



## Partnership on Measuring ICT for Development Contribution to the thematic review of the 2021 High-Level Political Forum on Sustainable Development

The spread of information and communications technologies (ICTs) and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies. The ongoing COVID-19 crisis has demonstrated that ICTs are vital to the health and safety of people and to keeping economies and societies working during the crisis. Digital government technologies have enabled national and local authorities in many countries to make rapid policy decisions based on real-time data and analytics, enhancing their capacities to deploy evidence-based services to those who need them most.

The important role that ICTs can play in achieving the Sustainable Development Goals (SDGs) is recognized in the 2030 Agenda for Sustainable Development. Several targets of the SDGs refer to ICTs and technology, highlighting the need to include specific ICT indicators in the monitoring framework. The need for more and better official ICT statistics to help to measure progress in implementing the 2030 Agenda is also widely recognized. Countries will need to consider ICT indicators beyond the SDG monitoring framework to adequately assess the impact of ICTs on their sustainable development. It is imperative that all areas in which ICTs will play a role are measured and monitored.

### **ICT indicators for Sustainable Development Goals**

The Partnership on Measuring ICT for Development has taken a lead role in increasing awareness about the importance of ICT for development and in international ICT monitoring. In its report to the United Nations Statistical Commission in 2018, the Partnership indicated that it had established a task group on ICT for the SDGs, the objective of which was to propose a thematic list of ICT indicators that could be used to measure ICT availability and use in sectors relevant to the Goals that are not covered in the global indicator framework for the Goals. One of the main objectives of the task group was to define a thematic list of ICT indicators that could be collected by countries to assess their level of ICT adoption and use.

The task group concluded its work on the indicators in 2019, and the new thematic list was first presented to the United Nations Statistical Commission in March 2020. The list

comprises 26 ICT indicators, related to 27 SDG Targets belonging to 11 Goals. The proposed indicators were discussed and agreed upon through a consultation process involving governments and international organizations. The proposed indicators cover the following areas: ICT infrastructure and access; access to and use of ICT by households and individuals; use of ICT by businesses; the ICT sector; trade in ICT goods, trade in ICT services and trade in ICT-enabled services; ICT in education; e-waste and e-government. Each indicator is also linked to one or more SDG targets: e.g., indicator PI01 on the proportion of individuals using the Internet, is directly related to SDG targets 1.4, 2.3, 8.5, 12.8 and 16.10, among others. The full list of proposed indicators and related SDG targets is provided in the annex.

The main purpose of the indicators is to help countries that collect or are planning to collect ICT statistics to produce high-quality and internationally comparable data. A large majority of the indicators has been endorsed by the Commission, which also recognized the important role of ICTs for the post-2015 development framework. Several indicators were selected for the tracking of several SDG targets, reflecting the cross-cutting nature of ICTs. Going forward, the full list of indicators will be widely distributed, and the Partnership will continue to review and update the indicators, cooperate to develop new indicators and methodologies, and contribute to the statistical development of countries by offering capacity-building assistance.

Launched in 2017, the Global e-Waste Statistics Partnership aims to build capacity in countries to produce reliable and comparable e-waste statistics and build a global e-waste database to track developments over time and inform policymakers and industry. Its publication, the *Global e-Waste Monitor*, provides the most comprehensive overview of global e-waste statistics available today, including an overview of the magnitude of the e-waste problem in different regions. The current, third edition of the Global e-Waste Monitor was launched in July 2020. A dedicated sub-indicator on e-waste is also being developed under Sustainable Development Goal indicator 12.5.1, “National recycling rates, tons of material recycled”, which is currently a tier III indicator, in partnership with the United Nations University, the United Nations Environment Programme and other experts.

### **ICT for Sustainable Development during the COVID-19 pandemic**

Global measures to combat the pandemic have posed new challenges to the Partnership’s work in collecting data ICT availability and use. Social distancing and shelter-in-place orders prevent in-person consultations and interviews and international travel. More than ever, the Partnership relies on ICTs and digital applications to carry out its work.

Digital technologies have enabled broader sharing of knowledge, encouraging collaborative research to find solutions and provide transparent guidance to Governments and people amidst the COVID-19 pandemic. Policy makers have been called upon to collect and process COVID-19-related data in an ethical, transparent, safe, interoperable, and secure manner that protects the privacy and data security of individuals.

Moving beyond the COVID-19 crisis, policy makers need to further embrace technology to support the achievement of the SDGs, focusing their efforts on improving data protection and global digital inclusion policies and strengthening the policy and technical capabilities of public institutions.

### **Future directions: Big data and the digital economy**

The growth of ICTs has resulted in a rapid increase of new data sources, including big data sources, from the ICT industry. The measurement of the evolving digital economy is an aspect of ICT statistics that has received increased attention from individual partners as part of their mandates, and this work in turn contributes to knowledge-sharing within the Partnership. New data needs for the information society and digital economy will require countries to strengthen national coordination and include all stakeholders to improve data quality and availability to inform policy.

The Partnership recognizes the potential of big data produced by the evolving digital economy, by technologies such as the Internet of things, cloud computing and artificial intelligence. At the same time, issues of data access and sharing and data protection, privacy and security will have to be addressed, and national statistical systems will need to develop protocols to be able to leverage these new data sources.

### **Conclusion**

The need for more and better official ICT statistics to help to measure progress in implementing the 2030 Agenda has been widely recognized. This is still an area characterized by wide gaps across countries. Countries will need to consider ICT indicators beyond the SDG monitoring framework to adequately assess the impact of ICTs on their sustainable development. The Partnership's thematic list of ICT indicators for the Goals will continue to provide guidance to countries in this regard.

