

United Nations Economic and Social
Commission for Western Asia (UN-ESCWA)



Shared Prosperity **Dignified Life**



Guiding Template for National Digital Development Reviews *2021*

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Introduction

This template is designed to facilitate the work of experts in drafting national reviews of Arab countries participating in the ESCWA digital development project linked to the 2030 Sustainable Development Plan and its 17 goals¹. It is assumed that these reviews reflect the digital reality at the national level, and later on the Arab regional level, taking inspiration from the general guidelines issued by the United Nations Secretary-General regarding the new global term for digital cooperation, which focuses on “connect, respect and protect”, and being guided by the global digital cooperation road map, launched by the Secretary-General in June 2019².

This template takes into account the observations made by countries participating in the preparation of the national reviews for the 2018-2019 cycle. During this period, a pilot template was used, which was designed through a survey of the current state of member countries with regard to the main lines of action for building an information society. It was reviewed during the second half of 2020 in meetings and correspondence with the participating countries to consider lessons learned, best practices, proposals and recommendations learned to improve work methodology, procedures and tools for preparing the next national development reviews before their approval and launch of the next session at the beginning of 2021. The questions contained in the form were reviewed and eventually redistributed within the template, deleting some parts and adding others to the five blocks that were mentioned in the indicative model for the year 2018 to effectively reflect the reality of information in the Arab countries and the achievements made effectively.

All information required in this form relate to the last two years 2019-2020, 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 are not available and mention that they are not available for the required period of time.

The main objective of this work remains to shed light on the efforts made in the Arab countries in the field of digital technologies, which include information and communication technologies, in order to achieve the 2030 Agenda for Sustainable Development and its seventeen goals.

¹ Transforming our world: the 2030 Agenda for Sustainable, https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=A

² Report of the Secretary-General, Roadmap for Digital Cooperation, 2020, https://www.un.org/ar/content/digital-cooperation-roadmap/assets/pdf/Roadmap_for_Digital_Cooperation_EN.pdf.

Cluster 1

Strategic Frameworks

WSIS and SDGs

Cluster 2

State

Infrastrucure,
Governance, Legal
Environment

Cluster 3

Economy

Production,
Competitiveness of
ICT Sector and
Economic Growth

Cluster 4

Society

Transformation of
Public Administration
and Social Inclusion

Cluster 5

Culture and Media

Cultural identity, linguistic diversity, and Media

I. Cluster One: National, Regional and International Strategic Frameworks

A. National digital strategies (The role of the government and all stakeholders (C1))

The effective participation of governments and all stakeholders is vital in developing the Information Society, which requires cooperation and partnerships among all of them. The processes of adopting proper policies and formulating strategies are essential for mobilizing all stakeholders from a cross-section of the public and private sectors and disseminating the opportunities created by the Information Society.

In this section it is required to fill out the following table and discuss the development of recent national digital strategies and policies (if any), and refer to the comprehensive national strategy, strategies and/or sectoral policies. For each policy/strategy, 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 fulfilment of national policies and strategies including the accomplishment.

Overarching National Digital Strategy exists (like Digital Nation, Smart Nation, Digital Economy...etc.)	<i>(yes or no)</i>
Name of the Strategy	
Year of adoption and latest update	
Government agency in charge	<i>Name in English:</i>
	<i>Name in Arabic:</i>
Pace of implementation	<i>(Excellent/ Good/ Average/ Limited)</i>
Description of progress made (about 150 words)	
Sectoral (ICT):	<i>(yes or no)</i>
ICT Sector strategy / plan exists	
Name of the strategy / plan	
Year of adoption and latest update	<i>(year)</i>
Government agency in charge	<i>Name in English:</i>

