



National Digital Development Reviews in 2021 Guiding Template (Standard Model)



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Economic and Social Commission for Western Asia

National Digital Development Reviews in 2021 Guiding Template (Standard Model)

June 2021



United Nations
Beirut

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United Nations publication issued by ESCWA, United Nations House,
Riad El Solh Square, P.O. Box: 11-8575, Beirut, Lebanon.

Website: www.unescwa.org.

21-00466

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Abbreviations and acronyms

B2B business-to-business

B2C business-to-consumer

B2G business-to-government

CERT computer emergency response team

DESA Department of Economic and Social Affairs

G2B government-to-business

G2C government-to-citizen

G2G government-to-government

GDP gross domestic product

ICANN Internet Corporation for Assigned Names and Numbers

ICT information and communication technology

ICT4D ICT for development

IGO intergovernmental organization

IPv6 Internet Protocol version 6

ISCED International Standard Classification of Education

ISIC International Standard Industrial Classification of All Economic Activities

ISP Internet service provider

IT information technology

ITU International Telecommunication Union

LAN local area network

LTE	long term evolution
MSP	multisector partnership
NGO	non-governmental organization
OSS	open-source software
PCT	Patent Cooperation Treaty
PKI	management of public key infrastructure
PLT	Patent Law Treaty
PPP	public/private partnership
RDI	research, development and innovation
RSS	Really Simple Syndication
SDGs	Sustainable Development Goals
SMEs	small and medium-sized enterprises
SMS	short message service
STEM	science, technology, engineering and mathematics
STI	science, technology and innovation
TRA	telecom regulating authority
TRIPS Agreement	Agreement on Trade-Related Aspects of Intellectual Property Rights
UIS	UNESCO Institute for Statistics
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
URL	Uniform Resource Locator
WCT	World Intellectual Property Organization (WIPO) Copyright Treaty
WiMAX	Worldwide Interoperability for Microwave Access
WIPO	World Intellectual Property Organization
WSIS	World Summit on the Information Society
WTO	World Trade Organization

Introduction

This template is designed to facilitate the work of experts in drafting national digital development reviews of Arab countries participating in the ESCWA Digital Development Project, which is linked to the [2030 Agenda for Sustainable Development](#) and its 17 Sustainable Development Goals (SDGs). Those reviews are expected to reflect the digital reality at the national level, and later at the Arab regional level, guided by the general guidelines issued by the United Nations Secretary-General regarding the new global concept of digital cooperation, “connect, respect and protect”, and by the global [Roadmap for Digital Cooperation](#) launched by the Secretary-General in June 2019.

This template takes into account the observations made by countries participating in the preparation of national digital development reviews for the 2018-2019 cycle. During that period, a pilot template was used, which was designed through a survey of the current state of implementation by member States of the main lines of action for building an information society which were set up in the 2003 World Summit on the Information Society (WSIS) [Geneva Plan of Action](#). The pilot template was thoroughly reviewed during the second half of 2020 in meetings and correspondence with participating States to consider lessons learned, good practices, proposals and recommendations to improve work methodology, procedures and tools for preparing the next national digital development reviews before the launch of the next round of drafting national digital development reviews in

2021. All questions and required information contained in the initial template were reviewed, reformulated and/or repositioned within the updated template, deleting some parts or adding new ones under the five clusters that were established in the 2018 indicative model to effectively reflect the reality of information and communication technology (ICT) and relevant achievements in the Arab countries.

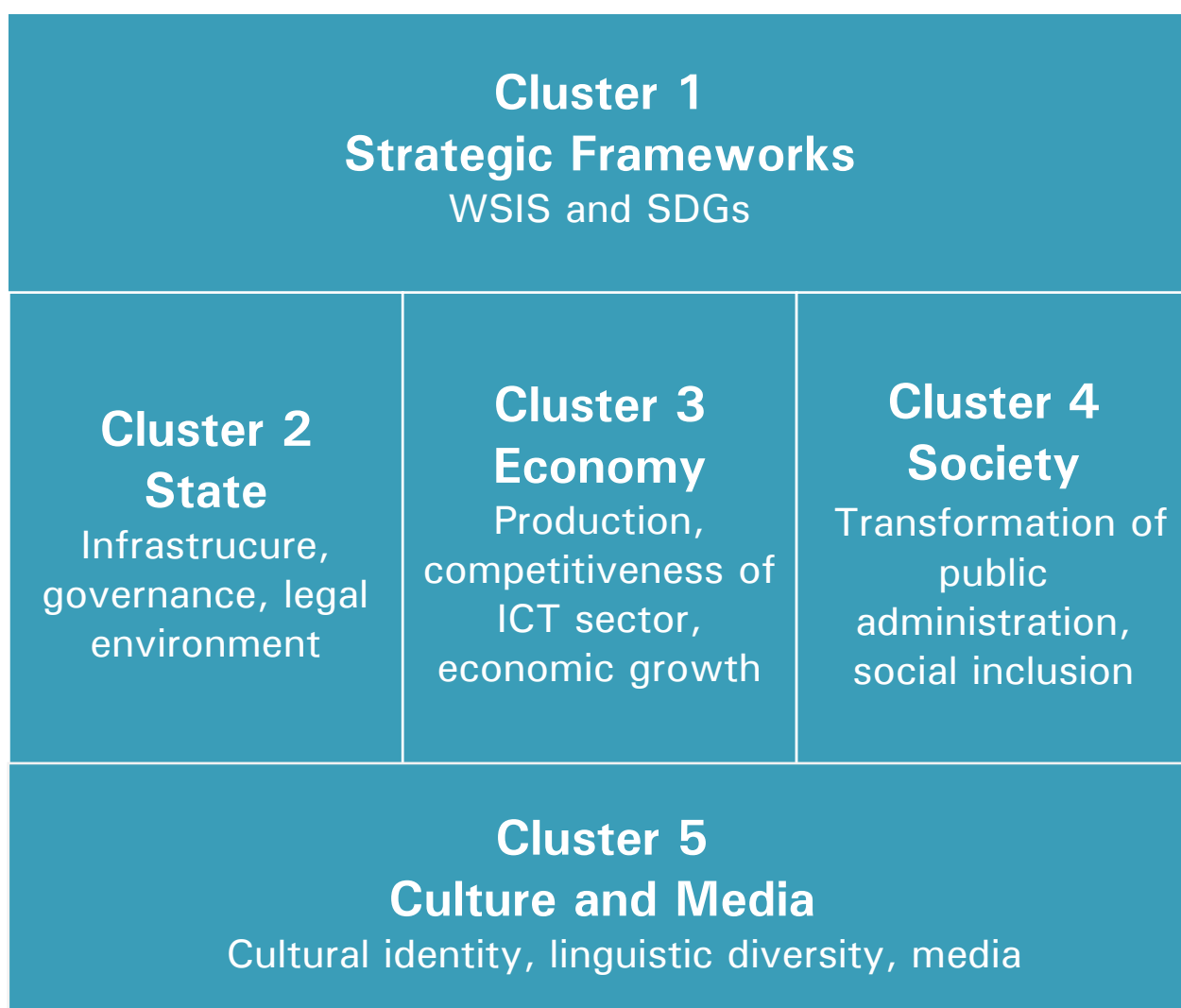
Following the production of the updated template at the start of 2021, the United Nations bodies partnering with ESCWA, namely the International Telecommunication Union (ITU), United Nations Conference on Trade and Development (UNCTAD), Department of Economic and Social Affairs (DESA) and United Nations Educational, Scientific and Cultural Organization (UNESCO) were invited to review the updated template and propose adjustments to enrich it. This additional exercise was extremely useful and was concluded in the beginning of the second quarter of 2021. The resulting version of the template will be used in the upcoming second round of preparation of national digital development reviews, in the ongoing and upcoming first round of preparation of national digital development agendas in a number of countries, and in the ongoing development of the Arab Digital Agenda.

