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**Submissions from entities in the United Nations system and elsewhere on  
their efforts in 2017 to implement the outcome of the WSIS**

**Submission by**

United Nations Department of Economic and Social Affairs

This submission was prepared as an input to the report of the UN Secretary-General on "Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels" (to the 21<sup>st</sup> session of the CSTD), in response to the request by the Economic and Social Council, in its resolution 2006/46, to the UN Secretary-General to inform the Commission on Science and Technology for Development on the implementation of the outcomes of the WSIS as part of his annual reporting to the Commission.

**DISCLAIMER:** The views presented here are the contributors' and do not necessarily reflect the views and position of the United Nations or the United Nations Conference on Trade and Development.



# Report on the Implementation of the Outcomes of the World Summit on the Information Society (WSIS)

(January – December 2017)

**United Nations Department of Economic and Social Affairs (UNDESA)**

The United Nations Department of Economic and Social Affairs (UNDESA) through the Division for Public Administration and Development Management (DPADM) serves as facilitator for the implementation of and follow-up to the action lines:

- C1 - The role of public governance authorities and all stakeholders in the promotion of ICTs for development
- C7 - ICT Applications: E-government
- C11 - International and regional cooperation

## I. Executive Summary

1. As the leading facilitator for Action Lines C1, C7eGov, and C11, as member of the United Nations Group on the Information Society (UNGIS), and manager of the IGF<sup>1</sup> Secretariat, UNDESA continued its efforts to promote policy dialogue and advocacy among United Nations bodies, governmental and non-governmental stakeholders and partners for the implementation of the outcomes of the World Summit on the Information Society (WSIS). This has involved a number of initiatives listed in Part II of this report. UNDESA has ensured a comprehensive exchange of views, information and experiences among WSIS stakeholders; and has provided advisory services and technical assistance to some developing countries.
2. During the annual WSIS Forum 2017, the facilitation meeting for action lines C1 and C11 emphasized the importance of emerging technologies in progressing the SDGs, as well as important role of governments to mobilize private sector in ensuring that ICTs aligns with SDGs and create the necessary regulatory environment and favourable conditions for innovation. Private sector can contribute towards SDGs in multiple ways, namely, through investments, innovation, establishing partnerships and dialogues to shape national IT strategies, as well as by collecting and analyzing data. It was noted that the private sector contributed best when it is called to provide a response to a well identified problem or issue.
3. Also during the WSIS Forum 2017, the C7 - ICT Applications: E-government facilitation meeting outlined the role of e-government in delivering an efficient, productive and innovative public services. Key principles in developing e-government are listed as

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<sup>1</sup> <http://www.intgovforum.org/>

focusing on people, working towards inclusiveness and ensuring e-government has an impact on the SDGs. To stand up against poverty, the facilitation meeting encouraged governments to empower people by promoting equal access to information and knowledge sources and concluded that e-government is an important enabler achieve the SDGs and to generate benefits in the form of eliminating poverty and increasing prosperity.

## II. Analytical Overview

### A. Opportunities

4. A cluster of new technologies has emerged that is likely to have such a profound impact that many observers are characterizing them as heralding a new industrial revolution<sup>2</sup>. The UN Secretary General, in his remarks at the Web Summit, held in Lisbon on November 6, 2017 referred to a “combination of new technologies” that represented the Fourth Industrial Revolution (4IR)<sup>3</sup>. The exact list of these new technologies is still a subject of discussion. However, the ones that are often mentioned include artificial intelligence (AI), robotics, 3-D printing, nanotechnology, biotechnology, Internet of Things (IoT), Big Data and cloud computing, material science, energy storage, and autonomous vehicles, etc<sup>4</sup>.
5. There is strong evidence about the multiple positive impact of these new technologies. They help advance health and education. They help anticipate disasters and support responses after disasters or during major epidemics. They can help combatting climate change and protect the environment. At the same time, there are strong concerns about the potential negative impacts of some of these technologies, including job losses or what some even perceive as “existential threats”.
6. The private sector has an important responsibility to mobilize technologies for realizing the SDGs - along with governments, civil society and actors.
7. The United Nations resolution 71/212 adopted by the General Assembly on 21 December 2016 recognizes the importance of assisting developing countries and LDCs with limited access to internet to address the challenges of making affordable and ubiquitous internet connection in the region. In this regard, the role of private sector connecting the world and contributing in achievement of SDG initiatives becomes of utmost importance. During the Private Sector Forum in September 2017<sup>5</sup> the critical importance of private investments for delivering SDGs was emphasized by the United

