UN digital development toolbox:

Guidelines, frameworks, and tools supporting the UN Development System delivery on digital in Europe and Central Asia

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This document was developed by the UN Digital Transformation Group for Europe and Central Asia, under the leadership of the International Telecommunication Union (ITU). It is a living document reflecting information gathered as of 20 February 2023. This document will be updated on a regular basis upon the contribution of UN Agencies.

This document lists the main UN frameworks, guidelines, capacity-building tools, toolkits and other measurement tools related to Information and Communication Technologies (ICTs) and digital development. The purpose of this document is to provide a reference to UN Country Teams and Resident Coordinators in Europe and Central Asia of available UN Sytem's policy tools and guidance that may be utilized in initiatives related to ICT and digital development. This way, supporting the development efforts happening at the country level within the context of the UNSDCF. It further aims at raising awareness of existing materials in an effort to undertake a concerted approach to inclusive and sustainable digital development.

The information contained in this document is non-exhaustive and only draws on the flagship resources of the following participating agencies: FAO, ITU, UNDP, UNECE, UNEP, UNESCO, UNICEF, UNIDO, UNOPS, UN Women, UNWTO, WHO, and WMO.

For any questions on this document, please contact the secretariat of the UN Digital Transformation Group for Europe and Central Asia provided by the ITU Office for Europe at: eurregion@itu.int

The UN Digital Transformation Group for Europe and Central Asia has been established under the Regional Collaborative Platform (RCP) for Europe and Central Asia. It is established alongside other Issue-Based Coalitions and Groups acting as regional task forces to facilitate improved cooperation between different UN agencies and their partners. The Digital Transformation Group addresses digital development issues through an SDG-centric lens in the region. The Group's mandate revolves around four main pillars as follow:
1. Facilitate cooperation and collaboration between different UN agencies in the field of digital transformation, realizing synergies among related areas of work and contributing to the relevant platforms, processes, conferences, etc.;
2. Promote coordinated UN support to the Member States in their implementation of the 2030 Agenda through ICTs, while providing support to the UN Country Teams (UNCTs) on digital transformation issues;
3. Strengthen information sharing on the activities of the UN System in Europe and Central Asia in the field of digital transformation and their impact on advancing the achievement of the SDGs;
4. Provide support to the work of the Issue-Based Coalitions and Knowledge Hub of the UN System for Europe and Central Asia, with a focus on digital transformation, while keeping track and sharing updates on the information of new technologies and trends which may be utilized as SDG enablers and accelerators.

The Group is co-chaired by ITU and UNECE and is composed of representatives of FAO, ILO, IOM, UNDP, UNEP, UNESCO, UNFPA, UN Habitat, UNICEF, UNIDO, UNWTO, UN Women, WHO, WIPO, WMO, and IFAD. Learn more about the Group on its dedicated webpage.

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I. Access

1. Enabling policy environment

International Telecommunication Union (ITU)

a. The ICT Regulatory Tracker (ITU)

Link: https://app.gen5.digital/tracker/about

Type: Framework

Related SDG(s): 9, 17

Target audience: Regulatory bodies, policymakers

Short description:

The ICT Regulatory Tracker is an evidence-based tool to help decision-makers and regulators make sense of the rapid evolution of ICT regulation. The Tracker pinpoints the changes taking place in the ICT regulatory environment. It facilitates benchmarking and the identification of trends in ICT legal and regulatory frameworks.

The Tracker does not measure the quality, the level of implementation or the performance of regulatory frameworks in place, but records their existence and features. It helps track progress and identify gaps in regulatory frameworks, making the case for further regulatory reform towards achieving a vibrant and inclusive ICT sector.

b. Digital Regulation Handbook (ITU)

Link: https://www.itu.int/hub/publication/D-PREF-TRH.1-2020/

Type: Framework

Related SDG(s): 9, 17

Target audience: Regulatory bodies, policymakers

Short description:

It aims to provide practical guidance and best practice for policymakers and regulators across the globe concerned with harnessing the benefits of the digital economy and society for their citizens and firms. provides more detailed guidance and case studies of best practices in the regulation of the digital economy.

c. G5 Benchmark (ITU)

Link: https://app.gen5.digital/benchmark/metrics

Type: Framework

Related SDG(s): 9, 17

Target audience: Regulatory bodies, policymakers

Short description:

The G5 benchmark is a data-driven tool to fast-track collaborative, cross-sector Digital regulation. It helps country regulators to establish roadmaps toward G5 Digital collaborative regulation excellence and inclusive digital transformation across all sectors of the economy.

d. G5 Accelerator (ITU)

Link: https://gen5.digital/

Type: Capacity-building tools

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector

Short description:

The ITU G5 Accelerator brings together high-value tools and resources offering practical, step-by-step support for countries already embarked or planning to embark on their digital transformation journey.

e. Best practices Guidelines of the Global Symposium for Regulators (GSR) (ITU)

Link: https://www.itu.int/en/ITU-D/Regulatory-Market/Pages/bestpractices.aspx

Type: Framework

Related SDG(s): 9, 17

Target audience: Regulatory authorities, policymakers

Short description:

ITU convenes global and regional forums to discuss global trends in regulation for Sector Members and other national and international stakeholders, through organizing the Global Symposium for Regulators (GSR) as well as strategic dialogues on topical policy, legal, regulatory, as well as on economic and financial issues and market developments. This page contains a repository of tools for an effective policy, legal and regulatory environment for the ICT sector, stemming from previous Global

Symposium for Regulators (GSR). The regulatory best practice guidelines aim to fast forward digital connectivity for all to allow all to participate in the digital economy and benefit from digital transformation.

f. The Global ICT Regulatory Outlook (GIRO) (ITU)

Link: https://www.itu.int/en/ITU-D/Regulatory-Market/Pages/giro20.aspx

Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies

Short description:

The Global ICT Regulatory Outlook (GIRO) series lays out a broad canvas of how regulation and digital markets are interacting – and advocates for collaborative regulatory reform in delivering meaningful connectivity and inclusive digital markets. The report is both dense, offering deep-dive detail, and high-level – pointing up the headline trends, challenges and opportunities for regulators as ICT broadens out to touch all civic, professional and personal aspects of our lives within the phenomenon we call the digital global economy.

International Telecommunication Union (ITU) - The World Bank

g. Digital Regulation Platform (ITU-The World Bank)

Link: https://digitalregulation.org/about/

Type: Capacity-building tools

Related SDG(s): 9, 17

Target audience: Regulatory bodies, policymakers, private sector, academia, the general public

Short description:

The Digital Regulation Platform aims to provide practical guidance and best practice for policymakers and regulators across the globe concerned with harnessing the benefits of the digital economy and society for their citizens and firms. The content provides an update on the basics of ICT regulation in light of the digital transformation sweeping across sectors and also includes new regulatory aspects and tools for ICT regulators to consider when making regulatory decisions. The Platform also incorporates the 2020 Digital Regulation Handbook, originally published as the Telecommunication Regulation Handbook, and now updated to mark the 20th anniversary of the publication and provides more detailed guidance and case studies of best practices in the regulation of the digital economy.

United Nations Development Programme (UNDP)

h. Data to Policy Navigator (UNDP)

Link: https://www.datatopolicy.org/

Type: Policy tool

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies

Short description:

The Data to Policy Navigator is designed to assist policymakers in grasping the fundamentals of data-driven decision-making. It provides a step-by-step guide and a range of practical examples from across the globe on how to integrate data into policy and programme development.

i. Digital Standards (UNDP)

Link: https://www.undp.org/digital/standards

Type: Guide

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies

Short description:

The UNDP Digital Standards provide guidance for teams on best practices when creating digital solutions for development. We are sharing them publicly as they may help other teams think through the process.