The information required in this template relates to the last two years, namely mid-2019 to mid-2021, unless national experts deem it necessary and important to discuss and analyse some of the older information. On the other hand, it is possible to skip questions for which the relevant

information is not available and mention that it is not available for the required period.

The main objective of this work is to exchange experiences and comparatively shed light on the

changes in policies through initiatives and programmes introduced in the Arab countries in the field of digital technologies, in an effort to achieve the goals of the 2030 Agenda for Sustainable Development.



1. Cluster 1: National, Regional and International Strategic Frameworks

A. National digital strategies: role of government and stakeholders in promoting ICT for development (C1)¹

Effective cooperation and partnerships between governments and all stakeholders are vital in developing the information society. It is therefore essential to design proper policies and strategies to mobilize the largest number of stakeholders from across the public and private sectors and to disseminate the opportunities created by the information society.

In this section you are required to fill out the following table and give information on the national comprehensive digital strategy and policy (if any), and the sectoral strategies and/or plans. For each sectoral strategy/plan, include its mission, vision, year adopted/planned and status, with an evaluation of its implementation thus far. Also, for the major sectors, list sectoral plans for building the information society or digital economy towards achieving SDGs, including but not limited to government, education, industry, commerce and health and describe progress towards the fulfilment of national policies and strategies including relevant accomplishments.

National level: A comprehensive national digital strategy exists (like Digital Nation, Smart Nation, Digital Economy, e-commerce, etc.)	(yes or no)
Name of the strategy	
Year of adoption and latest update	
Government agency in charge	Name in English: Name in Arabic:
Pace of implementation	(Excellent/Good/Average/Limited)
Description of progress made (maximum 150 words)	

¹ C1 refers to one of the 11 Action Lines (C1 to C11) listed in the World Summit on the Information Society (WSIS) [Geneva Plan of Action](#), which was adopted in 2003.

Sectoral level: ICT sector strategy/plan exists	(yes or no)
Name of the strategy/plan	
Year of adoption and latest update	
Government agency in charge	Name in English: Name in Arabic:
Pace of implementation	(Excellent/Good/Average/Limited)
Description of progress made (maximum 150 words)	
Other sectors: Digital transformation strategies/plans exist (digital learning, digital health, etc.) (Repeat the 5 rows below for each strategy/plan as required)	(yes or no)
Name of the strategy/plan	
Year of adoption and latest update	
Government agency in charge	Name in English: Name in Arabic:
Pace of implementation	(Excellent/Good/Average/Limited)
Description of progress made (maximum 150 words)	

B. National engagement in regional and international cooperation initiatives (C11)

The successful implementation of the information society requires cooperation at the national level between the public and private sectors in addition to the civil society (non-governmental organizations). It also requires

cooperation at the regional and international levels, among all stakeholders, especially in financing and implementing digital development and in the establishment of related action plans.

1. Follow-up to the World Summit on the Information Society (WSIS)²

In this regard, you are required to:

² <https://www.itu.int/en/itu-wsis/Pages/default.aspx>.

- Determine if there are official national action plans, with regional cooperation components, to support the fulfilment of the goals indicated in the WSIS [Geneva Declaration of Principles](#) (2003) and [Tunis Agenda for the Information Society](#) (2005), or the [Outcome document of the high-level meeting of the General Assembly on the overall review of the implementation of the outcomes of the World Summit on the Information Society](#) (New York, 15-16 December 2015). If so, provide details about these plans and what they have achieved or will achieve.
 - Determine the indicators and statistical data on the information society that the central statistical organization in your country issues periodically to measure the ICT performance in the achievement of SDGs, and to analyse the ITC's main dimensions.
 - Identify a regional project for building the information society or digital economy with national components being implemented in your country. Give an outline of the project and show the extent of progress made.
 - Indicate a project that helps bridge the digital divide at the national level by achieving SDGs. Give an overview of the project and show the extent of progress made.
 - Identify a WSIS success story available online in a concise and compelling format in order to exchange knowledge through experiences and good practices on policies and tools designed to promote the information society at regional and subregional levels.
- ## 2. Global Roadmap on Digital Cooperation
- In this regard, you are required to:
- Identify related efforts/activities through which participation or engagement took place during the last two years in policy advocacy, consultations or contributions to national, regional and/or global tracks pertaining to the [Global Roadmap on Digital Cooperation](#) which was launched by the United Nations Secretary-General in 2019.
- ## 3. Other related frameworks
- In this regard, you are required to:
- Identify other frameworks or initiatives for cooperation at the regional or international levels, if any, that your country is actively engaged in and has relevant national plans/activities, whether related to United Nations bodies or other bodies.

2. Cluster 2: Infrastructure, Governance and Legal Environment Policy Areas

A. ICT infrastructure (C2)

Infrastructure is central in achieving the goal of digital inclusion, enabling universal, sustainable, ubiquitous and affordable access to ICTs by all. This cluster considers relevant services already in place in developing countries and in countries with economies in transition, to provide sustainable connectivity and access to remote and marginalized areas at national and regional levels.

1. Market structure and regulatory landscape

In this regard, you are required to:

- Provide a summary of the telecom structure market (mobile and Internet services).
- Fill the following table:

Telecom service	Status of regulatory landscape	List main awarded telecom licenses
Mobile services	(competitive, monopoly or duopoly)	
Internet services	(competitive, monopoly or duopoly)	

2. ICT infrastructure by service type

In this regard, you are required to:

- Determine the availability of the following services: mobile phone services and Internet

services including fixed and mobile broadband, fiber-to-the-home (FTTH) and Next-Gen Wireless.

- List in-service Internet service providers (ISPs).
- List in-service mobile phone networks and penetration.
- Fill the following table (obtaining data from a trusted source such as ITU):

Indicator	Value	Latest year
Mobile phone penetration (subscriptions)		
Percentage of households with Internet access		
International Internet bandwidth (bit/s) per Internet user		
Percentage of the population covered by mobile networks: <ul style="list-style-type: none"> • At least 3G • At least LTE/WiMAX 		
Fixed-broadband subscriptions by speed tiers as a percentage of total fixed-broadband subscriptions: <ul style="list-style-type: none"> • 256 Kbit/s to 2 Mbit/s • 2 to 10 Mbit/s • 10 Mbit/s or more 		

3. ICT connectivity

Digital inclusion consists of enabling universal, sustainable, and ubiquitous access to ICTs by all, namely: households; businesses; government institutions; schools; universities; health institutions; libraries; post offices; museums; community centres; and other institutions accessible to the public.