The Partnership will continue to review and update its list of ICT indicators, cooperate in developing new indicators and related methodologies and contribute to the statistical development of countries by offering capacity-building assistance.

## Annex

### Thematic list of information and communications technology indicators for the Sustainable Development Goals

The full, updated thematic list of indicators for measuring information and communications technology indicators is provided in the table below. Each indicator is associated with one or more Sustainable Development Goal targets, which are also indicated. The targets to be reviewed in the 2021 HLPF are highlighted in **blue**.

<i>Proposed Indicator (PI)</i>	<i>Detailed Proposed Indicator</i>	<i>Collected by</i>	<i>Related Sustainable Development Goal targets</i>	<i>Methodology</i>
PI01	Proportion of individuals using the Internet	National statistical office (ICT surveys) – International Telecommunication Union	<b>1.4, 2.3</b> , 4.5, 5.b, <b>8.5</b> , 9.c, <b>12.8</b> , <b>16.10, 17.8</b>	International Telecommunication Union - Households
PI02	Proportion of households with Internet access	National statistical office (ICT surveys) – International Telecommunication Union	<b>1.4</b> , 9.1	International Telecommunication Union - Households
PI03	Proportion of individuals owning a mobile phone	National statistical office (ICT surveys) – International Telecommunication Union	<b>1.4, 2.3, 2.c, 3.8</b> , 5.b, <b>8.5, 8.10</b> , <b>10.c, 16.10</b>	International Telecommunication Union - Households
PI04	Population covered by a mobile broadband network	National statistical office (ICT surveys) – International Telecommunication Union	<b>1.4, 2.3, 2.a, 2.c</b> , <b>8.1, 8.2</b> , 9.1, 9.a, 9.c	International Telecommunication Union - Households
PI05	Internet broadband subscriptions per 100 inhabitants	National statistical office (ICT surveys) – International Telecommunication Union	9.c, <b>17.6</b>	International Telecommunication Union - Households
PI06	Countries having adopted a national e - health record	World Health Organization	<b>3.8</b>	World Health Organization
PI07	Enrolment in basic computer skills and/or computing courses in secondary education	Education ministries – United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics	4.5	UNESCO Institute for Statistics - EDU
PI08	Proportion of graduates in ICT - related fields at post - secondary levels (International Standard Classification of Education levels 5–8)	Education ministries – UNESCO Institute for Statistics	4.5	UNESCO Institute for Statistics - EDU
PI09	Individuals with ICT skills, by type of skill	International Telecommunication Union	4.4, <b>8.2</b>	International Telecommunication Union - Households

PI10	Percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills	UNESCO Institute for Statistics	4.4	UNESCO Institute for Statistics
PI11	Learner - to - computer ratio (International Standard Classification of Education levels 1–3)	Education ministries – UNESCO Institute for Statistics	4.a	UNESCO Institute for Statistics - EDU
PI12	Proportion of educational institutions with computers for pedagogical purposes (International Standard Classification of Education levels 1–3)	Education ministries – UNESCO Institute for Statistics	4.a	UNESCO Institute for Statistics - EDU
PI13	Proportion of educational institutions with Internet for pedagogical purposes (International Standard Classification of Education levels 1–3)	Education ministries – UNESCO Institute for Statistics	4.a	UNESCO Institute for Statistics - EDU
PI14	Internet traffic (in exabytes)	Telecommunications regulators–International Telecommunication Union	<b>8.2</b>	International Telecommunication Union - ICT
PI15	Proportion of individuals using the Internet for Internet banking	National statistical office (ICT surveys) – International Telecommunication Union	<b>1.4, 8.1, 8.3, 8.10, 10.c</b>	International Telecommunication Union - Households
PI16	Businesses using the Internet for Internet banking and for accessing other financial services	United Nations Conference on Trade and Development	<b>8.3</b>	United Nations Conference on Trade and Development
PI17	Educational institutions with Internet (International Standard Classification of Education levels 1–3)	Education ministries – International Telecommunication Union, UNESCO Institute for Statistics	9.1	UNESCO Institute for Statistics - EDU/ International Telecommunication Union - Households
PI18	ICT prices as a percentage of gross national income per capita	Telecommunications regulators – International Telecommunication Union	9.1, 9.c	International Telecommunication Union - ICT

PI19	International Internet bandwidth (bits per second) per Internet user	Telecommunications regulators – International Telecommunication Union	9.5, 9.a	International Telecommunication Union - ICT
PI20	Businesses using the Internet	United Nations Conference on Trade and Development	<b>17.8</b>	United Nations Conference on Trade and Development
PI21	United Nations e - participation index	Department of Economic and Social Affairs	<b>16.6, 16.7, 16.10</b>	Department of Economic and Social Affairs - EPI
PI22	Proportion of e - waste treated in an environmentally sound manner	Organization for Economic Cooperation and Development, Statistics Division of the United Nations/United Nations Environment Programme, United Nations University	<b>12.4, 12.5</b>	EWASTE
PI23	Proportion of businesses receiving orders over the Internet	United Nations Conference on Trade and Development	<b>17.8</b>	United Nations Conference on Trade and Development
PI24	Proportion of businesses placing orders over the Internet	United Nations Conference on Trade and Development	<b>17.8</b>	United Nations Conference on Trade and Development
PI25	Business use of broadband subscriptions	United Nations Conference on Trade and Development	<b>8.2</b>	United Nations Conference on Trade and Development
PI26	International trade in digitally deliverable services as a percentage of total services trade	United Nations Conference on Trade and Development	<b>8.2</b>	United Nations Conference on Trade and Development - ICT