2. Connectivity and digital Infrastructure

Broadband commission for sustainable development (ITU/UNESCO)

a. The State of Broadband (Broadband Commission)

Link: https://www.broadbandcommission.org/publication/state-of-broadband-2022/

I   Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector

Short description:

The State of Broadband annual report is a unique, global snapshot of broadband network access and affordability. Written through a consensus-driven framework and drawing on the insights of the Commission's high-level, multistakeholder membership, the report provides:
1. B. a snapshot of global progress on reaching universal connectivity;
2. input on the most pertinent issues facing broadband development;
3. updates on the 2025 Broadband Advocacy Targets; and
4. insights from Commissioners on the policy actions needed to reach universal connectivity.

b. Quick Guide: 2025 Broadband Advocacy Targets (Broadband Commission)

Link: https://broadbandcommission.org/publication/2025-broadband-advocacy-targets/

Type: Research report, Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector, academia

Short description:

The seven Advocacy Targets of the Broadband Commission reflect ambitious and aspirational goals and function as a policy and programmatic guide for national and international action in broadband development. Starting initially with four connectivity goals established in 2011, the Targets were expanded to five in 2013, with the addition of the gender equality goal, and eventually to seven in 2018.

c. 21st Century Financing Models for Bridging Broadband Connectivity Gaps (Broadband Commission)

Link: https://broadbandcommission.org/publication/21st-century-financing-models/

Type: Research report, Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector

Short description:

The report's main objective is to propose models for investing in, financing, and funding broadband development beyond its current geographical and demographic footprint. This effort includes conducting a comprehensive study of the financing models used so far, together with developing new models and broadening the base of contributors to disrupt the current way of thinking and operating. The report thus include recommendations for innovative financing models.

d. Strategies Towards Universal Smartphone Access Report (Broadband Commission)

Link: https://broadbandcommission.org/publication/strategies-towards-universal-smartphone-access/

Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector

Short description:

The report, 'Strategies towards universal smartphone access' by the Broadband Commission Working Group on Smartphone Access represents the first multi-stakeholder analysis on the topic of smartphone access. This study aims to evaluate their importance and make recommendations of priority actions – to drive real progress in the area of smartphone access and tackling the digital divide.

International Telecommunication Union (ITU)

e. The Global Connectivity Report (ITU)

Link: https://www.itu.int/itu-d/reports/statistics/global-connectivity-report-2022/

Type: Policy tool

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector

Short description:

The Global Connectivity Report 2022 takes stock of the progress in digital connectivity over the past three decades. It provides a detailed assessment of the current state of connectivity and how close the world is to achieve universal and meaningful connectivity, using a unique analytical framework. It goes on to showcase solutions and good practices to accelerate progress. The second part of the report consists of seven thematic deep dives on infrastructure, affordability, financing, the pandemic, regulation, youth, and data.

f. Infrastructure and Connectivity Development Frameworks (ITU)

Link: https://www.itu.int/en/ITU-D/Regulatory-Market/Pages/InfrastructurePortal.aspx

Type: Framework

Related SDG(s): 9, 17

Target audience: Policy makers, regulatory bodies, private sector

Short description:

ITU is working on technical, economic, policy and regulatory research and collecting data on the evolution of connectivity and infrastructure development world-wide.

This portal gathers the results from this work, information on activities and initiatives done by ITU Members. It also highlights key findings from ITU publications, studies, research, ITU Study Groups, and data and analysis from the ITU ICT Eye database.

g. The Last-mile Internet Connectivity Solutions Guide (ITU)

Link: https://www.itu.int/en/ITU-D/Technology/Pages/LMC/LMC-Home.aspx

Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector

Short description:

The Last-mile Internet Solutions Guide consists of guidelines that can help policymakers and professionals select and customize appropriate last-mile connectivity solutions. This guide is part of a broader Last-mile Connectivity Toolkit, which aims to drive new collaborative strategies to extend connectivity to those at the bottom of the social pyramid, and to enable key stakeholders to take a more holistic approach that treats broadband as a basic public utility and core tool for socio-economic development. To complement this Solutions Guide, ITU Development Bureau is developing a range of resources to help Member States address last-mile connectivity challenges, including a database of

case studies (LMC Case Studies Database) and interactive last-mile connectivity diagnostic and decision-making tools.

h. Guide for procuring last-mile connectivity data networks (ITU)

Link: https://www.itu.int/pub/D-TND-05-2022/fr

Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector

Short description:

Traditionally, the Internet service providers build, deploy and provide data networks and services to end users. However, in some instances, building connectivity networks and providing connectivity services are initiated by other public or private institutions such as banks, electricity companies, educational institutions, communities, or governments, to ensure additional coverage, quality of service, and/or affordability. In such cases, it is often important to procure the connectivity project in order to build resilient data networks and provide required digital services.

This guide is designed to assist requisitioners in procuring last-mile connectivity networks and services based on the principles of affordability, usage, financial viability, structure, and sustainability. The guide provides a step-by-step overview of the process of procuring last-mile connectivity data networks and services. It complements The Last-mile Internet Connectivity Solutions Guide, which was designed to address the lack of network infrastructure, with a view to encouraging more affordable service delivery.

i. Telecommunications/ICTs for rural and remote areas (ITU)

Link: https://www.itu.int/hub/publication/d-stg-sg01-05-1-2021/

Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector, academia

Short description:

Telecommunications/ICTs for rural and remote areas: This report analyses, among other topics, solutions for the ICT connection of rural and remote areas and small island states; demand, cost and financing mechanisms for the deployment of ICTs; relevant technologies, services and applications; capacity building; as well as policies necessary to connect rural and remote areas.

j. ICT and Broadcasting Infrastructure Sharing Guidelines (ITU)

Link: https://www.itu.int/en/ITU-D/Regulatory-Market/Documents/Infrastructure_portal/CRASA-ITU-IS_Guidelines_Final_Jan2018.pdf

Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector

Short description:

The main objective of the SADC Infrastructure Sharing Guidelines project is to allow for regional harmonization in: (I) Achieving an enabling policy and regulatory framework conducive to infrastructure sharing; (ii) Identifying existing platforms (transmission and contribution networks) suitable for infrastructure sharing in SADC; (iii) Enabling competition in access networks and provide positive environmental impacts; (iv) Providing positive incentives to roll out to underserved areas; (v) Improving quality of service, especially, in the rural areas; and (vi) Ensuring positive impact on the wholesale and retail ICT and broadcasting services prices.

k. ICT infrastructure business planning toolkit (ITU)

Link: https://www.itu.int/en/publications/ITU-D/Pages/publications.aspx?lang=en&media=electronic&parent=D-PREF-EF.ICT_STRUCT_KIT-2019

Type: Toolkit

Related SDG(s): 9, 17

Target audience: Private sector

Short description:

The ICT infrastructure business planning toolkit offers regulators, policymakers, and stakeholders a practical methodology for the accurate economic evaluation of proposed broadband infrastructure installation and deployment plans. The expert guidance offered by the toolkit will greatly facilitate the development of a credible and coherent business plan that is adaptable to a wide range of broadband infrastructure deployment projects.

l. Financing universal access to digital technologies and services (ITU)

Link: https://www.itu.int/hub/publication/D-PREF-EF-2021-ECO_FIN/

Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policy makers, regulatory bodies, private sector

Short description:

Designed to provide practical guidance to our members and other stakeholders, this report contributes to reviewing and rethinking funds as a concept, exploring alternative models using a combination of monetary and non-monetary contributions and implementing innovative risk-mitigation mechanisms and financial solutions for smarter investments. It also provides guidance on the policy and regulatory frameworks needed to attract greater private sector participation in financing universal connectivity, access and uptake and explores business models for deploying supply and demand-side projects and initiatives in the digital era.

m. Setting the scene for 5G: Opportunities and challenges (ITU)

Link: https://www.itu.int/en/ITU-D/Documents/ITU_5G_REPORT-2018.pdf

Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector, academia, general public

Short description:

This report highlights 16 key issues and responses for regulators and policy-makers to consider as they formulate strategies to stimulate investment in 5G networks. These include: the investment case; spectrum management issues; infrastructure sharing; access costs; investment incentives — and more.

n. Guidelines on Establishing or Strengthening National Broadband Mapping Systems (ITU)

Link: https://www.itu.int/en/ITU-D/Regional-Presence/Europe/Documents/Projects/2022/Executive Meeting on Broadband Mapping Systems/MAY 2022 ITU Guidelines for establishing or strengthening national broadband mapping systems_v1.2 - RTR1_AG%5b1%5d.pdf

Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policy makers, regulatory bodies, private sector

Short description:

These Guidelines are a set of operational Guidelines serving as a baseline tool for non-EU NRAs and other institutions in charge of broadband mapping systems at the national level to support them in the establishment or strengthening of broadband mapping tools. The guidelines address both pillars of strategic/regulatory matters and project setup/technical requirements which are nevertheless intertwined. The Guidelines draw upon the experiences of various stakeholders, including NRAs from the European Union, BEREC, and the European Commission, and address the critical questions faced by all stakeholders in this field.

o. Broadband Map - Identify gaps, build, connect (ITU)

Link: https://www.itu.int/en/ITU-D/Technology/Pages/InteractiveTransmissionMaps.aspx

Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector, academia

Short description:

This webpage serves as a repository of materials to support Member States in identifying gaps to establish national broadband maps, and guidelines to implement such maps.

p. Broadband maps (ITU)