In this regard, you are required to:

- List main initiatives (public/private/non-governmental organizations-NGOs) geared towards providing universal access to ICTs.

4. Internet architecture

In this regard, you are required to:

- Describe the current national Internet landscape, including:
 - Backbone and broadband network infrastructure.
 - Availability of WiFi hotspots, WiMAX services and 3G/4G mobile networks.
 - Fibre optics network, Internet submarine cables.
 - National and regional Internet exchange centres, and regional root servers.
 - Adoption of the Internet Protocol version 6 (IPv6).

5. Domain name management and adoption

In this regard, you are required to:

- Fill the following table:

Name of country code top-level domain (ccTLD) registrar	<i>Name in English:</i> <i>Name in Arabic:</i>			
URL of registrar	(http://)			
Total number of ccTLDs registered in the country (Arabic and English) for the years 2019, 2020 and 2021		2019	2020	2021
	Arabic			
	English			

B. Governance (C1 and C11)

1. Public/private partnership, multisector partnership and role of non-governmental organizations

In this regard, you are required to:

- State if there is a structured dialogue involving all relevant stakeholders, in devising sustainable digital strategies for

the information society and for the exchange of good practices. If so, give an overview of this dialogue.

- Identify mechanisms, if any, at the national level, for the initiation and promotion of partnerships among stakeholders of the information society.
- State the presence or establishment of at least one functioning public/private partnership (PPP) or multisector partnership (MSP).

- Describe the NGOs' engagement in concrete projects to develop the information society.

2. Participation in Internet governance activities

In this regard, you are required to:

- State if there is any structured dialogue involving all relevant stakeholders, in the field of Internet governance and give an overview of this dialogue.
- Identify mechanisms, at the national level, for the initiation and promotion of a national Internet governance forum.
- State if your country is involved in the Arab Internet Governance Forum process.
- State if your country is involved in the Global Internet Governance Forum process.
- State if your country is involved in the policymaking and public consultations of the Internet Corporation for Assigned Names and Numbers (ICANN).

C. Legal environment, ethics and trust (C2, C5, C6 and C10)

The provision of an enabling environment is crucial to the mobilization of resources and the creation of a climate conducive to ICT

acquisition and dissemination. A trustworthy, transparent and non-discriminatory legal, regulatory and policy environment constitutes an essential basis for cooperation between public and private sectors and all community components. With the increasing sensitivity and value of digital information, there is an increasing need to ensure its security and protect its privacy. This area tackles specific requirements regarding security and privacy, protection of personal data and confidentiality of information.

1. Legal and regulatory environment

In this regard, you are required to:

- Indicate the existence of a supportive, transparent, and pro-competitive, legal and regulatory framework, providing the appropriate incentives to investment and community development in the information society, including:
 - Intellectual property rights.
 - Telecom and Internet legislations and regulations (like updated telecom laws, cyberspace laws, etc.).
 - Cyberlegislation, especially for e-signature, e-transactions, e-commerce and e-payment.
- Fill the following tables:

International treaties and conventions on intellectual property	Adopted	Observer status	Year of adoption
World Trade Organization (WTO)	(yes/no)		
Paris Convention on the Protection of Industrial Property	(yes/no)		
Patent Cooperation Treaty (PCT)	(yes/no)		
World Intellectual Property Organization (WIPO) Copyright Treaty (WCT)	(yes/no)		

International treaties and conventions on intellectual property	Adopted	Observer status	Year of adoption
Madrid Agreement Concerning the International Registration of Marks	(yes/no)		
Hague Agreement Concerning the International Registration of Industrial Designs	(yes/no)		
Patent Law Treaty (PLT)	(yes/no)		
Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement)	(yes/no)		
Other related treaties/conventions (specify):	(yes/no)		

Cyberlaws	Available?	Law number	Year passed
e-transactions law	(yes/no)		
e-signature law	(yes/no)		
e-payment law	(yes/no)		
e-commerce law	(yes/no)		
Law for the management of public key infrastructure (PKI)	(yes/no)		

2. Open data and open access to information

In this regard, you are required to:

- List the laws addressing open data and/or open access to information (law number, year passed, reference URL).
- List policies, initiatives or guidelines related to open data and/or open access to information.
- Describe ways adopted to achieve user education and awareness about open data and open access to information.

3. Data privacy and data protection

In this regard, you are required to:

- List the laws addressing privacy and data protection (law number, year passed, reference URL).
- List policies, initiatives or guidelines on the respect of privacy and data protection.
- Describe ways adopted to achieve user education and awareness about online privacy and privacy protection.

4. Countering ICT misuse and preventing ICT abuse

In this regard, you are required to:

- List the laws addressing cybercrime (law number, year passed, reference URL).
- Identify initiatives launched for the prevention, detection and prosecution of cybercrime and ICT misuse.
- Describe the efforts exerted to fight spam at national and international levels.
- Identify the measures adopted for the prevention and detection of abusive ICT uses.

5. Use of electronic transactions and documents

In this regard, you are required to:

- Indicate if electronic documents and transactions are used including electronic means of certification and authentication (e.g. e-signature).

6. Online and network security

In this regard, you are required to:

- State if there is a national security strategy or action plan addressing issues related to protecting the government's critical resources and network (indicate whether such strategy is set up and applied and summarize its components, etc.).
- State if there is a national computer emergency response team (CERT) (indicate its name in English and Arabic, its activity, number of incidents recorded, etc.).
- Identify national awareness plans or initiatives taken in emergency situations related to Internet and information security.
- State if there are secure and reliable applications facilitating online transactions.
- Name cybersecurity measures taken to ensure online transactions are secure.
- Describe good national practices in the field of information security and network security.

3. Cluster 3: Digital Economy, Employment and Trade Policy Areas³

A. Digital economy and the ICT sector (C12)⁴

The digital economy is an economy based on an ecosystem (economic, social and cultural environment) that is centred around a strongly built ICT sector, and driven especially by the growing importance of digital data and digital platforms.⁵ Harnessing the digital economy requires public-private cooperation, in addition to the availability of many factors including investments and finance facilities, industry structure, and research, development and innovation (RDI) capacities. The ecosystem normally includes multiple ministries, authorities and commissions, thus strengthening supply chains and empowering businesses, while protecting end users/consumers. This whole ecosystem can result in economic contribution to the gross domestic product (GDP), job creation, increased export and other economic-oriented value creation.

1. Government institutions shaping the ICT sector

Governments differ in their institutional structures that govern the digital economy, including the ICT sector. In some countries, the ICT sector is governed through a ministry of ICT; in others, through a ministry of telecom and digital economy; while in certain countries two or three ministries deal with ICT, whereby telecom falls under one ministry, information technology (IT) under another and digital economy under a third ministry.

Telecom regulators, also called telecom regulating authorities (TRAs), and IT services authorities are governmental entities that issue secondary legislations that complement existing laws to organize competition in liberalized telecom services markets, or to advance the development and use of other ICT applications and services.

³ Some sections in this chapter (including related tables in the annex) may require coordination with the Ministry of Economy and/or economic development agencies.