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<sup>2</sup> “An emerging technology is a radically novel and relatively fast growing technology characterized by a certain degree of coherence persisting over time and with the potential to exert a considerable impact on the social-economic domain(s).” (Rotolo, D. et al. (2015). “What is an emerging technology?”, *Research Policy*, No. 44, vol. 10, pp. 1827-1843.)

<sup>3</sup> <https://www.un.org/sg/en/content/sg/speeches/2017-11-06/secretary-generals-remarks-web-summit>

<sup>4</sup> See for example, Klaus Schwab, *The Fourth Industrial Revolution*, New York: Crown Business, p. 1

<sup>5</sup> <https://www.unglobalcompact.org/take-action/events/1051-united-nations-private-sector-forum-2017>

Nations Secretary General.

8. Global technology companies like Google and Facebook are making efforts to connect the unconnected regions in the world introducing innovative solutions. In the last five years global projects were raised to bring free internet connection in African countries and India. Google introduced its Project Loon which is aiming to deliver balloon powered internet to people in rural and remote areas in the world. The internet.org initiative of Facebook is aiming to make the digital services free in the areas with less access to internet introducing free basic platform for companies and citizens. The recipients of such projects gain free access to apps, websites and services without paying for internet and the companies can grow their audience and scale their social impact.
9. Governments are making advances in the area of e-government as shown in the most recent United Nations E-Government Survey<sup>6</sup>.
10. While e-government is an enabler for all Sustainable Development Goals (SDGs), its impact is visible notably on proactive delivery of services particularly on health and education. E-government enables better delivery of public services to citizens and contributes to their empowerment (G2C), improves interactions with business (G2B), allows efficient relations with other government agencies (G2G), and enhances performance of employees (G2E). Egovt can also enable participatory decision-making.
11. All countries face obstacles in ensuring inclusiveness in their e-government development which must be identified and addressed. To stand up against poverty, governments should empower people by providing equal access to information and knowledge sources. E-Government can act as a facilitator for equal access to information, thus empowering people in all aspects of social arenas.
12. There is need for governments to advance e-government with the emergence of new technologies. Key principles in developing e-government systems should be to focus on people, work towards inclusiveness, emphasize local service delivery and ensure e-government has an impact on the SDGs.

## **B. Challenges**

13. The new technologies pose special challenges for developing countries in particular, the Least Developed Countries (LDC) and other “countries in special situations,” which represent about fifty per cent of the world population. There is the danger that the advent of the new technologies may widen further the technological divide between these countries and the developed countries.

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<sup>6</sup> <http://workspace.unpan.org/sites/Internet/Documents/UNPAN97453.pdf>