Link: https://bbmaps.itu.int/bbmaps/

Type: Policy tool

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory authority, industry stakeholders

Short description:

The ITU broadband maps is an interactive data driven tool providing mappings of broadband coverage across the world.

q. ITU-Development Expert Working Group guidance on connectivity, digital transformation and ICT devices (ITU)

Link: https://www.itu.int/itu-d/sites/studygroups/

Type: Expert working group – policy guidance

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector, academia

Short description:

ITU Development-Study Groups provide an opportunity for members to share experiences, present ideas, exchange views, and achieve consensus on appropriate strategies to address ICT priorities. In particular, ITU-D Study Group 1 focuses on answering questions and building expertise on enabling environment for meaningful connectivity, the study group 2 on Digital transformation and the study group 4 focuses on Conformity and Interoperability of ICT Devices (C&I).

r. Report - Question 4/1: Economic policies and methods of determining the costs of services related to national telecommunication/ICT networks including next-generation networks (ITU)

Link: https://www.itu.int/pub/D-STG-SG01.04.1-2017

Type: Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, private sector, academia

Short description:

This report takes stock of different cost models and new methods of charging telecommunication/ICT services in a Next Generation Network (NGN) environment. While services have become more affordable, prices could come down further given the cost reductions associated with provision of these services in an NGN environment. What are the factors preventing this from happening now? The report shares some guidelines on how to promote infrastructure sharing, how to encourage price/tariff reduction to consumers through competition and how access to and use of telecommunication/ICT services can be further stimulated.

United Nations Economic Commission for Europe (UNECE)

s. UNECE NEXUS: Sustainable Mobility and Smart Connectivity (UNECE)

Link: https://unece.org/sites/default/files/2021-08/2015779_R_web.pdf

Type: Framework

Related SDG(s): 8, 9

Target audience: Regulatory bodies, policymakers, private sector, academia, the general public

Short description:

The "Sustainable mobility and smart connectivity" publication reviews the challenges affecting mobility and connectivity within the ECE region. It highlights the vital importance that mobility and connectivity play in the operation of an economy and in moving goods and people within and across borders showing that the digitalization of many of these processes are key to improving efficiency and effectiveness. Addressing the challenges in these two areas is fundamental in assisting Member States in achieving the Sustainable Development Agenda. Each country has actions to pursue in relation to meeting these challenges and this publication highlights which are the main ones.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

t. Global Declaration on Connectivity for Education (UNESCO)

Link: https://en.unesco.org/futuresofeducation/sites/default/files/2022-02/Rewired%20Global%20Declaration%20on%20Connectivity%20for%20Education.pdf

Type: Normative instrument

Related SDG(s): 4, 9

Target audience: Regulatory bodies, policymakers, private sector, academia, the general public

Short description:

Three core principles, each with underlying commitments, will help ensure that the digital transformation of education accelerates progress towards the education commitments of the 2030 Agenda for Sustainable Development. Operationalizing these principles will require a whole-of-government approach and should draw inspiration and guidance from the UN Secretary General's Roadmap for Digital Cooperation.

3. Data protection, data privacy, cybersecurity and mitigation of cyber harassment

International Telecommunication Union (ITU)

a. The Global Cybersecurity Index (GCI) (ITU)

Link: https://www.itu.int/en/ITU-D/Cybersecurity/Pages/global-cybersecurity-index.aspx

Type: Guidelines

Related SDG(s): 9, 16, 17

Target audience: Policymakers, regulatory bodies, private sector

Short description:

GCI is a trusted reference that measures the commitment of countries to cybersecurity at a global level – to raise awareness of the importance and different dimensions of the issue. As cybersecurity has a broad field of application, cutting across many industries and various sectors, each country's level of development or engagement is assessed along five pillars – (i) Legal Measures, (ii) Technical Measures, (iii) Organizational Measures, (iv) Capacity Development, and (v) Cooperation – and then aggregated into an overall score. Based on a multi-stakeholder approach and initiative, the GCI leverages the capacity and expertise of different organizations (see key partners below), with the objectives of improving the quality of the survey, fostering international cooperation, and promoting knowledge exchange on this topic.

b. Cybersecurity programme: CIRT framework (ITU)

Link: https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-CYBERSEC-2021-01-PDF-E.pdf

Type: Framework

Related SDG(s): 9, 16, 17

Target audience: Policymakers, regulatory bodies

Short description:

This report sets out how to establish a national CIRT and outlines cooperation mechanisms at the regional and international levels that identify, manage, and respond to cyberthreats. The ITU CIRT framework is used in ITU engagements for beneficiary country assistance to establish a national CIRT that serves as a trusted central coordination point of contact for national cybersecurity policy, aimed at identifying, defending, responding and managing cyber threats. ITU assists the beneficiary country in assessing, building, and deploying the technical capabilities and related trainings necessary to establish its national CIRT.

c. Child Online Protection (COP) Guidelines for Policymakers (ITU)

Link: https://www.itu-cop-guidelines.com/policymakers

Type: Guidelines

Related SDG(s): 4, 9, 16, 17

Target audience: Policymaker

Short description:

The COP Guidelines for policy-makers offer national governments and policy-makers a user-friendly and flexible framework that supports the development of targeted and effective measures for child online protection at the national level. Policy-makers play a key role in ensuring children's safety and well-being online and offline. Child online protection is a global challenge and requires a global approach based on harmonized and inclusive national strategies on COP. The Guidelines for policy-makers propose concrete recommendations on how to develop a national strategy on COP, provided with tools to identify key stakeholders to engage with, coordination efforts and alignment with existing national frameworks and strategy plans.

d. Child Online Protection Guidelines for Industry (ITU)

Link: https://www.itu-cop-guidelines.com/industry

Type: Guidelines

Related SDG(s): 4, 9, 16, 17

Target audience: Private sector, industry

Short description:

The Guidelines for industry on Child Online Protection focus on protecting children in all areas and against all risks of the digital world and as such, highlight good practice of industry stakeholders that can be considered in the process of drafting, developing and managing businesses child online protection policies and measures. As a toolbox, these guidelines also aim at enhancing business success by helping large and small operations and stakeholders to develop and maintain an attractive and sustainable business model, while understanding the legal and moral responsibilities towards children and society. The Guidelines for industry dedicate additional attention the special situation children living with disabilities and highlight key areas for protecting and promoting children's rights such as:

- integrating child rights considerations into all appropriate corporate policies and management processes,
- developing standard processes to handle child sexual abuse material (CSAM),
- creating a safer and age-appropriate online environment,
- educating children, carers and educators about children's safety and the responsible use of ICTs and promoting digital technology as a mode for increasing civic engagement.

These guidelines were developed by ITU and a working group of leading expert. The working group was chaired by UNICEF and coordinated by ITU.

e. Child Online Protection Guidelines for Parents and Educators (ITU)

Link: https://www.itu-cop-guidelines.com/parentsandeducators

Type: Guidelines

Related SDG(s): 4, 9, 16, 17

Target audience: Parents, caregivers and educators

Short description:

The Guidelines for parents and educators on Child Online Protection aim to sensitize families to the potential risks and threats and help cultivate a healthy and empowering online environment at home, and in the classroom. Highlighting key recommendations the guidelines emphasize the importance of open communication and ongoing dialogue with children, creating a safe space where young Internet users feel empowered to raise concerns. Defining key risks and harms for children online, including privacy issues, cyberbullying, grooming and sexual exploitation and abuse (CSEA), the guidelines further dedicate additional attention to the impact of new and emerging technologies on children. In addition, while addressing the importance of the situation faced by children with disabilities, for whom the online world offers a particularly crucial lifeline to full – and fulfilling – social participation; the consideration of the special needs of migrant children and other vulnerable groups has also been included.

f. Child Online Protection Guidelines for Children (ITU)

Link: https://www.itu-cop-guidelines.com/children

Type: Guidelines

Related SDG(s): 4, 9, 16, 17

Target audience: Children, parents, caregivers and educators

Short description:

The Guidelines help children and youth learn how to manage risks online, while empowering them to exercise their rights online and engage in opportunities that the Internet offers. The COP Guidelines for children are developed for three different age groups:

1. Online with Sango – a storybook for children under 9 years old which presents six scenarios with questions for children to think about and answer.
2. Work with Sango – a workbook for children age 9-12 which contains educational
3. activities, which children can complete to learn about their rights online, and also risks to their safety online.
4. The Net rules challenge – a social media campaign related to this website for young people age 13-18 years which helps them learn how to manage risks online, supporting them in a safe and positive online experience.

g. Child Online Protection Online Self-Paced Trainings for Policymakers (ITU)

Link: https://academy.itu.int/training-courses/full-catalogue/child-online-protection-policy-makers

Type: Capacity-building tools

Related SDG(s): 4, 9, 16, 17

Target audience: Policymakers

Short description:

This course is designed for policy makers to learn about child online behaviors, threats and risks associated with cyberspace, and help them to develop national policies and strategies in line with current global trends, that are holistic, inclusive, and evidence based.