	<i>Name in Arabic:</i>
Pace of implementation	<i>(Excellent/ Good/ Average/ Limited)</i>
Description of progress made (about 150 words)	
Other Sectors:	<i>(yes or no)</i>
Digital Transformation strategy / plan exists (Digital Learning / Digital Health...etc.)	
<i>(Repeat this section – 5 rows – as required)</i>	
Name of the strategy /Plan	
Year of adoption and latest update	<i>(year)</i>
Government agency in charge	<i>Name in English:</i>
	<i>Name in Arabic:</i>
Pace of implementation	<i>(Excellent/ Good/ Average/ Limited)</i>
Description of progress made (about 150 words)	

B. National Engagement in International and Regional Cooperation Initiatives (C11)

The successful implementation of the information society requires cooperation among all stakeholders at both the international and regional levels, especially in financing and implementing digital development and in the establishment of related action plans.

1. WSIS Follow-up³

- Are there formal national action plans to support the fulfilment of the goals indicated in WSIS declaration of principles (Geneva 2003) and the Tunis Agenda (Tunis 2005), or the overall UNGA Review of WSIS Implementation (NY, 2015), with regional cooperation components? If so, provide details about these plans and what they have 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 performance of information and communication technology in order to achieve the goals of sustainable development, and to analyse its main dimensions.
- Identify a regional project for building the information society/digital economy with national components to be implemented in your country, giving an outline and showing the extent of progress made.

³ Kindly limit free text descriptions/discussions to about 150 words, if possible.

- Indicate a project that helps bridge the digital divide at the national level by achieving the sustainable development goals, giving an overview and showing 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 best practices on policies and tools, designed to promote the Information Society at regional and sub-regional levels.

2. Other related Frameworks (other than WSIS)

Identify and specify other related frameworks or initiatives at the regional or international levels, if any, that your country is actively engaged in and has a related national plans/activities, whether related to UN bodies or non-UN bodies.

II. Cluster Two: 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. It 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

- 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	<i>(competitive, monopoly or duopoly)</i>	
Internet services	<i>(competitive, monopoly or duopoly)</i>	

2. ICT Infrastructure by Service Type

- Availability of the following services: Mobile phone services, Internet Services including Fixed and Mobile broadband, FTTH, Next Gen Wireless.
- List in-service ISPs.
- List in-service mobile phone networks and penetration.
- Fill the following table:

Indicator	Value	Latest Year
Mobile phone penetration		
Percentage of households with Internet access		
International Internet bandwidth (bit/s) per Internet user		

Percentage of the population covered by mobile networks - At least 3G - At least LTE/WiMAX		
Fixed-broadband subscriptions by speed tiers as a % of total fixed-broadband subscriptions - 256 Kbit/s to 2 Mbit/s - 2 to 10 Mbit/s - 10 Mbit/s or more		

3. *ICT connectivity*

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

- List main initiatives (public/private/NGO) geared towards providing universal access to ICTs.

4. *Internet Architecture*

- The current national Internet landscape, including:
 - ✓ the 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; and
 - ✓ adoption of IPv6.

5. *Domain name management and adoption*

- Fill the following table:

Name of ccTLD registrar	<i>Name in English:</i> <i>Name in Arabic:</i>
URL of registrar	<i>(http://)</i>
Total Number of ccTLDs registered in the country (Arabic and English) for the years 2018, 2019, and 2020.	

B. Governance (C1 and C11)

1. Public/Private Partnership (PPP), Multi-Sector Partnership (MSP) and Role of Non-Governmental Organizations

- Overview the existence of structured dialogue involving all relevant stakeholders, in devising sustainable digital strategies for the Information Society and for the exchange of best practices;
- Identify mechanisms, 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 Multi-Sector Partnership (MSP);
- NGOs' engagement in concrete projects to develop the Information Society.

2. Participation in Internet Governance activities

- Overview the existence of any structured dialogue involving all relevant stakeholders, in the field of Internet Governance.
- Identify mechanisms, at the national level, for the initiation and promotion of National Internet Governance Forum.
- Involvement in the Arab Internet Governance Forum process.
- Involvement in the Global Internet Governance Forum (IGF) process.
- Involvement in ICANN's policy making and public consultations.