⁴ The WSIS [Geneva Plan of Action](#) (2003), which consisted of 11 Action Lines (C1 to C11), did not include specific Action Lines for the ICT sector, as it was considered a well-established sector in the developed countries and there was no need to follow up on its progress. Regarding the ESCWA/Arab region, and while growing at a healthy pace during the last decade, the ICT sector as a stand-alone economic sector remains underdeveloped. Both the public and private sectors are acting as consumers of technologies rather than producers and innovators. In this context, and in order to depict the progress made by different actors in building the ICT sector and to measure its contribution to national economies, ESCWA added Action Line C12 and Action Line C12+, related to the ICT sector.

⁵ Information on all aspects of digital economy is provided in the [Digital Economy Report 2019: Value Creation and Capture-Implications for Developing Countries](#), published by the United Nations Conference on Trade and Development (UNCTAD).

Almost all countries have established telecom regulators, with some being also in charge of postal and media communication sectors. The extension of this concept to other IT services does not have a unique worldwide model; some countries have an IT commission or authority; others have an IT industrial development agency; while others provide e-government services under TRAs.

In this regard, you are required to:

- Provide a list of ICT regulators (authorities or commissions) in your country and their respective mandates, highlighting achievements/successes and challenges.
- Provide the name(s) of ministry(ies) involved in governing the digital economy and their respective mandates.

2. Actors of the ICT sector

The productive side of the ICT sector comprises industries/firms that produce ICT goods (including hardware, telecom and software) and provide services, solutions, applications, digital content and technical training.

In this regard, you are required to:

- Indicate how the above set of businesses are classified in your country, from the point of view of statistical offices and from the point of view of the Ministry of Economy.
- Provide a set of tables for the main ICT companies, which include the economic and demographic characteristics of those companies, the most important of which are:
 - Employment category: large, medium, small and micro.
 - Economic activity and business volume.

- Company classification: producing ICT equipment/software, using ICT in its business, selling and installing equipment and software, etc.
- Nature of the company: telecommunications/networks, including mobile phone companies; software, including development of tools and applications for laptops and mobile phones; content, including the development of digital content for computers, mobile phones or tablets.
- Company ownership: private, public, participatory; foreign, local, joint.
- Also provide, if possible, statistical data or information on the following:
 - Composition of the workforce in ICT companies in terms of gender balance (among workers and in leadership) and proportion of persons with disabilities among workers.
 - Existence of a government policy to encourage women to apply for employment in ICT companies, facilitating gender balance at all levels.
 - Most important successes these companies achieved and obstacles they faced in their establishment and launch.

3. Research, development, innovation and standardization to promote the ICT industry

A mature digital economy cannot excel without efforts to promote the ICT industry at large with a focus on science, technology and innovation (STI); research, development and innovation (RDI); and standardization.

In this regard, you are required to:

- State whether there is a strategy and/or policy related to research, development

and/or innovation in the ICT sector and indicate whether it is gender sensitive.

- Describe the status of research and development in the field of ICT, in terms of available equipment, tools and services.
- Identify the government support for research and development programmes in areas such as:
 - Machine translation tools development.
 - Multilingual search engines and content referencing.
 - Data-driven innovations and applications.
 - Data-oriented science and related business (e.g. open data on weather, traffic, refugees).
 - Deployment and use of open-source software (OSS).
 - ICT-based support for persons with disabilities.
- Identify the existence of public and/or private initiatives for the strengthening of innovation in the ICT sector (e.g. research and development centres of large companies).
- Highlight the level of development, use and promotion of open, interoperable, non-discriminatory and demand-driven standards.
- Indicate the level of awareness and adoption of international interoperability standards (e.g. for global e-commerce).
- Indicate the level of awareness of access requirements for persons with disabilities.

4. Government facilitation for entrepreneurship and investment in the ICT sector

This section focuses on governments and stakeholders' measures to strengthen the ICT sector and to increase competitiveness, particularly as related to entrepreneurship and investment.

About entrepreneurship:

- Indicate government measures, initiatives and activities to promote entrepreneurship, innovation and incubator schemes, providing information on women entrepreneurs.
- Provide information on government assistance to ICT-based small and medium-sized enterprises (SMEs), firms, start-ups and entrepreneurial initiatives increasing their competitiveness through the following:
 - Streamlining administrative procedures.
 - Facilitating access to capital.
 - Enhancing capacity to participate in ICT-related projects.
- Describe measures related to the support of ICT exports (see details on Trade in ICT goods and services in the next section).

About investment:

- Describe measures to attract major private national and foreign direct investments, providing information on government investment funds including their target areas, and their concern for gender equality.
- List the contributions of international financial organizations to the creation of a transparent, stable and predictable investment environment in the ICT sector.
- Indicate national strategies, policies and incentives related to the promotion of investments in the ICT sector.
- Highlight the legal framework for investments in the ICT sector, including incentives.
- Provide information on the availability of venture capital investments and agencies for building the ICT sector, and the availability of ICT competitiveness indicators.

- Describe one or two success stories in any of the above domains of entrepreneurship and investment.
- Describe major obstacles to widespread of entrepreneurship and investment in various categories of ICT companies.

B. Economic impact of the ICT sector (C12++)⁶

1. Contribution of the ICT sector to the national economy

In this regard, you are required to:

- Fill [table 1](#) (Core indicators on the ICT producing sector) and [table 2](#) (Core indicators on international trade in ICT goods and services) in the annex.
- Indicate the contribution of the value added of the ICT sector to the GDP in your country.
- Provide illustrations on selected determinants of ICT contribution to growth in your country such as (education, manufacturing, automation, cost of ICT, investments institutional quality, income levels, etc.), if possible.

2. Trade in ICT goods and services⁷

In this regard, you are required to:

- Provide information on how the government in your country has instigated an enabling environment that supports and facilitates trade (particularly export) of ICT goods and services. The enabling

environment may include incentive programmes, such as tax reduction, regulatory mechanisms, standards or measurement framework with national targets, financing support/financing instruments.

- Determine the ratio of sales (export) of ICT goods (computer equipment, communications equipment, software) and services, to all countries, to total exports of all goods and services.
- Determine the ratio of purchases (import) of ICT goods (computer equipment, telecommunications equipment, software) and services, from all countries, to total imports of all goods and services.

3. Digital trade

Digital trade relates to goods and services ordered online (e-commerce) and services delivered digitally (ICT-enabled services), according to the Handbook on Measuring Digital Trade.⁸ Hence, this section relates to ICT-enabled trade (e-trade) including e-commerce, e-fulfilment (delivery/courier/post) and e-payments. Government support and facilitation is crucial in creating an enabling environment for digital trade or e-business. The enabling environment for e-business may include incentive programmes, such as tax reduction, regulatory mechanisms, standards or measurement framework.

In this regard, you are required to:

- List key regulations, facilitation, standards or measurement frameworks instigated by

⁶ See footnote 8.

⁷ UNCTAD presents data and figures on trade in ICT goods and services at the national, regional and international levels through the link: <https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=15850>.

⁸ Organisation for Economic Co-operation and Development, World Trade Organization and International Monetary Fund, 2020. [Handbook on Measuring Digital Trade](#), Version 1.

your government to boost digital trade, e-commerce and e-payment.