Learning Objectives:
- To know more about children's use of the Internet and their rights
- To learn how technologies impact children , risks and harms online.
- Learn about the principles of Safety by Design for policy making on child online protection
- To learn about the different global and regional frameworks on Child Online Protection
- Synthesizing the elements from the global frameworks to apply in the local context
- Familiarizing with the global actors involved in protection of children online
- How to develop a multi stakeholder coordinated national child online protection strategy
- Coordination process between different line ministries and national stakeholders on Child Online Protection, including introduction to child participation frameworks, especially related to policy making.
- Tools for effective policymaking on Child Online protection
- To learn more about the core child protective services that play a critical role in COP
- How to prepare national policies, especially adapting to emerging trends on ICTs

h. Child Online Protection Online Self-Paced Training for Parents and Carers (ITU)

Link:

- Introductory course: https://academy.itu.int/training-courses/full-catalogue/child-online-protection-parents-entry
- Intermediate course: https://academy.itu.int/training-courses/full-catalogue/child-online-protection-parents-intermediate

Type: Capacity-building tools

Related SDG(s): 4, 9, 16, 17

Target audience: Parents, caregivers

Short description:

The introductory course is designed to create awareness among parents, guardians and caregivers about various child online engagements, their risks and benefits and help you to create a safer and more beneficial online family experience for your child at home. Learning Objectives:

- understand the importance of awareness about children's online engagements;
- recognize children's rights on the Internet;
- be aware of online risks and harm associated with the internet, and children's reactions to being exposed to them;
- know how to create safe environments for children;
- be familiar with the ways to help children at risk, offer your support to those harmed, and useful resources.

The intermediate course is designed to educate parents/caregivers/guardians on their role as social support in helping their children who might have encountered online harm. Learning Objectives:

- be able to recognize signs of child online exploitation;
- know to avoid victimizing children who were sexually exploited;
- understand the types of online risks and harm associated with the internet, and how children will react to such situations;
- be able to perform immediate actions to help children subjected to online violence;
- be familiar with the resources for further advice and support.

i. Child Online Protection Trainings for academic and non-academic staff and social workers (ITU)

Links:

- Introductory course: https://academy.itu.int/training-courses/full-catalogue/child-online-protection-academic-and-non-academic-staff-entry
- Intermediate course: https://academy.itu.int/training-courses/full-catalogue/child-online-protection-social-workers-academic-and-non-academic-staff-intermediate

Type: Capacity-building tools

Related SDG(s): 4, 9, 16, 17

Target audience: Parents, caregivers

Short description:

The introductory course is designed to create awareness among educators, teachers, youth workers, and youth organizations on the protection and rights of children online. The course is aimed to help educators create a safer online school experience for their students. Learning Objectives:
- understand online circumstances that can put children at risk of being harmed;
- Identify risks for children while they explore the online world such as mis/disinformation, cyberbullying, online radicalization, screen time, and inappropriate content;
- know which safety measures should be implemented at school and classroom levels to mitigate online risks;
- know how to properly respond and report if children were harmed online;
- be familiar with additional resources to get further support

The intermediate course is designed to help educators better understand the risks related to Online Child Sexual Exploitation and Abuse (further - OCSEA), and how the educational environments can be used to prevent children from harm associated with OCSEA. Learning Objectives:
- understand the role of educators in child online protection;
- be familiar with the 4C's classification of online risks;
- be able to identify different types of OCSEA and understand how they happen;
- know how to respond to the harmful online incidents and report them.

j. Child Online Protection Online Self-Paced Training for Industry (ITU)

Link: https://www.itu.int/en/ITU-D/Cybersecurity/Pages/COP/Trainings.aspx

Type: Capacity-building tools

Related SDG(s): 4, 9, 16, 17

Target audience: Industry

Short description:

This course is upcoming and will be designed to raise awareness of industry stakeholders on COP related challenges and help them mitigating risks and challenges from an industry perspective.

k. Child Online Protection Online Self-Paced Training for Children and Adolescents (ITU)

Link: https://www.itu.int/en/ITU-D/Cybersecurity/Pages/COP/Trainings.aspx

Type: Capacity-building tools

Related SDG(s): 4, 9, 16, 17

Target audience: Children and adolescents

Short description:

This course is upcoming and will be designed to raise awareness of children and adolescents on COP related risks and threats, and help them mitigating those, including through teaching their rights online.

International Telecommunication Union (ITU) / UN Digital Transformation Group for Europe and Central Asia

l. Data Protection Online Self-Paced Lecture (ITU-UNDTG4ECA)

Link: https://www.itu.int/en/ITU-D/Regional-Presence/Europe/Pages/Events/2021/Data%20Protection%20Training/Data-Protection-Training-UN.aspx

Type: Capacity building tools

Related SDG(s): 9, 16, 17

Target audience: UN System staff, general public

Short description:

This lecture targeting RCs, RCOs, and UNCTs in Europe and Central Asia and beyond aimed at raising awareness on/ and provide elementary understanding of data protection , challenges and opportunities. It further aimed at providing relevant resources for future work and engagement related to data protection issues. In concrete, the workshop addressed and provided an overview of the following: practical examples of the application of data protection in everyday life; a brief history of the subject; the institutionalization of data protection; the main definitions related to this topic, with a focus on sensitive personal data and data subject and processor; the fundamental principles of data protection; individual rights; consent and interest and finally; notification requirements.

II. Adoption

1. Digital skills, education and competencies for a skilled population and highly skilled professionals

Broadband Commission for Sustainable Development (ITU/UNESCO)

a. Artificial Intelligence and Digital Transformation Competencies for Civil Servants (Broadband Commission)

Link: https://broadbandcommission.org/publication/artificial-intelligence-and-digital-transformation/

Type: Guidelines

Related SDG(s): 4, 9, 17

Target audience Policy makers, civil servants

Short description:

Written by the Broadband Commission Working Group on AI Capacity Building, the Working Group Report introduces a competency framework for civil servants, spelling out the Artificial Intelligence and Digital Transformation Competencies needed today. The framework aims to strengthen the abilities of civil servants to effectively use digital tools, develop and implement digital transformation projects, and address complex governance challenges. The report also offers 9 key policy recommendations for the governments, academia, and private sector.

b. Recommendations of the Broadband Commission on SDG4: Quality Education (Broadband Commission)

Link: https://broadbandcommission.org/publication/recommendations-sdg4/

Type: Guidelines

Related SDG(s): 4

Target audience Policy makers, private sector, academia

Short description:

This is a compilation of research and recommendations relating to education from the Broadband Commission for Sustainable Development which can be found at www.broadbandcommission.org/publications. This is not an exhaustive list but rather an illustrative example. The compilation focus on the following areas:

- Digital Skills Development;
- Transforming Education: Policies and Best Practices;
- Financing Connectivity and Infrastructure;
- Plan for Future Technology;
- COVID-19 Response for Education.

International Labour Organization (ILO) – International Telecommunication Union (ITU)

c. Digital Skills for Jobs Campaign (ILO-ITU)

Link: https://www.decentjobsforyouth.org/campaign/digital-skills

Type: Guidelines

Related SDG(s): 4, 8, 17

Target audience: General public, academia

Short description:

Today, most jobs require some level of digital skills. Key growth areas alone have created demand for tens of millions of jobs around the world. These jobs often go unfilled due to skills shortages. Launched by partners of the Global Initiative on Decent Jobs for Youth, and led by ITU and ILO, the Digital Skills for Jobs Campaign recognizes that investing in youth by developing their digital skills is a win-win strategy: It addresses the skills gap by increasing young people's employability, creating quality jobs, and sparking innovation across all sectors in the digital economy.