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

The provision of an enabling environment is crucial to mobilize resources and create a climate conducive to the acquisition and dissemination of ICT. A trustworthy, transparent and non-discriminatory legal, regulatory and policy environment constitutes an essential basis for cooperation between public and private sectors. The sensitivity and value of digital information and the need to protect it are increasing. This area tackles specific requirements regarding security and privacy, protection of personal data and confidentiality of information.

1. Legal and regulatory environment

- Indicate 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 (IPR);
 - ✓ Telecom and Internet legislations and regulations (like updated Telecom laws, Cyberspace laws...etc.);
 - ✓ Cyber legislation, especially those related to: e-signature, e-transactions, e-commerce and e-payment.

- Fill the following tables:

International Treaties and Conventions on Intellectual Property	Adopted (Y/N) or Observer	Year of Adoption
WTO	<i>(yes/no)</i>	
Paris Convention	<i>(yes/no)</i>	
PCT	<i>(yes/no)</i>	
WCT	<i>(yes/no)</i>	
Madrid Agreement	<i>(yes/no)</i>	
Hague Agreement	<i>(yes/no)</i>	
PLT	<i>(yes/no)</i>	
TRIPS	<i>(yes/no)</i>	

Cyber Laws	Available?	Law number	Year Passed
e-transactions law	<i>(yes/no)</i>		
e-signature law	<i>(yes/no)</i>		
e-payment	<i>(yes/no)</i>		
e-commerce	<i>(yes/no)</i>		
Management of PKI available	<i>(yes/no)</i>		

2. Privacy and Data protection

- List of laws addressing privacy and data protection (law number, year passed, reference URL).
- Initiatives or guidelines with respect to privacy and data protection.

- User education and awareness about online privacy and the means of protecting privacy.

3. Countering misuse and preventing abuse of ICTs

- List laws addressing cyber-crime (law number, year passed, reference URL);
- Initiatives for the prevention, detection and prosecution of cyber-crime and misuse of ICTs.
- Efforts taken to fight spam at national and international levels.
- Adopted measures for the prevention and detection of abusive ICT uses.

4. Use of electronic transactions and documents

- Use of electronic documents and transactions including electronic means of certification and authentication (e.g. e-signature);

5. Online and network security

- Presence of a national security strategy or action plan addressing issues related to protecting the government's critical resources and network (describe whether such strategy is set up, applied, its components, etc.)
- Existence of a national CERT (indicate name in English and Arabic), its activity, number of incidents recorded, etc.
- National awareness plans or initiatives taken in this regard.
- Existence of secure and reliable applications facilitating online transactions;
- Cyber-security measures taken to ensure online transactions are secure.
- Good national practices in the field of information security and network security;

III. Cluster Three: Digital Economy, Employment and Trade Policy Areas⁴

A. Building the ICT Sector (C12)

Building the ICT sector requires public-private cooperation, in addition to the availability of many factors including investments and finance facilities, industry structure, and RDI capacities. The sector could include operators of telecommunications services, computer hardware manufacturing, software development, service provision, call centres, technical training, Web design and development, digital content development and Arabization, and providing technological solutions.

1. ICT Firms

These include firms in operation providing services using ICT, wholesaling and/or manufacturing (ICT goods). Provide a set of statistical tables for the main ICT companies, which include the economic and demographic characteristics of the ICT 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 (PPP) - foreign, local, joint.

Also needed, if possible, statistical data or information on:

- The composition of the workforce in ICT companies in terms of gender (the extent of gender balance in leadership and among workers) and the proportion of people with special needs among workers.
- Existence of a government policy to encourage women to apply for employment in ICT companies, facilitating gender balance at all levels.
- The most important successes and obstacles these companies faced in their establishment and launch.