14. According to the UNDESA study on “The impact of the technological revolution on labour markets and income distribution” released in July 2017, technological progress has been the main driver for economic growth increasing the overall productivity, bringing time and cost effectiveness and as a result the economic value for all the stakeholders. However, there is a growing concern about the impact of emerging technologies in labour markets. The cognitive abilities of machines are enhancing with a growing application of AI technologies and machine learning and becoming widespread almost in every industry replacing the workers with robotics. The concerns arise with arguments that human involvement will become less demanded and which will lead to mass unemployment. However, the impact of emerging technologies into labour markets is not predetermined. Emerging technologies can also create new occupations demanding higher digital competencies from employees in broad range of industries”. As an example in the US labour market about 7 million private sector jobs were lost in the third quarter of 2016 while 7.7 million jobs were created according to the above mentioned study<sup>7</sup>.
15. Access to the Internet is crucial in order for people to be able to use the e-government services. As called for in SDG 9 (on building resilient infrastructure, promoting inclusive and sustainable industrialization and fostering innovation) a major effort is required to increase access to ICT and make the broadband affordable and reachable in all the regions in the world including the remote and rural areas of the countries and LDCs by 2020.
16. According to the WSIS action line “C7 - ICT Applications: E-government facilitation” meeting in 2017, two main barriers for low usage of e-government services are low trust in government websites considering online security and complexity of e-government websites.
17. There is still lack of accessibility of e-government services. Despite the existence of international standards for Web accessibility, the large majority of websites do not follow them. This includes governmental websites. In 2012, United Nations E-Government Survey indicated that online national portals contain non-accessible elements in more than 60% of the countries. It is known that there has been progress. While in 2014, 40% of countries allowed for flexible font size and type, an essential accessibility feature, additional 7 countries allowed for flexible font size and type in 2016<sup>8</sup>.
18. There are some existing gaps in benchmarking e-government development: (i) not obtaining direct information from the governments as providers of online services, though at the risk of objectivity; (ii) not gaining perspectives of citizens and people in general as users of online services, e.g. through user feedback, mystery shoppers and

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<sup>7</sup> [https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/2017\\_Aug\\_Frontier-Issues-1.pdf](https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/2017_Aug_Frontier-Issues-1.pdf)

<sup>8</sup> 2012 and 2016 UN E-Government Surveys

perception surveys; (iii) gap between the availability of e-government services (supply) and use of them (demand).

19. It is also important to consider the ways the governments can effectively communicate and engage its citizens. The most appropriate channels of public service delivery, including but not limited to web portal, email, SMS, mobile apps, social media, public kiosks and intermediaries through public-private partnerships, need to be carefully selected for the right services targeting the specific audience. Channel selection is a deciding factor to effectively reach out to specific groups of citizens.
20. In 2016 the global adult literacy rate was 86%, where 14% of the world population is still considered to be illiterate<sup>9</sup>. Digital literacy of people and quality access to ICTs is very important to ensure the full potential of e-participation. In developed countries, the proportion of households with Internet access at home is twice as high as in developing countries. Only 15% of households in LDCs have Internet access at home. In these countries, many Internet users are accessing the Internet from work, schools and universities or from other shared public connections outside the home<sup>10</sup>. For e-government to truly contribute to improving people's lives, it is vital to increase public access to the Internet and promote digital literacy.
21. ICTs can play a crucial role in promoting the inclusion of persons with disabilities, through e-learning, telecommuting, accessible e-governance online services, among others. But major obstacles remain. Most ICTs are still inaccessible for persons with disabilities and many ICTs remain unaffordable. Persons with disabilities tend to have lower access to education which in turn prevents them from accessing information and from fully benefiting from the benefits of ICT due to lack of ICT skills. As a result, the digital divide between persons with and without disabilities persists.
22. To make ICTs more accessible, it will be essential to design solutions leading to the development of inclusive technologies, at minimal cost and with wide benefits. This will require: national regulation setting guidelines and standards for accessibility; implementation of policies to promote the creation of accessible ICTs ; reducing the cost of accessible ICTs and the cost of ICT equipment especially designed for persons with disabilities; raising awareness among the ICT industry on the economic benefits the development of accessible technology can generate; improve the purchasing power by persons with disabilities to buy ICT; increase access to education and to ICT skills training among persons with disabilities.

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<sup>9</sup> [http://uis.unesco.org/sites/default/files/documents/fs45-literacy-rates-continue-rise-generation-to-next-en-2017\\_0.pdf](http://uis.unesco.org/sites/default/files/documents/fs45-literacy-rates-continue-rise-generation-to-next-en-2017_0.pdf)

<sup>10</sup> <http://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2017.pdf>

