghana shared growth and development agenda II. Available at: <http://www.un-page.org/files/public/gsgda.pdf>
- 4 GIFEC. Ghana Investment Fund for Electronic Communication. Available at: <http://gifec.gov.gh/>
- 5 NITA. National Information Technology Agency. Available at: <https://nita.gov.gh/>
- 6 The World Bank. World Bank Country and Lending Groups. Available at: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>
- 7 Agency for Digitisation Denmark (2016). A Stronger and More Secure Digital Denmark (2016-2020). Available at: [https://digst.dk/media/16165/ds\\_singlepage\\_uk\\_web.pdf](https://digst.dk/media/16165/ds_singlepage_uk_web.pdf)
- 8 Member States Questionnaire submitted by Australia to UNDESA in 2017.
- 9 MOIS Korea (2017). World e-Government Leaders to Gather at OECD E-Leaders Meeting 2018 in Korea. Available at: [http://www.mois.go.kr/eng/bbs/type001/commonSelectBoardArticle.do?bbsId=BBSMSTR\\_000000000019&nttlId=58071](http://www.mois.go.kr/eng/bbs/type001/commonSelectBoardArticle.do?bbsId=BBSMSTR_000000000019&nttlId=58071)
- 10 Gov.UK (2017). Policy paper. Government Transformation Strategy, United Kingdom (2017-2020). Available at: <https://www.gov.uk/government/publications/government-transformation-strategy-2017-to-2020>
- 11 Government Offices of Sweden (2017). Action on digital transformation. Available at: <http://www.government.se/press-releases/2017/06/action-on-digital-transformation/>
- 12 Prime Minister's Office Finland (2016). Action plan for the implementation of the key project and reforms defined in the Strategic Government Programme. Available at: <http://valtioneuvosto.fi/documents/10616/1986338/Action+plan+for+the+implementation+Strategic+Government+Programme+EN.pdf/12f723ba-6f6b-4e6c-a636-4ad4175d7c4e>
- 13 Member States Questionnaire submitted by Singapore to UNDESA in 2017.
- 14 GovTech Singapore (2007). Singapore's e-Government Journey. Available at: [https://www.tech.gov.sg/media-room/speeches/2007/09/singapores-egovernment-journey\\_](https://www.tech.gov.sg/media-room/speeches/2007/09/singapores-egovernment-journey_)
- 15 ICT.govt.nz (2017). ICT Strategy and Action Plan. Available at: <https://www.ict.govt.nz/strategy-and-action-plan/strategy/>
- 16 Member States Questionnaire submitted by New Zealand to UNDESA in 2017.
- 17 Gouvernement.fr (2018). Action Publique 2022 : pour une transformation du service public. Available at : <https://www.gouvernement.fr/action/action-publique-2022-pour-une-transformation-du-service-public>
- 18 Secrétariat d'Etat au numérique (2017). L'administration change avec le numérique : découvrez le programme DCANT! <https://www.numerique.gouv.fr/transformation-numerique-de-letat/administration-change-avec-le-numerique-decouvrez-le-programme>
- 19 Ministry of Internal Affairs and Communications Japan. Japan's e-Government Initiatives. Available at: <http://www.e-gov.go.jp/en/e-government.html>
- 20 Member States Questionnaire submitted by Japan to UNDESA in 2017.
- 21 Ericsson Mobility Report (2017). 5.2 billion mobile broadband subscriptions. Available at: <https://www.ericsson.com/en/news/2018/2/5.2-billion-mobile-broadband-subscriptions>
- 22 General Assembly (2015). Resolution adopted by the General Assembly on 25 September 2015. Available at: [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/RES/70/1&Lang=E](http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E)
- 23 Agency for Digitisation Denmark (2016). A Stronger and More Secure Digital Denmark (2016-2016). Available at: [https://digst.dk/media/16165/ds\\_singlepage\\_uk\\_web.pdf](https://digst.dk/media/16165/ds_singlepage_uk_web.pdf)
- 24 Australian Government Digital Transformation Agency (2018). Digital Service Standard. Make it accessible. Available at: <https://www.dta.gov.au/standard/9-make-it-accessible/>