2. R and D, Innovation and Standardization in the ICT sector

- List strategies and policies related to R and D and/or innovation in the ICT sector, and indicate whether they are gender sensitive;

⁴ Some sections in this chapter (including related tables in the appendices) may require coordination with the Ministry of Economy and/or economic development agencies.

- Status of research and development in the field of ICT, in terms of available equipment, tools and services.
- Government support for R and D programmes in areas such as:
 - ✓ machine translation tools development;
 - ✓ multi-lingual search engines and content referencing;
 - ✓ deployment and use of Open Source Software (OSS);
 - ✓ ICT-based support for persons with disabilities.
- Public and/or private initiative 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.

3. Government facilitation, Investments and Financing the ICT sector

- Provide information on government assistance to Small and Medium-Sized Enterprises (SMEs) ICT firms, increasing their competitiveness by streamlining administrative procedures, facilitating their access to capital and enhancing their capacity to participate in ICT-related projects.
- Strategies, policies and incentives related to investments in the ICT sector (existence and implementation).
- Highlight the existence of a legal framework for investments in the ICT sector (including incentives and exemptions).
- Public and/or private initiatives for the strengthening of investments in the ICT sector;

- Measures, if any, for the attraction of major private national and foreign investments (developed countries and international financial organizations) for ICTs through the creation of a transparent, stable and predictable investment environment.
- Formulation by governments and stakeholders of ICT measures that foster the Information society such as:
 - ✓ Entrepreneurship, innovation and incubator schemes, including information on women entrepreneurship and their areas of focus;
 - ✓ Government investment funds including their target areas, and whether these include gender equality and women empowerment);
 - ✓ Investment promotion strategies;
 - ✓ Software export support activities.
- Provide information on local and foreign investments in the ICT sector.
- Provide information on the availability of venture capital investments, eventually including ICT competitiveness indicators.
- Existence of private and/or public investment funds, funding agencies and venture capitals working on building the ICT sector.
- Initiative or success story related to improving financing mechanisms and innovate their processes.
- Major obstacles to widespread investment in various categories of ICT companies.

B. Economic Impact of the ICT Sector (C12++)

1. Contribution of ICT sector in the national economy

Please fill [table 1](#) and [table 2](#) of Appendix 1 with regards to the specified indicators. Additionally:

- Indicate the contribution of the ICT sector to the GDP in your county.
- 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 services, and ICT-enabled-services (e-Trade)

- Determine the ratio of sales (export) of goods (computer equipment, communications equipment, software) and ICT services for all countries to exports of other goods and services.
- Determine the ratio of purchases (import) of goods (computer equipment, telecommunications equipment, software) and information and communication technology services from different countries to exports of these goods and services.

3. E-business

- Availability of e-business services, particularly, online banking and e-commerce.
- Provide a success story of Internet commerce in your country that illustrates the importance and need for e-business.
- Identify the main obstacles that prevent the widespread adoption of electronic commerce.
- Provide data disaggregated by gender, if available, such as the percentage of women using these services.
- To which extent are applications such as B2B, B2C mature?
- Use of international e-business models for trade in your country and taking gender differences into consideration.
- Describe the availability and use of e-business standards (such as e-payment systems).
- Extent of accessibility of these services to persons with disabilities?
- Fill the following table:

Laws/services	Available?	Law number	Year Passed
e-banking services	<i>(yes/no)</i>		
e-commerce law	<i>(yes/no)</i>		
Name other laws on e-services			

4. Employment in the ICT sector

ICT can be used to increase production efficiency and lower production cost of goods and services, which reduce employment (since employment is considered the highest cost of production). At the same time ICT can be used to create new services or products and create more jobs.

- Illustrate the impact of ICT on faster employment growth in your country, through examples if possible.