### III. Innovative policies and programmes & Future actions

#### A. Innovative policies and programmes

23. E-government has grown rapidly over the past 15 years, since the first attempt of the United Nations to benchmark e-government in 2001. E-government is now ubiquitous in many more countries, a stark contrast in comparison to 2003 – when 18 countries or about 10% of countries globally were without any online presence. 51 percent of countries had “low EGDI” or “medium EGDI” values in 2016, as compared to over 73 per cent of countries in 2003.
24. According to the 2016 United Nations E-Government Survey, a new trend in e-government has been the evolution towards the provision of integrated public services online through, among others, one-stop platforms allowing access to a range of public services. This approach makes it easier for people to interact with public administration and get adequate and holistic responses to their queries and needs.
25. Along with integrated services, e-government may increasingly support policy integration and encourage the efforts of various government institutions to work more closely together as stated in the 2016 edition of the UN E-Government Survey. It can provide governments with increased insights to help revisit existing decision making processes and workflows. This can help achieve more integrated policies and work flows – a critical condition for realizing the SDGs. Progress is however slow. Although there are examples of successful integration of policies within the social area for example, integrating policies and services across the economic, social and environmental areas remains difficult. Efforts to promote whole-of-government service delivery and policies have to be accompanied with efforts to ensure that organizational cultures, coordination mechanisms and financial and accountability systems support collaboration among public institutions.

26. In an effort to make public institutions more inclusive, effective, accountable and transparent, many governments across the globe are opening up their data for public information and scrutiny. According to the 2016 United Nations E-Government Survey 128 out of 193 United Nations Member States provides datasets on government spending in machine readable formats. The remaining 65 have no such information online.
27. E-participation is expanding all over the world. With growing access to social media, an increasing number of countries now proactively use networking opportunities to engage with people and evolve towards participatory decision-making as recommended by one of the targets of the SDGs. This is done through open data, online consultations and multiple ICT-related channels. While developed countries, especially European countries, are among the top 50 performers in the 2016 United Nations E-Government Survey, many developing countries are making good progress as well; especially lower-middle income countries. In general, a country's lower income level is not an obstacle to posting basic public sector information online on national portals or using social media and other innovative means for consulting and engaging people on a broad range of development-related issues. Yet, a country's income level matters when it comes to developing more technically complex and specialized e-participation portals, such as for e-petitioning or online consultation and deliberation. Low income countries need to be supported in addressing such challenges. A critical challenge remains to ensure that the newest approaches to engaging people in decision making and expressing their needs and opinions actually allow the poorest and most vulnerable to express their positions and contribute. This requires accompanying measures in various areas as well as mobilizing non-governmental actions and communities.

## **B. Future actions**

28. Moving forward, ICT will be an important driving force that can help reach the SDGs in 2030. UNDESA will continue to promote ICTs as catalysts for realizing the 2030 Agenda and to encourage further partnerships among all stakeholders. It will also support governments in their efforts to promote a holistic use of ICT and e-government to addressing complex challenges, particularly through collaborative governance and whole-of-government service delivery for sustainable development, open government data initiatives and e-participation.



29. The United Nations Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs (STI Forum) will continue to provide opportunities to strengthen dialogue between stakeholders and Governments to promote future cooperation in science, technology and innovation. The high level political forum will create opportunities to establish networks among stakeholders and enhance capacity building to help facilitate the development of emerging technologies in order to achieve the SDGs. A road map for the Technology Facilitation Mechanism will be developed by the inter-agency task team and the 10 member group which will associate the key international events such as the World Government Summit, the Global Solutions Summit, various United Nations meetings and expert meetings with the Forum. This will help to maximize the impact of the forum by delivering key messages to different stakeholders<sup>11</sup>.
30. UNDESA will continue to analyze the e-government development of the United Nations Member States. The next edition of the biannual E-Government Survey will be released in 2018 with the overall theme “Gearing e-government to support transformation towards sustainable and resilient societies”. The survey will put particular emphasis on the role of fast-evolving technologies that can bring both unprecedented opportunities and existential threats, and have the potential to help shape the future of government. The Survey will focus on technologies that can have a far-reaching impact on the realization of the SDGS and on the way governments operate and interact with people.