International Telecommunication Union (ITU)

e. Digital Skills Toolkit (ITU)

Link: https://www.itu.int/en/ITU-D/Digital-Inclusion/Youth-and-Children/Pages/Digital-Skills-Toolkit.aspx

Type: Toolkit

Related SDG(s): 4, 9, 17

Target audience Policy makers, private sector, academia

Short description:

This toolkit provides policymakers and other stakeholders with practical information, examples, and step-by-step guidance to develop a national digital skills strategy. Topics in the toolkit include: engaging the right stakeholders, inventorying and assessing existing policies, developing strategies for varied proficiency levels, creating strategies for under-represented groups such as women and persons

with disabilities, organizing campaigns and joining regional or international initiatives, and monitoring and updating the strategy. The toolkit converts complexity into manageable tasks and includes examples of programmes and frameworks from around the world to serve as models and inspiration.

f. Digital Skills Assessment Guidebook (ITU)

Link: https://academy.itu.int/itu-d/projects-activities/research-publications/digital-skills-insights/digital-skills-assessment-guidebook

Type: Guidelines

Related SDG(s): 4, 8, 9, 17

Target audience Policy makers, private sector, academia

Short description:

ITU's Digital Skills Assessment Guidebook has been designed to serve as a comprehensive, practical step-by-step tool for national digital skills assessments. The guidebook can be used to determine the existing supply of a digitally skilled cohort at a national level, to assess skills demand from industry and other sectors, to identify skills gaps, and to develop policies to address future digital skills requirements.

United Nations Development Program (UNDP)

g. Digital Training for Civil Servants (UNDP)

Link: https://academy.itu.int/training-courses/full-catalogue/inclusive-digital-transformation-achievement-sdgs-and-samoa-pathway-sids

Type: Training

Related SDG(s): 9,17

Target audience: Civil Servants, Governments

Short description:

This course offers an online introduction to support civil servants and other stakeholders in the digital ecosystem in shaping an inclusive, whole-of-government approach to digital transformation in Small Island Developing States (SIDS). The course provides an introduction to digital transformation in SIDS around five pillars of digital transformation: government, infrastructure, regulation, business, and people. The course offers the latest available data on digital transformation in SIDS; and highlights examples, challenges and opportunities and case studies of innovation across SIDS. It features analytical tools, such as the UNDP Digital Readiness Assessment and UNCDF Inclusive Digital Economy Scorecard and offers links to resources and extensive lists of additional readings from UNCDF, UNDP, ITU, World Bank, GSMA and others.

h. AI Empowerment Programme for Civil Servants (UNDP)

Link: https://www.undp.org/digital

Type: Capacity Building

Related SDG(s): 4,8,9,11,17

Target audience: Civil Servants, policymakers

Short description:

Guided by the capacity-building framework that the Broadband Commission Working Group has developed, UNDP is implementing an AI capacity-building program that is being implementedfor civil servants in someselected countries. These programs wereare customized as per each country's needs.

i. Digital Leadership Training Modules (UNDP)

Link: https://undp.sharepoint.com/:f:/r/teams/RBAP/KnowledgeHub/Shared Documents/UNDP RIC Digital Leadership Training Modules?csf=1&web=1&e=qpDi3Y

Type: Training

Related SDG(s): 9,17

Target audience: Civil Servants, Governments

Short description:

This course offers an online introduction to support civil servants and other stakeholders in the digital ecosystem in shaping an inclusive, whole-of-government approach to digital transformation in Small Island Developing States (SIDS). The course provides an introduction to digital transformation in SIDS around five pillars of digital transformation: government, infrastructure, regulation, business, and people. The course offers the latest available data on digital transformation in SIDS; and highlights examples, challenges and opportunities and case studies of innovation across SIDS. It features analytical tools, such as the UNDP Digital Readiness Assessment and UNCDF Inclusive Digital Economy Scorecard and offers links to resources and extensive lists of additional readings from UNCDF, UNDP, ITU, World Bank, GSMA and others.

j. Digital Guides (UNDP)

Link: digitalguides.undp.org

Type: Knowledge resourse

Related SDG(s): All

Target audience: Programme People in the UN system and beyond

Short description:

The Global Policy Network and Chief Digital Office have collaborated on UNDP has produced digital guides that explore the impact of digital technologies on development contexts within UNDP's thematic areas. These resources cover all six Signature Solutions, offering practical guidance and insights to empower programme officers to include digital into their work.

United Nations Economic Council for Europe (UNECE)

k. Ageing in the Digital Era (UNECE)

Link: https://unece.org/sites/default/files/2021-07/PB26-ECE-WG.1-38.pdf

Type: Framework

Related SDG(s): 4, 10, 17

Target audience: General public, academia

Short description:

Ageing in the digital era – UNECE highlights key actions to ensure digital inclusion of older persons. Digital skills are a precondition for digital inclusion. Many older people today will have passed their working and personal lives without exposure to digital technologies or routine computer use and without the need to acquire digital skills. Only one in four older Europeans have basic or above basic digital skills, compared to two in three in the age group 35 to 44, three in four among 25-34 year olds and four in five among youth (16-24).

United Nations Educational, Scientific and Cultural Organization (UNESCO)

l. ICT Competency Framework for Teachers (UNESCO)

Link: https://unesdoc.unesco.org/ark:/48223/pf0000265721

Type: Capacity-building tools

Related SDG(s): 4

Target audience: Policymakers

Short description:

It informs teacher-training policies and programmes to strengthen the use of ICT in Education. Its target audience is teacher-training personnel, educational experts, policy-makers, teacher support personnel, and other professional development providers. The ICT CFT assumes a working knowledge

of the benefits of ICT in Education and encourages contextualization and adaptation of teacher professional development as relevant.

m. Designing inclusive digital solutions and developing digital skill: Guidelines (UNESCO)

Link: https://en.unesco.org/themes/literacy-all/pearson-initiative/guidelines

Type: Guidelines

Related SDG(s): 4

Target audience: Policymakers

Short description:

Technology should be developed in ways to better accommodate people with nascent digital skills and low levels of literacy. Simply put, technology should adapt/change to meet the needs of different people rather than people adapting/changing to use technology. This concerns hardware as well as software. Both hardware and software can make technology usable to people with very few digital skills and low levels of literacy.

n. Ensuring effective distance learning during COVID-19 disruption: Guidance for teachers (UNESCO)

Link: https://unesdoc.unesco.org/ark:/48223/pf0000375116

Type: Guidelines

Related SDG(s): 4

Target audience: Teachers, educators

Short description:

It aims to help teachers understand key issues related to home-based distance learning during COVID-19 school closures and design and facilitate effective learning activities. This Guidance includes resources, examples, and tips for teachers and educators from pre-primary to upper-secondary level. Available in Arabic, Bangla, Chinese, English, Farsi, French, Portuguese, Russian, and Spanish.

United Nations Industrial Development Organization (UNIDO)

o. Online training course "Digital Business Innovations for Women Entrepreneurs and Managers" (UNIDO)

<u>Link:</u>

- https://learning.unido.org/course/view.php?id=80
- https://learning.unido.org/course/view.php?id=34

<u>Type</u>: Capacity-building tools

<u>Related SDG(s)</u>: 4, 8, 10

<u>Target audience:</u> General public

<u>Short description:</u>

To help women capitalize on the benefits stemming from Industry 4.0, UNIDO developed an online training course "Digital Business Innovations for Women Entrepreneurs and Managers". The course consists of the following one-hour training modules delivered in the form of video lectures by reputable experts with accompanying presentations:

- Basics of digital technologies;
- Digital marketing;
- Digital project management;
- E-commerce;
- Social media marketing (SMM);
- Customer relationship management (CRM).

The course is accessible after registration and login free of charge in English and Russian on the UNIDO e-learning platform learning.unido.org.

2. Digital inclusion

International Telecommunication Union (ITU)

a. ICT Accessibility - The key to inclusive communication (on-line self-paced training) (ITU)

<u>Link:</u>   https://academy.itu.int/training-courses/full-catalogue/ict-accessibility-key-inclusive-communication-line-self-paced-training

<u>Type</u>: Capacity-building tools

<u>Related SDG(s)</u>: 10, 17

Target audience: Policymakers, regulatory bodies, private sector, academia, general public

Short description:

This free of charge self-paced course has been designed to be accessible for everyone including by persons with disabilities. The course, estimated to about 8h, provides a holistic knowledge on the topic of ICT accessibility through 3 Modules as follows:

- Module 1: Enabling communication for all through ICT Accessibility This module aims to provide learners with an introduction to ICT accessibility for persons with disabilities;
- Module 2: ICT Accessibility policy regulations and standards;
- Module 3: Achieving ICT accessibility through public procurement.

b. How to ensure inclusive digital communication during crises and emergency situations (online self-paced trainings) (ITU)

Link: https://academy.itu.int/index.php/training-courses/full-catalogue/how-ensure-inclusive-digital-communication-during-crises-and-emergency-situations

Type: Capacity-building tools

Related SDG(s): 9, 10, 16, 17

Target audience: Policymakers, regulatory bodies, private sector, academia, general public

Short description:

This self-paced online course on inclusive digital communication during crises and emergency situations has been developed in response to the recent COVID-19 pandemic. It is in line with, and in support to the UN Secretary General Policy on Disability Inclusion and the BDT work in ICT/digital accessibility to ensure digital inclusion. It comprises one module and aims to provide direction and practical guidance on how to develop and deliver inclusive digital communication during times of crisis or emergency. This course is an introduction to inclusive digital communication. It highlights the importance of delivering accessible digital information and communication across a range of digital platforms, and in multiple formats. It focuses on the importance of incorporating ICT accessibility when developing contingency and national emergency telecommunication plans at local, regional, and national levels. This course is estimated to take approximately one and a half hours (1.5hrs) to complete.

c. Guidelines on how to ensure that digital information, services and products are accessible by all people, including Persons with Disabilities during COVID-19 (ITU)

Link: https://www.itu.int/en/ITU-D/Digital-Inclusion/Persons-with-Disabilities/Pages/COVID-19-Guidelines.aspx

Type: Guidelines

Related SDG(s): 9, 10, 16, 17

Target audience: Policymakers, regulatory bodies, private sector

Short description:

Given the major role of the ICTs in the global COVID-19 pandemic, the Guidelines containing key messages and actions are provided to ensure that digital information, services and products delivered globally are accessible to all people including Persons with Disabilities, and no one is left behind in this global challenging crisis.

d. National Programme in Web Accessibility: "Internet for @ll" (ITU)

Link: https://www.itu.int/en/ITU-D/Digital-Inclusion/Persons-with-Disabilities/Pages/Internet-for-@ll.aspx

Type: Capacity-building tool

Related SDG(s): 9, 10, 16, 17

Target audience: Policymakers, regulatory bodies

Short description:

The programme aims to empower countries with the necessary know-how to ensure that all citizens, including persons with disabilities and older users, are able to access public online information products and services, thereby enabling their access to education and employment opportunities and giving them the opportunity to actively participate in the social and economic life of the country. It also proposes a national self-sustainable educational model in web accessibility.

e. Towards building inclusive digital communities (ITU)

Links:

- https://www.itu.int/pub/D-PHCB-TOOLKIT.01-2021
- https://www.itu.int/en/ITU-D/Digital-Inclusion/Persons-with-Disabilities/Documents/Toolkit_Interactive_Self-Assessment_in_ICT_Accessibility.xlsm

Type: Policy toolkit

Related SDG(s): 9, 10, 16, 17

Target audience: Policymakers, regulatory bodies, private sector

Short description:

This toolkit aims at supporting policy makers and stakeholders efforts in building inclusive digital communities globally by providing a holistic understanding and knowledge of ICT/digital accessibility principles and implementation requirements. This ITU resource also enables countries and organizations to run a self-assessment and obtain an immediate overview on the level of their ICT accessibility implementation. Based on the result, the toolkit delivers tailored guidelines to support development of appropriate policies, strategies and to replicate good practices and offers the tools to support evaluation and to monitor the advance in ICT/digital accessibility implementation, as a key component to ensure that everyone regardless of age gender or ability is included in the digital world.

f. Women in Cyber - Mentorship Programme (ITU)

Link: https://www.itu.int/en/ITU-D/Cybersecurity/Pages/Women-in-Cyber/Women-in-Cyber-Mentorship-Programme.aspx

Type: Capacity-building tools

Related SDG(s): 9, 10, 16, 17

Target audience: Academia, general public

Short description:

There is a need to enable women to take on the opportunities that the cybersecurity sector has to offer, in the goal of closing the workforce gap, fostering more inclusivity in a traditionally male-dominated field, and ultimately optimizing the work towards a more secure cyberspace for all. ITU-D Women in Cyber programme aims to tackle the cultural and systemic barriers that prevent broader inclusion of women in cybersecurity, while working to equip them with the skillset to enter and thrive in the field. The goal of the programme has been and will continue to be to encourage community building, guidance, and senior-junior solidarity among women in the sector. The programme showcases role models and examples of career paths taken by women leaders in the field, encourages networking and knowledge-sharing, and mentoring the future generation of women cybersecurity professionals.

g. Girls in ICT (ITU)

Link: https://www.itu.int/women-and-girls/girls-in-ict/

Type: Capacity-building tools

Related SDG(s): 4, 9, 10, 16, 17

Target audience: Policymakers, regulatory bodies, private sector, academia, general public

Short description:

For girls and young women to thrive in science, technology, engineering and mathematics (STEM) careers, they need safe and reliable access to the internet and digital tools. Within the framework of Girls in ICT, ITU and our partners work together to develop solutions and ideas for lowering barriers to access and improving safety online for girls and young women.

h. Ageing in the digital world: From vulnerable to valuable (ITU)

Link: https://www.itu.int/hub/publication/d-phcb-dig_age-2021/

Type: Guidelines

Related SDG(s): 10, 17

Target audience: Policymakers, regulatory bodies, private sector, academia, general public

Short description:

This report addresses the two global megatrends that reinforce each other: the emergence of digital technologies and ageing populations, both of which are predicted to bring about important socio-economic changes worldwide. The report aims to help ITU members and other stakeholders to understand digital opportunities and take advantage of new possibilities for economic, social and political growth from increased digital inclusion and age-friendly digital environments. It highlights trends, identifies good practices and possible solutions, and presents guidelines that can leverage the contributions of older generations, reduce their age-related vulnerability and foster their socio-economic development to achieve healthier and wealthier inclusive societies. It focuses on the role that ICTs can play in ensuring digitally inclusive communities in which older persons are active participants and valuable contributors.

United Nations Development Program (UNDP)

i. Inclusive by Design: Accelerating Digital Transformation for the Global Goals (UNDP)

Link: https://www.undp.org/publications/inclusive-design-accelerating-digital-transformation-global-goals

Type: Guide

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies

Short description:

Digital transformation must be intentionally inclusive if it is to contribute to realizing the Sustainable Development Goals. This policy brief explores the concept of inclusive digital transformation and what it involves in practice. The brief emphasizes the importance of approaching digital transformation in an inclusive whole-of-society way and outlines its illustrative benefits for countries and societies. The brief also provides some inspiration for how countries can accelerate inclusive digital transformation and mitigate its potential harms, through case studies and ten emerging good practices.

j. Gender Equality in Digitalization (UNDP)

Link: https://www.undp.org/eurasia/publications/gender-equality-digitalization

Type: Guidance Note

Related SDG(s): 5, 16

Target audience: Policymakers, regulatory bodies, private sector, academia, general public

Short description:

Globally and in the Europe and Central Asia region, gender equality in the digital sphere has assumed increasing importance in the digital and data-driven transformation of the economy and governance systems, accelerated by the COVID-19 crisis. This paper analyses current barriers to gender equality in digitalization and identifies entry points for UNDP and national partners in governments to develop gender-responsive digital initiatives and policies.

United Nations Development Program (UNDP) – World Economic Forum's Edison Alliance

k. Digital Inclusion Navigator (UNDP-WEF Edison Alliance)

Link: https://www.edisonalliance.org/navigator

Type: Resource Library, Case studies, Guidelines

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies, practitioners

Short description:

The Digital Inclusion Navigator is a one-stop-shop of curated, high-quality information, real-world case studies, leading best practices, and other evidence-based content from trusted sources. Its initial focus is on the role of digital services in healthcare, financial services, and education as well as expanding access to and use of digital connectivity and technologies. The Digital Inclusion Navigator was created by the World Economic Forum, the UN Development Programme, and the Boston Consulting Group under the umbrella of the EDISON Alliance.

United Nations Economic Council for Europe (UNECE)

l. Engaging Young People in the Implementation of ESD in the UNECE Region: Good Practices in the Engagement of Youth in Education for Sustainable Development (UNECE)

Link: https://unece.org/sites/default/files/2022-09/Engaging_Young_People_web_final_05.09.2022.pdf

Type: Guidelines

Related SDG(s): 4, 10

Target audience: Policymakers, regulatory bodies

Short description:

An overview of good practice programs and initiatives aimed at supporting and empowering youth participation in education for sustainable development (ESD). Given their high level of digital interconnectivity, young people are capable of contributing to the resilience of their communities by, among other things, proposing innovative solutions to societal challenges and driving social progress.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

m. Guidelines for ICT in education policies and masterplans (UNESCO)

Link: https://unesdoc.unesco.org/ark:/48223/pf0000380926

Type: Guidelines

Related SDG(s): 4

Target audience: Policymakers

Short description:

It guides policy-makers to ensure that when adopting technology, human rights should be defended; inclusion, equity, and gender equality should be at the heart of solutions; and innovations should be considered as a common good. It helps to understand the three key knowledge: 1) subject-matter knowledge and guiding principles on the use of ICT in education 2) procedural knowledge and 3) contextual knowledge.