- ICT contribution to job creation for youth and girls in your country, giving illustrations on the magnitude of ICT job creation for youth and females (through case studies, initiatives, projects, etc.).
- Indicate hurdles preventing employment in the ICT sector.
- Availability of data, periodic reports, or research studies - by the authorities concerned with employment and work in the country - on measuring or evaluating the net number of job opportunities created as a result of the information and communication technologies; whether in the ICT sector itself or in other sectors.
- In case these data, reports or studies are not available, is there any methodology, approach or criteria - whether adopted or being developed - regarding this type of measurement or evaluation. If so, what are the details of such a measurement approach or evaluation criteria?

5. E-employment

- Use of ICT as means to locate employment (such as, Internet, broadcast SMS, announcements via social and professional networks).
- Availability of employment portals and national databases of résumés.
- Highlight any public or private initiatives which support “tele-working” - allowing citizens to live within their societies and work anywhere, increasing employment opportunities especially for women, and for people with special needs, including data from these initiatives that indicate the use of teleworking by both women and men.
- If such initiatives exist, then provide related data to see if more women than men are making use of tele-working and conduct related analysis.
- Indicate a success story from your country related to e-employment and lessons learned.
- Provide major hurdles limiting the use of e-employment.

IV. Cluster Four: Digital Transformation and Social Inclusion Policy Areas⁵

A. Inclusive and Empowering Access to relevant information, knowledge, applications and Content (C3)

ICTs allow 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.

This action line (C3) as described by WSIS 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.

For each of the above groups, relevance and meaningfulness of “access”, according to the following three aspects:

- a) **Availability and Affordability:** Indicate any available digital-based information/knowledge platforms, including gender considerations in the accessibility of these platforms to women: Journals, Books, digital public libraries, scientific archives, applications, content, and services that are free or made affordable through certain government regulations⁶ or community-based programmes.
- b) **Development and Adaptability:** Indicate if the above available information/knowledge are adapted to the specific target groups (or there are plans to adapt them: such as localization, customization, periodical update and upgrade), including persons with disabilities.
- c) **Means of Access - Availability of adequate access through various channels:** Availability of sustainable, affordable or free-of-charge access through multi-purpose community public access points to the Internet; and more importantly plans to upgrade them, including the scheduling of access to women and girls.

⁵ Some sections in this chapter may require coordination with the Ministry of Social Affairs and/or social development agencies.

⁶ Governments can issue regulations that make access free or cheaper for specific population groups.

- Indicate initiatives providing free-of-charge access to the Internet in metropolitan-wide public areas.
- Help services and assistance provided to users, in places such as libraries, educational institutions, public administrations, post offices or other public places, with special emphasis on rural and underserved areas.
- Indicate major obstacles to wide-scale digital-based inclusiveness of above sub-groups.
- Existence of special access provisions for persons with special needs (e.g. sign language provision, text-to-speech services).

2. Empowerment (use): Educational, Entertainment, Political Engagement, Economic Returns

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

For each of the above groups, indicate the purpose and utility of usage, and role of stakeholders according to the following:

a) **Purpose of Usage:**

Indicate the main purpose of use by the specific target group for the following types of engagement, while providing sex-disaggregated data to reflect on the trend of engagements, and capturing 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; facilitation of transport, dwelling, health, nutrition, insurance, safety).
- **Economic Engagement:** using ICTs as a tool by citizens, to improve their engagement in economic activities (owning an SME, 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 and local governance (including 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 main motivation of local authorities or community empowerment groups to promote the above purposes of use, including management of related networks.

For each of the above groups, indicate the major hurdles obstructing the wide-scale digital-based empowerment of the respective sub-group.

B. Capacity building on ICT4D/Digital Development⁷ (C4)

Everyone should have the necessary skills to benefit fully from the Information Society; therefore, ICT4D capacity building is essential. ICTs can contribute to:

- Achieving universal education worldwide, through delivery of education and training of teachers, particularly vocational and tertiary education in STEM;
- Offering improved conditions for lifelong learning, which consider the needs of both men and women, and enables people who are outside the formal education process to improve their professional skills.
- Engagement in social life, political participation, social cohesion.