- Highlight availability of main e-commerce platforms or gateways created and/or used in your country.
- Provide data on the availability of digital trade, e-business, e-commerce, e-fulfilment, online banking and e-payments services in your country, and to which extent these services are mature and applications are classified as B2G (business-to-government), B2B (business-to-business), or B2C (business-to-consumer).
- Provide data on the use of digital trade, e-business, e-commerce, e-fulfilment,

online banking and e-payment services in your country, disaggregated by gender (such as the percentage of women using these digital trade-related services), if available.

- Provide one success story, or more, of e-commerce in your country that illustrates its importance and need.
- Identify the main obstacles in your country that prevent the widespread adoption of national e-commerce on the one hand and of cross-border e-commerce on the other.
- Indicate the extent of accessibility to these services for persons with disabilities.
- Fill the following table:

Law/service	Available?	Law number	Year passed
e-banking law	(yes/no)		
e-commerce law	(yes/no)		
e-payment law	(yes/no)		
Other e-services laws	(yes/no)		

4. Employment in the ICT sector

This section deals with employment in the ICT sector, and employment created in ICT occupations in other sectors. The next section deals with employment and work using the Internet (job matching).

It is usually debated that ICT can be used to increase production efficiency and lower production cost of goods and services. This, however, reduces employment (since employment is considered the highest cost of production). At the same time, it is debated that ICT can be used to create new services or products and even create new jobs that may exceed those lost due to the use of ICT. Therefore, by not

investing in ICT resources and skills, firms may not be able to compete in the digital economy and ultimately would go out of business, which will have significant effects on employment.

In this regard, you are required to:

- Illustrate the impact of ICT on faster employment growth in your country, through creating jobs in the ICT sector or creating ICT occupations in other sectors, with examples if possible.
- Illustrate ICT contribution to job creation for youth in your country, highlighting the magnitude of ICT job creation for males and females (through case studies, initiatives, projects, etc.).

- Indicate incentives encouraging employment in the ICT sector or creating ICT occupations in other sectors.
- Indicate hurdles preventing employment in the ICT sector, including brain drain of ICT experts.
- Highlight the availability of data, periodic reports, or research studies prepared by the authorities concerned with employment and work, on measuring or evaluating the net number of job opportunities created as a result of ICTs, whether in the ICT sector itself or in other sectors, disaggregated by gender, if available.
- Determine, in case those data, reports or studies were not available, if there is any methodology, approach or criteria – whether adopted or being developed – regarding this type of measurement or evaluation. If so, provide details on such measurement approach or evaluation criteria.

5. Employment through the Internet

The previous section dealt with employment in the ICT sector, and employment created in ICT occupations in other sectors. This section deals with employment and work using the Internet (job matching).

In this regard, you are required to:

- Highlight availability of employment portals and national databases of online résumés.
- Highlight the magnitude of ICT use (such as Internet, short message service (SMS) broadcast, announcements via social and professional networks) to locate employment opportunities.
- Highlight any public or private initiatives which support “teleworking”, in your country, allowing citizens to live within their societies and work anywhere, increasing employment opportunities especially for women and persons with disabilities, including data from these initiatives that indicate the use of teleworking by both men and women.
- Provide data related to such initiatives if they exist, to see if the percentage of women making use of teleworking is higher or equal to that of men, and conduct related analysis.
- Provide a success story from your country related to e-employment and teleworking lessons learned.
- Indicate major hurdles limiting the use of e-employment.

4. Cluster 4: Digital Transformation and Social Inclusion Policy Areas⁹

A. Inclusive and empowering access to information, knowledge, applications and content (C3)

ICT allows people, anywhere in the world, to access information, knowledge and content almost instantaneously, and so, empowers individuals, communities, and society at large.

This area aims to promote and increase access to relevant public domain information, knowledge, applications and content.

Action line C3, as described in the WSIS [Geneva Plan of Action](#) (2003), entails (a) access to public official information, (b) access to scientific knowledge, (c) digital public libraries and archives, (d) ICTs for all initiatives, (e) open source and free software and (f) public access to information.

1. Inclusiveness (access): availability, development, affordability and adaptability

Target Groups: Individuals at large (citizens, migrants, displaced, etc.), children (especially marginalized children), women (especially marginalized women), youth (especially marginalized youth), elderly (especially marginalized elderly), persons with disabilities and other disadvantaged and vulnerable groups.

In this regard, you are required to:

- Indicate, for each of the above target groups, the relevance and meaningfulness of “access” according to the following three aspects:
 - (a) Availability and affordability:** Identify available digital-based information/knowledge platforms, including their gender considerations (accessibility to these platforms for women), such as: journals, books, digital public libraries, scientific archives, applications, content, and services that are free or made affordable through certain government regulations¹⁰ or community-based programmes;
 - (b) Development and adaptability:** Indicate if the above available digital-based information/knowledge platforms are adapted to the specific target groups, including persons with disabilities, or there are plans to adapt them such as localization, customization, periodical update and upgrade;
 - (c) Means of access – availability of adequate access through various channels:** Availability of sustainable and affordable or free-of-charge access through multi-purpose

⁹ Some sections in this chapter may require coordination with the Ministry of Social Affairs and/or social development agencies.

¹⁰ Governments can issue regulations that make access free or cheaper for specific population groups.

community public access points to the Internet; and more importantly plans to upgrade them, including scheduling access for women and girls.

- Identify initiatives to provide free-of-charge access to the Internet in metropolitan-wide public areas.
- Identify help services and assistance provided to users in such places as libraries, educational institutions, public administrations, post offices or other public places, with emphasis on rural and underserved areas.
- Indicate major obstacles to wide-scale digital-based inclusiveness of the above-mentioned target groups.
- Indicate if there are special provisions for the access of persons with disabilities (e.g. sign language, text-to-speech, etc.).

2. Empowerment (use): educational, entertainment, political engagement and economic returns

Target Groups: Individuals at large (citizens, migrants, displaced, etc.) and marginalized and/or vulnerable groups, including children, women, youth, elderly, persons with disabilities and other disadvantaged groups.

In this regard, you are required to:

- Indicate, for each of the above-mentioned target groups, the purpose and utility of usage, and the role of stakeholders according to the following:
 - (a) **Purpose of usage:** Indicate the main purpose of usage by the specific target group for the following types of engagement,

while providing sex-disaggregated data to reflect on the trend of engagements, and capture potential impact of ICTs on participation of women in the political and economic activities:

- **Social engagement:** using ICTs as a tool by citizens to improve their social engagement and living conditions (literacy, education, recreation, transport, dwelling, health, nutrition, insurance, safety).
- **Economic engagement:** using ICTs as a tool by citizens to improve their engagement in economic activities (SME ownership, transactions, e-commerce, full-time jobs, part-time jobs, work-from-home, freelancing, etc.).
- **Political engagement:** using ICTs as a tool by citizens to improve their participation in local governance (e-services, e-voting, e-participation, etc.) and the country's ranking according to the indicators of electronic services and electronic participation.

(b) **Role of stakeholders:** indicate the main role and motivation of local authorities or community empowerment groups in promoting the above-mentioned purposes of usage, including management of related networks.

- Indicate, for each of the above-mentioned target groups, the major hurdles obstructing their wide-scale digital-based empowerment.