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<sup>11</sup> <https://sustainabledevelopment.un.org/?page=view&nr=1924&type=13&menu=1634>

# Annex - Selected UNDESA Activities

## A. Selected meetings, missions and projects

31. The United Nations Public Service Forum “The Future is Now: Accelerating Public Service Innovation for Agenda 2030” was held in The Hague on 22-23 June 2017. The Forum, held in honor of the United Nations Public Service Day, was organized by the Ministry of Interior and Kingdom Relations of the Netherlands and DPADM. For two days, participants debated how innovative policies can be fostered to implement the 2030 Agenda for Sustainable Development. One of the key recommendations of the Forum identified ICT as an enabler for innovating public service delivery. Indeed, disruptive technologies such as artificial intelligence, big data, the Internet of things can create innovative and sustainable business models of the future. Innovative and inclusive way of doing business can help end discrimination, create and promote equal opportunity especially for the poorest and most vulnerable.
32. The Bahamas Small Island Developing States (SIDS) Symposium, organized by UNDESA, was held in the Bahamas from 21-23 February 2017 and attended by high-level officials from 40 over SIDS and other countries. The overarching focus of the Symposium was “equipping public institutions and mobilizing partnerships”, and “mobilizing ICTs” was one of the five thematic sessions. During the Symposium, much attention was devoted to ensuring that SIDS have access to ICTs.
33. In a mission, Côte d’Ivoire in May 2017, UNDESA delivered a keynote address on current ICT trends and SDG implementation during a national workshop on “Using ICT for the implementation of the SDGs”. The workshop followed the work that DESA carried out for the Government in December 2015. Based on a previous DESA recommendation, the Ministry of ICT of Côte d'Ivoire developed a strategy on "Building a Public Sector of the Future". UNDESA also held discussions with different ministries about their SDG implementation preparedness and what role ICT could play in the implementation process.
34. UNDESA organized a number of regional and sub-regional meetings on disability statistics and measurement in the context of the 2020 World Population and Housing Census Programme and the 2030 Agenda for Sustainable Development. These meetings aimed at enhancing national capacity in disability measurement, which in turn will provide countries with the statistical capacity to measure the digital divide between persons with and without disabilities.
35. An Expert Group Meeting on Preparatory Process for the 2018 United Nations E-Government Survey was organized by UNDESA at the United Nations Headquarters in May 2017. The meeting aimed to generate proposals on the content, approach and revisions on the methodology of the Survey. Practitioners and experts from academia discussed how e-government can be harnessed to support the achievement of the SDGs as well as emerging issues.

36. As part of the DESA project on “Strengthening of Capacities of Developing Countries to Provide Access to Information for Sustainable Development through Open Government Data”, UNDESA organized a workshop on Open Government Data (OGD) for Sustainable Development in Hague, Netherlands during the United Nations Public Service Forum on 22-23 June 2017 and supported governments of Panama and Uruguay in developing their “Open Government Data” action plans. The action plans addressed the key dimensions in building sustainable OGD eco-systems including frameworks, procedures, capacities, responsibilities and civic demand for OGD.
37. UNDESA participated at the conference “Digital Transformation Encounter” on 21-23 August in Montevideo, Uruguay. More than 400 participants from international organizations, civil society, academia and Government representatives from the region were present. A panel discussion addressed the theme “Policies to Construct Data, Data to Construct Policies”. The objective of the lecture was to address the key concepts of data-driven government for the achievement of the SDGs.
38. UNDESA participated in the 3rd Asia-Pacific Regional Forum on Smart Cities and e-Government organized by ITU, Thai Government and WeGO in Bangkok, Thailand in September, 2017. “Participatory Governance for Good Smart City: Focusing on Implications from Gentrification in Achieving the SDGs” was addressed during a session on smart sustainable cities.
39. In 2017, UNDESA collaborated with a various stakeholders, including United Nations agencies and civil society, to compile relevant evidence and good practices on access to ICT for persons with disabilities to inform the flagship report on disability and development requested by A/RES/69/142. To further respond to the mandate of this resolution, in December 2017, UNDESA will organize an Expert Group Meeting on Monitoring and Evaluation for Disability-inclusive Development, which will include a session devoted to ICT.
40. Finally, in 2017 UNDESA met with various government officials responsible for e-government development. During these meetings parties elaborated the e-government strategies and plans of how to utilize e-government to contribute for the achievement of the 2030 Agenda. For example, in January 2017 the delegation from the Government Technology Agency of Singapore shared with UNDESA the latest updates on the implementation of e-government and digital government in Singapore. In September 2017 UNDESA hosted a talk by the Director of the Government Digital Service of the United Kingdom of Great Britain and Northern Ireland. A Project with UNDESA funded by the Government of Panama (PAN/X01/15) is being developed through the National Authority for Governmental Innovation (AIG) aimed at the enhancement of capacities for institutional coordination, elaboration of performance indicators to support digital approaches towards the Agenda 2030 and SDG implementation. UNDESA also supported the ICT Ministry in Colombia (MINTIC) in the development of a Project for the creation of a Centre for Digital Public Innovation