1. *ICT in Education and Training (including e-Learning)*

Please fill [table 3](#) of Appendix 1, with considerations for availability and participation of both men and women, while using gender sensitive content and sex disaggregated data. Provide a narrative to highlight the efforts exerted to integrate ICTs in education and training at different fronts (including, curriculum development, teacher training, institutional administration and management) and at all levels (including school, university, etc.) as follows:

a. **Basic literacy**

- Describe the use of ICTs as a tool for basic literacy in your country.

b. **Primary and secondary education**

- Use of e-learning systems and applications in all school levels.
- Availability of virtual schools including accreditation and accessibility of persons with special needs, if any.
- Availability/penetration of Internet connectivity in schools and in addition to free and open educational portals.
- Provide information on the availability of distance learning to help students develop self-learning and self-development capacities.
- Provide information on the availability of distance training as part of capacity building programmes.

c. **Higher education**

⁷ This section (including related tables in the appendices) requires coordination with Ministries of Education and Higher Education.

- Assess the availability of e-learning systems and applications (management information systems, student information systems, etc...) in universities.
- Discuss the 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).
- Highlight the adoption of online learning programmes/distance learning degrees: availability and accreditation.
- Provide information on availability and accessibility for persons with special needs.
- Provision of training as part of capacity-building programmes, helping students to develop self-learning and self-development capacities.

d. Training and other forms of education

- Indicate the existence of local ICT training centres with the cooperation of all stakeholders and taking advantage of existing facilities such as libraries, multipurpose community centres, and public access points.
- Extent of accessibility for persons with special needs.
- List national programmes supervised by the government for capacity-building of women in ICT.
- Provide information on the availability of distance learning, 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), and include sex disaggregated data and gender sensitive analysis on each.

2. Targeted Training programmes (for capacity building on the use of ICT4D)

Highlight and evaluate national targeted education or training programmes (provided by IGOs, public sector, private sector, and/or NGO) providing opportunities of full participation in the Information Society for the following sub-groups:

- ✓ Civil servants⁸
- ✓ Women
- ✓ Youth

⁸ ESCWA TDD will assess the progress in implementing the ESCWA Academy of Information and Communications Technology Essentials for Government Leaders in the ESCWA Region (AIGLE), and other initiatives targeting the government civil servants.

- ✓ People with Disability
 - ✓ Elderly
- For each of the above groups, indicate the major hurdles obstructing the wide-scale capacity building on ICT4D of the respective sub-group.

C. ICT applications (C7)

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.

1. E-Government⁹

- 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
 - ✓ Engaging with all citizens.

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 special needs.

- Fill the following table:

Name of Authority in Charge of ICT in Public Administrations	<i>English Name:</i> <i>Arabic Name:</i> <i>URL:</i>
Name of e-Government authority	<i>English Name:</i>

⁹ This section (including related tables in the appendices) requires coordination with the establishment in charge of e-Government project and the Prime Ministry.

	<i>Arabic Name:</i> <i>URL:</i>
Number of implemented government e-services	
Number of planned government e-services	

- 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: (<i>http://</i>)		
Information	General	(<i>yes/no</i>)
	Laws	(<i>yes/no</i>)
	Directories	(<i>yes/no</i>)
Services	Static Info	(<i>yes/no</i>)
	Downloadable Forms	(<i>yes/no</i>)
	Interactive	(<i>yes/no</i>)
e-payment		(<i>yes/no</i>)
Online account		(<i>yes/no</i>)
Bilingual		<i>Ar/En/Fr or other</i>
Citizen Participation	Blogs	(<i>yes/no</i>)
	Polls	(<i>yes/no</i>)
Social Media	Facebook	(<i>yes/no</i>)
	Twitter	(<i>yes/no</i>)
	LinkedIn	(<i>yes/no</i>)
	YouTube	(<i>yes/no</i>)
	WhatsApp	(<i>yes/no</i>)
Additional Services	RSS	(<i>yes/no</i>)
	Web Statistics	(<i>yes/no</i>)
	Search	(<i>yes/no</i>)
Mobile version	Support for smartphone/tablet	(<i>yes/no</i>)
	Dedicated App (iOS or Android based)	(<i>yes/no</i>)

Other features	<i>(indicate)</i>
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Please fill [table 4](#) of Appendix 1.