B. Capacity-building on ICT4D/digital development (C4)¹¹

Everyone should have the necessary skills to benefit fully from the information society; therefore, capacity-building in ICT for development (ICT4D) is essential. ICT can contribute to:

- Achieving universal education worldwide, through education and training of teachers, particularly vocational and tertiary education in science, technology, engineering and mathematics (STEM).
- Offering improved conditions for lifelong learning, which consider the needs of both men and women, and enable people who are outside the formal education process to improve their professional skills.
- Facilitating social life engagement, political participation and social cohesion.

Targeted training programmes

In this regard, you are required to:

- Highlight and evaluate national targeted education or training programmes (designed by intergovernmental organizations-IGOs, public sector, private sector, and/or NGOs) providing opportunities of full participation in the information society for the following groups:

- Civil servants.¹²
- Women.
- Youth.
- Persons with disabilities.
- Elderly.
- Indicate, for each of the above-mentioned groups, the major hurdles obstructing the wide-scale capacity-building on ICT4D.

C. ICT applications

1. E-government (C7)¹³

ICT thematic applications can support sustainable development in the fields of public administration, business, education and training, health, and employment, within the framework of national e-strategies. The ICT applications could be back-office applications, web-based or mobile applications.

In this regard, you are required to:

- Indicate the use and adoption of ICT in public administration in terms of:
 - Computerizing public administration.
 - Computerizing customs processing.
 - Computerizing taxation and revenues management systems.
 - Digitizing information.
 - ICTs in the environmental sector.
 - ICTs in the transport sector.
 - Engaging with all citizens.

¹¹ This section (including related tables in the annex) requires coordination with the Ministry of Education and Higher Education.

¹² ESCWA continues to assess the progress in implementing its project Academy of Information and Communications Technology Essentials for Government Leaders in the ESCWA Region (AIGLE), and other initiatives aiming at building the capacity of government civil servants.

¹³ This section (including related tables in the annex) requires coordination with the authority in charge of the e-government project and with the Presidency of the Council of Ministers.

- Provide information on the availability of e-government services including:
 - G2G (government-to-government) interaction between local and central governments.
 - G2C (government-to-citizen) delivery models and government portals.
 - G2B (government-to-business) interaction between local and central government and the commercial business sector.
- Provide information on accessibility of these applications and services for persons with disabilities.
- Fill the following table:

Authority in charge of ICT in public administrations	English Name: Arabic Name: URL:
E-government authority	English Name: Arabic Name: URL:
Number of implemented government e-services	
Number of planned government e-services	

- Indicate availability, adoption and use of e-procurement applications.
- Fill the following table by indicating available services on the e-government portal:

URL of e-government portal: (http://)		
Information	General	(yes/no)
	Laws	(yes/no)
	Directories	(yes/no)
Services	Static info	(yes/no)
	Downloadable forms	(yes/no)
	Interactive	(yes/no)
E-payment		(yes/no)
Online account		(yes/no)
Multilingual		Ar/En/Fr or other
Citizen participation	Blogs	(yes/no)
	Polls	(yes/no)
Social media	Facebook	(yes/no)

	Twitter	(yes/no)
	LinkedIn	(yes/no)
	YouTube	(yes/no)
	WhatsApp	(yes/no)
Additional services	Really Simple Syndication (RSS)	(yes/no)
	Web statistics	(yes/no)
	Search	(yes/no)
Mobile version	Support for smartphone/tablet	(yes/no)
	Dedicated App (iOS or Android based)	(yes/no)
Other features	(indicate)	

- Also fill [table 4](#) (Core indicators on ICT in government) in the annex.

2. E-learning/e-education (C4/C7)

In this regard, you are required to:

- Fill [table 3](#) (Core indicators on ICT in education) in the annex. Those indicators take into consideration the ICT availability in education for, and participation of both men and women, using gender sensitive content and sex disaggregated data.
- Provide a narrative highlighting effort exerted to integrate ICT in education and training in various areas (including curriculum development, teacher training, institutional administration and management) and at all levels (including school, university, etc.) as follows:

(a) Basic literacy

- Use of ICTs as a tool for basic literacy in your country.

(b) Primary and secondary education

- Use of e-learning systems and applications at all school levels.

- Availability of virtual schools including accreditation and accessibility of persons with disabilities.
- Availability/penetration of Internet connectivity in schools in addition to free and open educational portals.
- Availability of distance learning to help students develop self-learning and self-development capacities.
- Availability of distance training as part of capacity-building programmes.

(c) Higher education

- Availability of e-learning systems and applications (management information systems, student information systems, etc...) in universities.
- Availability of virtual universities including their accreditation.
- Availability of local e-content libraries in universities.
- Extent to which universities are connected to global digital

libraries via the Internet and making them available to their students and professors (which is a major requirement for scientific research).

- Availability and accreditation of online learning programmes/distance learning degrees.
- Availability and accessibility of all mentioned services for persons with disabilities.
- Training provided as part of capacity-building programmes, helping students to develop self-learning and self-development capacities.

(d) Training and other forms of education

- Existence of local ICT training centres with the cooperation of all stakeholders, taking advantage of existing facilities such as libraries, multipurpose community centres, and public access points.
- Extent of accessibility for persons with disabilities.
- National programmes supervised by the government for capacity-building of women in ICT.
- Availability of distance learning and training as part of capacity-building programmes, helping users to develop self-learning and self-development capacities.
- Major hurdles obstructing the wide-scale use of ICTs in education and training (including e-learning), with sex disaggregated data and gender sensitive analysis on each.

3. E-health (C7)¹⁴

In this regard, you are required to:

- Identify the availability and access to the world's medical knowledge and locally relevant content resources needed for better addressing public health issues, women's and men's health, and such diseases as HIV/AIDS, malaria, tuberculosis and corona (COVID-19).
- Identify national programmes that address and promote sexual and reproductive health for both men and women and raise awareness of the society in this regard.
- Determine the approved national programmes to combat epidemics, including malaria and corona.
- Indicate the use of telemedicine and medical teleconferencing for underserved areas and vulnerable populations.
- Describe the maturity and implementation of the following health care information systems:
 - Patient care management.
 - Digital record keeping.
 - Pharmaceutical management.
 - Databases for national healthcare.
- Indicate if ICT-based information systems are used to alert, monitor and control the spread of communicable diseases and to provide medical and humanitarian assistance in disasters and emergencies.
- Report a success story related to wide-scale digital-based health programmes implemented nationally.
- Indicate major hurdles obstructing the use of digital-based health programmes at the national level.

¹⁴ This section requires coordination with the Ministry of Health.

5. Cluster 5: Culture and Media Policy Areas

A. Cultural identity and linguistic diversity (C8)¹⁵

Safeguarding cultural and linguistic diversity, while stimulating respect for cultural identity, traditions and religions, is essential to the development of the information society. Digital content, particularly on the Internet, preserves the language, facilitates its evolution and promotes cultural diversity while sustaining socioeconomic development. In addition, digital content development can play a major role in preserving the national heritage.

Use of ICT in support of cultural and linguistic diversity

In this regard, you are required to:

- Indicate the use of ICT in your country for the preservation of linguistic diversity and cultural heritage, keeping it accessible as a living part of today's culture. This includes the availability and development of systems aimed at ensuring continued access to archived digital information and multimedia content in digital repositories, and supporting archives, cultural collections, museums and national libraries as the memory of humankind.