focusing on innovations in public administration, currently focusing on SDG implementation.

## B. Resources and tools

41. In support of public sector development and reform through the use of ICTs, UNDESA has been monitoring the progress of Member States on e-government since 2003. The 2016 United Nations E-government Survey has evaluated the progress of e-government development in 193 United Nations member states using the composite indicator E-Government Development Index (EGDI). Since the second edition was published in 2003, the exact methodology -- an online assessment of government national portals in computing the online service index (OSI) -- has been used consistently with tweaks in each edition to reveal prevailing trends and data availability. The OSI, along with the telecommunication infrastructure index (ITU as data source provider) and the human capital index (UNESCO/UIS as source provider), jointly derive the E-Government Development Index (EGDI) as a composite measure, of which countries are ranked numerically based on standardized and normalised indices.
42. In addition to the online service questionnaire (OSQ) which is a core part of EGDI used to construct OSI, which will continue to be carried out by DESA through trained researchers, for the first time in 2017, an official member states questionnaire (MSQ) were sent to all United Nations Member States by UNDESA. As of December 2017, around 100 countries responded to the MSQ providing UNDESA the latest progress on their e-government development.
43. In 2017, UNDESA continued to enhance its existing tools in promoting e-government, e-participation and ICTs for development. Measurement and Evaluation Tool for E-Government Readiness (METER<sup>12</sup>) is an online interactive tool designed to assist governments and decision makers at all level in developing, monitoring, refining and improving the context within which information and communication technologies are used to transform government, thus creating the context for e-government. Measurement and Evaluation Tool for Engagement and E-Participation (METEP<sup>13</sup>) is an interactive tool designed to assist governments, civil society, private sector and multi-stakeholder communities to measure and qualitatively assess performance levels and development of civic engagement and e-participation through ICTs at both national and local levels. Open Government Data (OGD) Readiness Assessment<sup>14</sup> was created to assist governments in assessing the readiness of a country to adopt and implement an OGD initiative.
44. UNDESA continued to strengthen the technical capacity of the United Nations Public Administration Network (UNPAN) Online Training Centre, an online governance and public administration learning platform. Encompassing 19 interactive and 30 pdf-based

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<sup>12</sup> <http://www.unmeter.org/>

<sup>13</sup> <http://metep.org/>

<sup>14</sup> <https://publicadministration.un.org/en/ogdassessment>

capacity-building courses, public administration and management topics are presented to online trainees in a multilingual environment in the platform. In 2017, the 1625 interactive courses were delivered to more than 1600 participants from around the world.

45. UNDESA has played a key role promoting an inclusive information society for persons with disabilities. The United Nations E-government surveys conducted by UNDESA every two years have provided a source of information on accessibility of national online portals. UNDESA also compiles cases of excellence of e-governance, including good practices on increasing accessible to persons with disabilities.
46. UNDESA maintains a hub of information on disability and ICT at the United Nations Enable website<sup>15</sup>.

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<sup>15</sup> <https://www.un.org/development/desa/disabilities/issues.html>