2. E-health¹⁰

- Identify the availability and access to the world’s medical knowledge and locally-relevant content resources for strengthening public health issues, women’s and men’s health, diseases such as HIV/AIDS, malaria, tuberculosis and Corona (COVID-19).
- Identify national programmes that address and promote “Sexual and reproductive health” and targets both men and women and raises awareness of the society.
- Determine the approved national programmes to combat epidemics, including malaria and Corona.
- Use of telemedicine and medical teleconferencing for underserved areas and vulnerable populations.
- Maturity and implementation of the following health care information systems:
 - ✓ patient care management;
 - ✓ digital record keeping;
 - ✓ pharmaceutical management;
 - ✓ Databases for national healthcare.
- Use of ICT based information systems to alert, monitor and control the spread of communicable diseases and for providing medical and humanitarian assistance in disasters and emergencies.
- Indicate a success story related to wide-scale digital-based health programmes implemented nationally.
- Major hurdles obstructing digital-based health programmes at the national level.

¹⁰ This section requires coordination with Ministry of Health

V. Cluster Five: Culture and Media Policy Areas

A. Cultural identity and linguistic diversity¹¹ (C8)

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 socio-economic development. In addition, digital content development can play a major role in preserving the national heritage.

1. Use of ICT in support of cultural and linguistic diversity

- Use of ICTs 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 for ensuring continued access to archived digital information and multimedia content in digital repositories, and support 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 and enhancing the linguistic diversity of the country.

B. Media¹² (C9)

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

- Diversity of media and its ownership in your country.

-Fill the table below, indicating the number of media outlets in each category:

¹¹ This section may require coordination with the Ministry of Culture.

¹² This section may require coordination with the Ministry of Information.

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

- Government support to media institutions and reporters.
- Legislations governing the media sector, such as those dealing with freedom and plurality of information.
- Media sector contribution to the freedom and plurality of information.
- Gender portrayal in the media.
- Percentage of female media journalists/editors.

2. The media and its role in the Information Society

- 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.
- The extent to which social media is used in preserving cultural identity of peoples and enhancing the country's linguistic diversity.

3. Convergence between ICT and the media

- National preparedness for convergence of television, Internet and telephony (triple play), providing statistics for double and triple packages.

4. Social Media in the Arab World

- Role of social media in raising awareness and building the information society.
- 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.

VI. Variety of useful initiatives

1. Other initiatives and success stories

- 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.

2. Handling emerging events and crises

- There may be emerging global events or crises (such as COVID-19), regional or national, which ICTs can help in effectively addressing them; indicate how you have dealt with these events and crises in your country and the positive results achieved through this treatment.

Appendix 1

Table 1 - Core indicators on the ICT (producing) sector

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. <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 (FTE) or hours worked.</p> <p>For countries using ISIC Rev. 3/Rev 3.1 (or national equivalents), the ICT sector is defined per the OECD's 2002 definition. This can be found in Box 1 and is discussed in detail in OECD (2007).</p> <p>For countries using ISIC Rev. 4 (or national equivalents), the ICT sector is defined per the OECD's 2007 definition. This can be found in Box 2 and is discussed in detail in OECD (2007).</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 consists 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 to 36, 41-66, 69-82 and 95. Discussions are ongoing on whether it should include some industries that were not included in the Rev. 3.1 definition of the total business sector (divisions 37-39, 90-93 and 96).¹³</p>			
ICT2	ICT sector share of gross value added (expressed as a percentage of total business	<p><i>Gross value added</i> for a particular 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</p>			

¹³ See draft ISIC Rev. 4: <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=27>.