- Highlight the development of national digital archives and digitization of public, educational, scientific and cultural heritage information.
- Use of social networking and social media/websites and their role in preserving the cultural identity of individuals, populations and cultural groups and enhancing the linguistic diversity of the country.

B. Media (C9)¹⁶

The media sector and its various and diverse forms are part of the digital world that encompasses all sectors of the economy. The media systems have an essential role in the development of the information society and are recognized as an important contributor to press freedom and plurality of information.

1. Media diversity, independence and pluralism

In this regard, you are required to:

- Indicate if there is diversity of media and media ownership in your country.
- Fill the table below, indicating the number of media outlets in each category:

¹⁵ This section may require coordination with the Ministry of Culture.

¹⁶ This section may require coordination with the Ministry of Information.

Media outlets	Language(s)	Ownership			
		Private	Mixed	Government	Foreign
Newspapers					
Electronic newspapers					
Magazines					
News agencies					
Radio stations					
Television stations					

- Indicate if there is government support for media institutions and reporters.
- Indicate the existence of legislations governing the media sector, such as those dealing with freedom and plurality of information.
- Describe the media sector contribution to the freedom and plurality of information.
- Describe the portrayal of women in the media.
- Indicate the percentage of female media journalists/editors.

2. Role of the media in the information society

In this regard, you are required to:

- Provide an assessment of the role of the media: print, broadcast as well as new media in the information society.
- Highlight the use of traditional media in bridging the knowledge divide and facilitating the flow of knowledge, particularly in rural areas.
- Indicate the extent to which social media is used in preserving cultural identity of

peoples and enhancing the country's linguistic diversity.

3. Convergence of ICT and the media

In this regard, you are required to:

- Describe the national preparedness for convergence of television, Internet and telephony (triple play).
- Provide statistics for double and triple packages.

4. Social media

In this regard, you are required to:

- Highlight the role of social media in raising awareness and building the information society.
- Indicate the extent to which social media is used to preserve the cultural identity of individuals and ethnic and cultural groups and to enhance the country's linguistic diversity.

6. Useful Initiatives

A. Other initiatives and success stories

In this regard, you are required to:

- Briefly list existing or proposed initiatives and projects to use digital technology in support of sustainable development, if any, without limiting them to a specific field.

B. Handling emerging events and crises

There may be emerging national, regional or global events or crises (such as COVID-19), which can be addressed effectively with ICTs help.

In this regard, you are required to:

- Indicate how your country has dealt with such events and crises through ICT means and whether positive results have been achieved.

Annex. ICT core indicators

Table annex 1. Core indicators on the ICT producing sector^a

Core indicator		Definitions and notes	2018	2019	2020
ICT1	Proportion of total business sector workforce involved in the ICT sector (expressed as a percentage)	<p><i>ICT workforce</i> (or ICT employment) consists of those persons employed in businesses that are classified as belonging to the ICT sector.</p> <p><i>Total business workforce</i> represents all persons engaged in domestic production in the business sector. In a national accounts' framework, employment can be measured in terms of headcounts, jobs, full-time equivalents or hours worked.</p> <p>The industry-based definition of the ICT sector was based on Revision 3 of the International Standard Industrial Classification (ISIC Rev. 3).^b This definition was slightly revised in 2002 according to ISIC Rev. 3.1.</p> <p>In 2007, the principles underlying this definition were reviewed leading to a narrower definition. The revised definition is now based on ISIC Rev. 4.</p> <p>The total business sector is defined on an activity (industry) basis per ISIC Rev. 3.1 as divisions 10-67 and 71-74. It therefore excludes: agriculture, hunting, forestry and fishing; real estate activities (because a significant proportion of the value added of the latter consists of imputed rent of owner-occupied dwellings); and community, social and personal services (which consist mainly of non-market activities such as public administration, education and health services).</p> <p>For countries using ISIC Rev. 4, the total business sector is not so easily defined. It will most likely include the equivalent divisions 05-36, 41-66, 69-82 and 95 (ISIC Rev. 4, Part II, chap II, pp. 45-61). Discussions are ongoing on whether the total business sector should include some industries that were not included in the ISIC Rev. 3.1 definition of the total business sector (divisions 37-39, 90-93 and 96).</p>			

Core indicator		Definitions and notes	2018	2019	2020
ICT2	ICT sector share of gross value added (expressed as a percentage of total business sector gross value added)	<p><i>Gross value added</i> for an industry represents its contribution to national GDP. It is sometimes referred to as GDP by industry and is not directly measured (but is estimated in a national accounts' framework). In general, it is calculated as the difference between production (gross output) and intermediate inputs (the energy, materials and services required to produce final output).</p> <p>Definitions of the ICT sector and the total business sector are those mentioned in ICT1.</p>			

^a The core indicators on the ICT producing sector (ICT 1 and ICT 2) presented in table 1 are based on the [UNCTAD Manual for the Production of Statistics on Digital Economy, 2020 Revised Edition](#), table 7.

^b ISIC is for International Standard Industrial Classification of All Economic Activities, developed by the United Nations Department of Economic and Social Affairs/Statistics Division to provide a set of activity categories that can be utilized for the collection and reporting of statistics according to such activities. It was first published in 1948, then reissued in several consecutive revisions, the latest of which was [ISIC Revision 4](#) in 2009. Previous versions include: [ISIC Revision 2](#) (1968); [ISIC Revision 3](#) (1990); and [ISIC Revision 3.1](#) (2002).

Table annex 2. Core indicators on international trade in ICT goods and services^a

Core indicator		Definitions and notes	2018	2019	2020
ICT3	ICT goods imports as a percentage of total imports	<p>ICT3 is calculated as the quotient of the value of imports of ICT goods divided by the total value of all imports (expressed as a percentage).</p> <p><i>ICT goods</i> are defined per the OECD's 2003 "A Proposed Classification of ICT Goods", based on the 1996 and 2002 Harmonized System classification (more information can be found on the UNCTAD Classifications).</p> <p>Other concepts are per the UN Comtrade Database, e.g. re-exports and re-imports are not netted out, and data are presented in United States dollars (US\$) (converted from country currencies).</p>			
ICT4	ICT goods exports as a percentage of total exports	<p>ICT4 is calculated as the quotient of the value of exports of ICT goods divided by the total value of all exports (expressed as a percentage).</p> <p><i>ICT goods</i> are defined per the OECD's 2003 "A Proposed Classification of ICT Goods", based on the 1996 and 2002 Harmonized System classification"(more information can be found on the UNCTAD Classifications).</p> <p>Other concepts are per the UN Comtrade Database, e.g. re-exports and re-imports are not netted out, and data are presented in US\$ (converted from country currencies).</p>			

ICT5	ICT services imports as a percentage of total imports of services	ICT5 is calculated as the quotient of the value of imports of ICT services divided by the total value of imports of all services (expressed as a percentage). <i>ICT services</i> are defined by UNCTAD ^b and include telecommunications services, computer services/computer software, computer services/other computer services, licenses to reproduce and/or distribute computer software.			
ICT6	ICT services exports as a percentage of total exports of services	ICT6 is calculated as the quotient of the value of exports of all ICT services divided by the total value of exports of all services (expressed as a percentage).			