United Nations Women (UN Women)

n. Digital needs assessment for marginalized women (UN Women)

Link: Upcoming

Type: Guidelines

Related SDG(s): 10

Target audience: Policymakers, civil society, international development actors

Short description:

Needs assessment to determine marginalized groups of women's online habits, average digital literacy, access to Internet and technological devices, and needs and priorities regarding the digitalization of existing services to identify the gaps and obstacles to online service access to inform programme implementation.

III. Value Creation

1. Digital Governance

International Telecommunication Union (ITU)

a. GovStack building blocks and reference platform (ITU)

Link: https://www.govstack.global/

Type: Guidelines

Related SDG(s): 9, 16, 17

Target audience: Policymakers

Short description:

The GovStack initiative is a multi-stakeholder initiative led by the Federal Ministry for Economic Cooperation and Development, Gesellschaft für Internationale Zusammenarbeit (GIZ), Estonia, the International Telecommunication Union (ITU) and the Digital Impact Alliance. GovStack is a set of digital building blocks that allow national public agencies to harness the power of emerging IT technologies, while minimizing costs and dependence on external contractors. The building blocks can be stacked together to easily build need-tailored, yet technically standardized solutions and services for citizen-oriented use cases in administration, health care, agriculture, education, and more.

b. ICT Policy Impact Lab (ITU)

Link:
https://app.gen5.digital/lab?_gl=1*1lgwmr2*_ga*NTM1MTQ3ODI1LjE2NjkxMzEyMjM.*_ga_27GW5 7NRWK*MTY2OTEzMTIyMi4xLjAuMTY2OTEzMTIyMi4wLjAuMA..&_ga=2.95018652.1293418243.166 9131223-535147825.1669131223

Type: Capacity-building tools

Related SDG(s): 9, 16, 17

Target audience: Policymakers, regulatory bodies

Short description:

This simulation lab is based on empirical evidence and developed to support ICT regulators and policy makers in reigniting digital markets and economies.

United Nations Development Program (UNDP)

c. iVerify (UNDP)

Link: https://www.undp.org/digital/iverify

Type: Digital Tool, DPG

Related SDG(s): 16

Target audience: Policymakers, regulatory bodies

Short description:

iVerify is UNDP's automated fact-checking tool that can be used to identify false information and prevent and mitigate its spread. It is supported through the UNDP Chief Digital Office and the UNDP Brussels-based Task Force on Electoral Assistance. iVerify is also a Digital Public Good and can be found in the DPG Registry.

d. AI Readiness Assessment (UNDP)

Link: digital.undp.org

Type: Assessment Framework

Related SDG(s): All of them, since the assessment can be customized per sector

Target audience: Regulatory bodies, policymakers

Short description:

As a member of the Inter-Agency working group in AI, UNDP has deployed developed an AI Readiness Assessment for member-states. Utilizing factors such as vision, governance, ethics, innovation, infrastructure, data availability, and inclusivity, the tool will provide insights into AI understanding and capacity, strategy and planning, and implementation. The assessment will also encourage collaboration across government and with stakeholders such as the private sector and civil society. The assessment framework is based on three pillars:

i) government as an enabler of the AI environment,
ii) government as a user of AI, and
iii) ethical AI, which is the foundational pillar supporting the latter two. (Based on Ethical AI Framework led by UNESCO)

e. The Impact of Digital Technology on Human Rights in Europe and Central Asia (UNDP)

Link: https://www.undp.org/eurasia/publications/impact-digital-technology-human-rights-europe-and-central-asia

Type: Research Report, Policy Tool

Related SDG(s): SDG 16, all SDGs

Target audience: Regulatory bodies, policymakers, development stakeholders

Short description: Digital technologies are developing significantly and rapidly in the Europe and Central Asia region with significant impacts on human rights. These digital systems and tools offer opportunities to improve promotion and protection of human rights while at the same time can also undermine the protection and implementation of these rights. This study explores:

- Trends in digital technology and AI and their impact on data protection, privacy and human rights
- Legislative and institutional frameworks regulating digital technologies and human rights concerns
- Digital transformation and governance of AI
- Specific sectors at higher risk of human rights impacts: application of a human rights-based approach
- Recommendations for the adoption and governance of digital technologies and AI based on human rights

f. Emerging Innovations in Good Governance (UNDP)

Link: https://www.undp.org/eurasia/publications/emerging-innovations-good-governance

Type: Guidance, Toolkit

Related SDG(s): SDG 16, all SDGs

Target audience: Policymakers, Governments, Private Sector, Development Stakeholders

Short description: This report showcases developments in the delivery of public services and reinforcement of accountability mechanisms in Europe and Central Asia region in the context of the ongoing Covid-19 pandemic in 2020-2021. Many of the novel approaches in this report update represent a focused shift towards implementing digital and durable solutions that will outlast the pandemic.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

g. AI and education: guidance for policy-makers (UNESCO)

Link: https://unesdoc.unesco.org/ark:/48223/pf0000376709

Type: Guidelines

Related SDG(s): 4

Target audience: Policy makers

Short description:

It offers guidance for policy-makers on how best to leverage the opportunities and address the risks, presented by the growing connection between AI and education. It starts with the essentials of AI: definitions, techniques and technologies. It continues with a detailed analysis of the emerging trends and implications of AI for teaching and learning. It then introduces the challenges of harnessing AI to achieve SDG 4 and offers concrete actionable recommendations for policy-makers to plan policies and programmes for local context

United Nations Children's Fund (UNICEF)

h. Policy guidance on AI for children - Recommendations for building AI policies and systems that uphold child rights (UNICEF)

Link: https://www.unicef.org/globalinsight/media/2356/file/UNICEF-Global-Insight-policy-guidance-AI-children-2.0-2021.pdf

Type: Guidelines

Related SDG(s): 16, 17

Target audience: Policymakers, regulatory bodies, private sector, development agencies

Short description:

The guidance provides a brief description of what we mean by AI and AI systems. It then considers the range of ways in which AI systems impact children today, which are illustrated by use cases or examples that highlight the key opportunities, risks and concerns. Bearing in mind the need to uphold human rights, and drawing on the Convention on the Rights of the Child, the foundations for child-centred AI are presented. AI policies and systems should aim to protect children, provide equitably for their needs and rights, and empower them to participate in an AI world by contributing to the development and use of AI. Building on this foundation are nine requirements for child-centred AI, complementing key work already underway, but with a central focus on children.

United Nations Women (UN Women)

i. Expert position papers to contribute to preparations for CSW67 (UN Women)

Link: https://www.unwomen.org/en/csw/csw67-2023/preparations

Type: Guidelines

Related SDG(s):

Target audience: Policy makers, international development actors, CSOs, expert community

Short description:

Innovation and technological change, and education in the digital age for achieving gender equality and the empowerment of all women and girls.

World Meteorological Organization

j. Unified Data Policy (WMO)

Link: https://library.wmo.int/index.php?lvl=notice_display&id=22100

Type: Guidelines

Target audience: Policy makers, international development actors, expert community

Related SDG(s): 13, 16

Short description:

The 2021 Extraordinary World Meteorological Congress (11-22 October) approved the new WMO Unified Data Policy, which supersedes its older policies relating to the international exchange of meteorological, hydrological and climate data between the 193 Member states and territories of WMO.

Annex 1 to Resolution 1 (Cg-Ext(2021)) Discipline and domain-specific practice for core and recommended data (WMO)

Link**:** https://library.wmo.int/doc_num.php?explnum_id=11256#page=14

Type: Guidelines

Target audience: Policy makers, international development actors, expert community

Related SDG(s): 13, 16

Short description:

This annex lists the minimum set of core data that Members shall exchange on a free and unrestricted basis to underpin the services they provide for the protection of life and property and for the well-being of all nations. In addition, it identifies certain recommended data that should also be exchanged by Members to support Earth system monitoring and prediction efforts.

Annex 2 to Resolution 1 (Cg-Ext(2021)) Guidelines to Members on the application of the WMO Data Policy (WMO)

Link: doc_num.php (wmo.int)

Type: Guidelines

Target audience: Policy makers, international development actors, expert community

Related SDG(s): 13, 16

Short description:

The purpose of these guidelines is to help Members, especially through the engagement of their National Meteorological and Hydrological Services (NMHSs) with other national partners, to maximize the benefit obtained by their combined users from the free and unrestricted exchange of Earth system data, as articulated in the WMO Data Policy. While the primary remit of WMO is international collaboration on meteorological and related Earth system data, the national roles of many NMHSs are currently undergoing substantial changes, and many WMO Members have requested guidance on how their NMHSs and national partners should act with respect to their data within a larger national landscape of Earth system monitoring and prediction.