Core indicator		Definitions and notes	2018	2019	2020
	sector gross value added).	output) and intermediate inputs (the energy, materials and services required to produce final output). Definitions of the ICT and total business sector are per ICT1.			

Table 2 – Core indicators on international trade in ICT goods

Core indicator		Definitions and notes	2018	2019	2020
ICT3	ICT goods imports as a percentage of total imports	<i>ICT goods</i> are defined per the OECD's 2003 ICT goods classification, based on the 1996 and 2002 Harmonized System classification. It can be found in UNCTAD (2007). Other concepts are per the <i>UN COMTRADE</i> database e.g. re-exports and re-imports are not netted out, and data are presented in US dollars (converted by the UN from country currencies).			
ICT4	ICT goods exports as a percentage of total exports	<i>ICT goods</i> are defined per the OECD's 2003 ICT goods classification, based on the 1996 and 2002 Harmonized System classification. It can be found in UNCTAD (2007). Other concepts are per the <i>UN COMTRADE</i> database e.g. re-exports and re-imports are not netted out, and data are presented in US dollars (converted by the UN from country currencies).			

Table 3 - Core indicators on ICT in education

Core indicator		Definitions and notes	2018	2019	2020
ED1	Proportion of schools with a radio used for educational purposes (by ISCED level 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 TV used for educational purposes (by ISCED level 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 level 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 <i>telephone communication facility</i> .			
ED4	Student-to-computer ratio (by ISCED level 1 to 3)	Average number of students per computer in schools that offer computer-assisted instruction (CAI) by each ISCED level (1-3).			
ED5	Proportion of schools with Internet access, by type (by ISCED level 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 at school (by ISCED level 1 to 3)	Total number of students with access to the Internet in schools as percentage of the total number of students in schools offering internet-assisted instruction in a given country by each ISCED level (1-3).			
ED7	Proportion of students enrolled by gender at the tertiary level in ICT-related fields (for ISCED levels 5 and 6)	Number of students currently admitted in ICT-related fields ¹⁴ by gender as a percentage of all students enrolled in educational institutions in a given country by gender for ISCED levels 5 and 6 (combined).			

¹⁴ 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. These are represented by ISCED97 Fields of Study 48-Computing, together with elements of 21-Arts (audio-visual, media production and design) and 52-Engineering (electronics and automation). These fields involve substantial work in understanding the technical aspects of ICT rather than a more generic or basic use of ICT.

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 these levels of education.			
Reference indicator					
EDR1	Proportion of schools with electricity (by ISCED level 1 to 3) ¹⁵	Schools with electricity as a percentage of the total number of schools in the country for each ISCED level (1-3).			

Classificatory variables:

The main classificatory variable used for the ICT in education indicators is the 1997 version of ISCED (the International Standard Classification of Education, maintained by UNESCO). ISCED recognizes several levels of education as follows:

- 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); and
- ISCED 6 – Second stage of tertiary education (leading to an advanced research qualification).

¹⁵ 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 included as a reference indicator. International studies reviewed by 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 the supply and use of ICT.

Table 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 male and female persons employed (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 male and female persons employed (or other individual characteristics).			
EG3	Proportion of central government organizations with a Local Area Network (LAN)	The proportion of central government organizations with a Local Area Network (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.			
EG5	Proportion of central government organizations with Internet access, by type of access	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.			

Core indicator		Definitions and notes	2018	2019	2020
		Note that the sum of percentages of each type of access is likely to exceed 100, as many central government organizations will have more than one type of access service.			
EG6	Proportion of central government organizations with a web presence	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.			
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 untested⁵ 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 (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>			