^a The core indicators on international trade in ICT goods and services (ICT 3, ICT 4, ICT 5 and ICT 6) presented in table 2 are based on the [UNCTAD Manual for the Production of Statistics on Digital Economy, 2020 Revised Edition](#), tables 9 and 11.

^b [UNCTAD Manual for the Production of Statistics on Digital Economy, 2020 Revised Edition](#), p. 62.

Table annex 3. Core indicators on ICT in education^a

Core indicator		Definitions and notes	2018	2019	2020
ED1	Proportion of schools with a radio used for educational purposes (by ISCED levels 1 to 3)	Schools offering radio-based education as a percentage of the total number of schools in the country for each ISCED level (1-3).			
ED2	Proportion of schools with a television used for educational purposes (by ISCED levels 1 to 3)	Schools offering television-based education as a percentage of the total number of schools in the country for each ISCED level (1-3).			
ED3	Proportion of schools with a telephone communication facility (by ISCED levels 1 to 3)	Schools with telephone communication facilities as a percentage of the total number of schools in the country for each ISCED level (1-3). Note that the facility should be directly associated with the school. For instance, a mobile phone which is owned by an individual working at the school would not constitute a school telephone communication facility.			
ED4	Student-to-computer ratio (by ISCED levels 1 to 3)	Average number of students per computer in schools that offer computer-assisted instruction by each ISCED level (1-3).			

Core indicator		Definitions and notes	2018	2019	2020
ED5	Proportion of schools with Internet access, by type (by ISCED levels 1 to 3)	Schools with access to the Internet as a percentage of the total number of schools in the country for each ISCED level (1-3).			
ED6	Proportion of students who have access to the Internet in school (by ISCED levels 1 to 3)	Total number of students with access to the Internet in schools as a percentage of the total number of students in schools offering Internet-assisted instruction in the country by each ISCED level (1-3).			
ED7	Proportion of students enrolled by gender at the tertiary level in ICT-related fields ^b (for ISCED levels 5 and 6)	Number of students currently admitted at the tertiary level in ICT-related fields ^b by gender as a percentage of all students enrolled in educational institutions in the country for ISCED levels 5 and 6 (combined).			
ED8	Proportion of ICT-qualified teachers in primary and secondary schools	Number of primary and secondary teachers who have received ICT training, expressed as a percentage of the total number of teachers at those levels of education.			
Reference indicator					
EDR1	Proportion of schools with electricity (by ISCED levels 1 to 3) ^c	Schools with electricity as a percentage of the total number of schools in the country for each ISCED level (1-3).			

^a The main classificatory variables used for the core indicators on ICT in education are those set up by the UNESCO Institute for Statistics, in “[International Standard Classification of Education, ISCED 1997](#)” (pp. 22-39), which recognizes the following levels of education:

- ISCED 1 – Primary education or first stage of basic education.
- ISCED 2 – Lower secondary or second stage of basic education.
- ISCED 3 – Upper secondary education.
- ISCED 4 – Post-secondary non tertiary education (programmes that lie between the upper-secondary and tertiary levels of education).
- ISCED 5 – First stage of tertiary education (not leading directly to an advanced research qualification).
- ISCED 6 – Second stage of tertiary education (leading to an advanced research qualification).

- ^b ICT-related fields include computer science, computer engineering, information and communication technology, information systems, multimedia systems, ICT management, system support and software development, informatics, etc. Those are represented in the UNESCO [International Standard Classification of Education-ISCED 1997](http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-iscsed-2011-en.pdf) (ISCED was revised and published in 2011: <http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-iscsed-2011-en.pdf>). According to the ISCED fields of education code list, the ICT-related fields come under code 48-Computing, code 21-Arts (audio-visual, media production and design) and code 52-Engineering and engineering trades (electronics and automation). Those fields involve substantial work in understanding the technical aspects of ICT rather than a more generic or basic use of ICT.
- ^c Since electricity is not specifically an ICT commodity, but an important prerequisite for using many ICTs, it is not included in the core list, but added as a reference indicator. International studies reviewed by the UNESCO Institute for Statistics (UIS) revealed that the lack of electricity is such a significant barrier in many developing economies that monitoring trends of its provision is as relevant as monitoring ICT supply and use.

Table annex 4. Core indicators on ICT in government

Core indicator		Definitions and notes	2018	2019	2020
EG1	Proportion of persons employed in central government organizations routinely using computers	The proportion of persons employed in central government organizations routinely using computers is calculated by dividing the number of persons employed in central government organizations, who routinely use computers, by the total number of persons employed in central government organizations. The result is then multiplied by 100 to be expressed as a percentage. An optional indicator may be calculated separately for males and females (or other individual characteristics).			
EG2	Proportion of persons employed in central government organizations routinely using the Internet	The proportion of persons employed in central government organizations routinely using the Internet is calculated by dividing the number of persons employed by central government organizations, who routinely use the Internet, by the number of persons employed by central government organizations. The result is then multiplied by 100 to be expressed as a percentage. An optional indicator may be calculated separately for males and females (or other individual characteristics).			
EG3	Proportion of central government organizations with a local area network (LAN)	The proportion of central government organizations with a LAN is calculated by dividing the number of central government organizations with a LAN by the number of central government organizations. The result is then multiplied by 100 to be expressed as a percentage.			
EG4	Proportion of central government organizations with an intranet	The proportion of central government organizations with an intranet is calculated by dividing the number of central government organizations with an intranet by the number of central government organizations. The result is then multiplied by 100 to be expressed as a percentage.			

Core indicator		Definitions and notes	2018	2019	2020
EG5	Proportion of central government organizations with Internet access, by type of access	<p>The proportion of government organizations with Internet access, by type of access, is calculated by dividing the total number of central government organizations with Internet access (by each type of access and 'any' access) by the total number of central government organizations. The result is then multiplied by 100 to be expressed as a percentage.</p> <p>Note that the sum of percentages of all types of access is likely to exceed 100, as many central government organizations will have more than one type of access service.</p>			
EG6	Proportion of central government organizations with a web presence	<p>The proportion of central government organizations with a web presence is calculated by dividing the number of central government organizations with a web presence by the number of central government organizations. The result is then multiplied by 100 to be expressed as a percentage.</p>			
EG7	Selected Internet-based services available to citizens, by level of sophistication of service	<p>Unlike indicators EG1 to EG6, this indicator refers to both central and state/provincial levels of government. This is necessary to ensure international comparability as the services selected may be offered by different levels of government across countries. Because the approach taken to measuring Internet-based services is relatively untested and because responses may be somewhat subjective, the indicator is initially considered to be 'experimental'.</p> <p>The indicator is weighted by population in order to show the significance of government Internet-based services at the national level.</p> <p>The indicator is expressed in terms of the percentage of a country's population that is theoretically able to access each Internet-based service. Note that this does not refer to whether a citizen has the equipment or knowledge necessary to access those services, whether s/he needs to access those services or whether s/he directly benefits from them (for example, most of the services are not relevant to children). The ability to access each service will usually be linked to the relevant jurisdiction, for example, a citizen residing in a particular state will theoretically be able to access Internet-based services offered by that state government, though may not need to, wish to, or be technically capable of doing so.</p>			

Source: United Nations Department of Economic and Social Affairs (2018). *United Nations e-Government Survey 2018*.