Annex 3 to Resolution 1 (Cg-Ext(2021)) Guidelines on the application of the data policy in public-private engagement (WMO)

Link: https://library.wmo.int/doc_num.php?explnum_id=11256#page=25

Type: Guidelines

Target audience: Policy makers, international development actors, expert community

Related SDG(s): 13, 16

Short description:

The purpose of these guidelines is to promote the implementation of the policy of broadening and enhancing the free and unrestricted12 international exchange of Earth system data through better sharing of data between the public and private sectors. The guidelines are based on the understanding that the application of the free and unrestricted principle depends greatly upon sound, fair, transparent and stable relations between these two sectors.

2. Digital innovation ecosystem development

International Telecommunication Union (ITU)

a. Bridging the Digital Innovation Divide: A toolkit for developing sustainable ICT-centric ecosystem projects (ITU)

Link: https://www.itu.int/dms_pub/itu-d/opb/inno/D-INNO-TOOLKIT.2-2020-PDF-E.pdf

Type: Toolkit

Related SDG(s): 8, 9, 17

Target audience: Policymakers, regulatory bodies, private sector, academia

Short description:

It is designed for policy-makers, decision-makers, innovators and ecosystem builders seeking to build expertise in transforming ICT ecosystems into innovative powerhouses. Through a step-by-step process, this toolkit guides stakeholders in developing blueprints and recommendations that engage stakeholders in co-creation and help them identify gaps, amplify existing good practices and develop sustainable ecosystem initiatives tailored to unlocking their community's potential.

b. Global Initiative on AI and Data Commons (ITU)

Link: https://www.itu.int/en/ITU-T/extcoop/ai-data-commons/Pages/default.aspx

Type: Capacity-building tools

Related SDG(s): 8, 9, 17

Target audience: Private sector

Short description:

The Global Initiative on AI and Data Commons provides a collaborative digital platform for AI innovators and problem owners to learn, build, and connect to help identify practical AI solutions that can become publicly useful services and tools to help advance the United Nations Sustainable Development Goals (SDGs) under a common good perspective.

c. Blockchain hub (ITU)

Link: https://www.itu.int/hub/tag/blockchain/page/2/

Type: Toolkits and guidelines

Related SDG(s): 8, 9, 17

Target audience: Policymakers, regulatory authority, private sector, academia, General Public

Short description:

The ITU Blockchain virtual Hub is a webpage concentrating all blockchain-related guidelines, frameworks, reports, and other tools. It also provides resources for technical specification of blockchain.

d. Recommendation ITU-T Y.4462 (ITU)

Link: https://www.itu.int/ITU-T/recommendations/rec.aspx?id=14165

Type: Standards

Related SDG(s): 8, 9, 17

Target audience: Policymakers, regulatory authority, private sector, academia

Short description:

Recommendation ITU-T Y.4462 specifies the reference architecture of open IoT ICS which supports Internet of things (IoT) devices to access multiple third party service providers. This Recommendation clarifies the concept of the open IoT ICS, identifies its basic capabilities and common requirements and also provides the reference architecture and relevant high-level common procedures for open IoT ICS.

United Nations Economic Council for Europe (UNECE)

e. Sub-regional Innovation Policy Outlook 2020: Eastern Europe and the South Caucasus (UNECE)

Link: https://unece.org/sites/default/files/2021-06/UNECE_Sub-regional_IPO_2020_Publication.pdf

Type: Guidelines

Related SDG(s): 8, 9, 17

Target audience: Policymakers, regulatory bodies, private sector, academia

Short description:

The Eastern Europe and the South Caucasus (EESC) sub-region (Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova, and Ukraine) has considerable potential for sustainable growth and development. Innovation, or broad experimentation with new ideas, is crucial to making the most of this potential – and for public policy to play an effective role in enabling and promoting this dynamic. The increasing complexity of socioeconomic challenges, not least caused by COVID-19, require robust legal frameworks, strong institutions and evidence-based policies to respond to the changing environment, emerging constraints and new opportunities. EESC countries have a great foundation to build on, notably high levels of education attainment, a tangible and viable legacy of applied and basic research, and proximity to a range of markets, including the European Union. Recognizing the imperative of innovative development, EESC countries are keen to build on these advantages and have already taken concerted steps to promote innovation – including showing strong political commitment and investing into a range of new agencies and institutions. Several examples involving, for instance, foreign investment into production or the rise of export-oriented ICT and business-process outsourcing (BPO) services show the way.

3. Digital transformation of businesses and productive sector

United Nations Industry Development Organization (UNIDO)

a. Fourth Industrial Revolution (4IR) Strategic Framework (UNIDO)

Link:https://hub.unido.org/sites/default/files/publications/Making%204IR%20Work%20for%20All_2021.pdf

Type: Framework

Related SDG(s): 9

Target audience: Policymakers, regulatory authorities, private sector, general public

Short description:

The UNIDO 4IR Strategic Framework aims to mainstream a digital, gender-responsive, sustainable transformation and scale up digital capabilities in its Member States.

b. Branding for competitiveness and sustainable growth (UNIDO)

Link: https://www.unido.org/b4c

Type: Capacity-building tool, industrial modernization and upgrading programme

Related SDG(s): 9, 8, 12

Target audience: Policymakers, regulatory bodies, private sector, industry stakeholders

Short description:

Against the backdrop of accelerated globalization and intensified competitive pressures, enhancing export competitiveness through various strategies and policies has become a central focus of governments of developed and developing countries alike. Recently, branding has become an important strategy tool to enlarge export market shares. The scope of the branding strategy has expanded from corporate to national and regional brands, to include brands like "Made in Asia" or "Made in Europe," in which these different brands promote one another. UNIDO seeks to support private sector enterprises in developing countries and economies in transition in boosting their competitiveness and enhancing market access. This is achieved through comprehensive technical assistance for industrial modernization that also incorporates coordinated marketing and implementation of a joint branding strategy. UNIDO's "Branding for Competitiveness and Sustainable Growth" service provides a holistic approach tailored to the specific needs of enterprises, in which branding plays a key role as a marketing tool.

c. Digital toolkit for the implementation of Industry 4.0 technologies by SMEs (UNIDO)

Link: N/A. More information can be provided upon request.

Type: Capacity-building and digital awareness tool

Related SDG(s): 9

Target audience: SMEs, policy support agencies

Short description:
UNIDO developed the digital readiness toolkit to assist SMEs from developing countries in the implementation of Industry 4.0 technologies and digital transformation. First, the toolkit addresses the main productivity challenges experienced by industrial transformation SMEs from emerging countries. Second, Industry 4.0 technologies that could help to solve the identified productivity challenges are identified. Third, a step-by-step guidance on how SMEs may implement these technologies in presented. Finally, UNIDO gives a guide of parameters to assess the return on investment in these technologies by SMEs.

d. Innovation ecosystems assessment tool (UNIDO)

Links: N/A. More information can be provided upon request.

Type: Capacity-building tool, framework, policy tool

Related SDG(s): 9

Target audience: Industries, policymakers, knowledge-based institutions (academia and public/private research institutions), industry associations and supporting institutions, regulatory bodies and certification agencies, financial institutions

Short description:

UNIDO developed an innovation tool with a firm-level and systems component to assist policymakers, industry and related stakeholders from developing countries. Support is provided to achieve the following:

1. Firm-level:
- Measuring innovation in an enterprise through innovation enablers (innovation input activities, internal firm capabilities and linkages and knowledge flows in the ecosystem).
- Evaluating innovation performance in the form of product innovation (good or service) or business process innovation (product/process development, operations, marketing and sales, procurement, logistics and distribution and administration and management).
- Finding barriers to innovation input activities, internal firm capabilities and linkages/knowledge flows.

2. Systems-level:
- National, regional or sectoral innovation systems analysis.
- Systems analysis measures the economy's innovation ecosystem and its enabling role in manufacturing.
- Interactions (linkages) between stakeholders of the ecosystem, relative barriers to innovation, as well as the convergence or divergence of current policy instruments in addressing the needs of the actors of the system is examined.

United Nations Office for Project Services (UNOPS)

e. UN Web Buy Plus (UNOPS)

Link: https://unwebbuyplus.org/#/home

Type: Toolkit

Related SDG(s): 9

Target audience: International Development Partners

Short description:

UN Web Buy Plus is an innovative online procurement system that can enhance the procurement experience of partners in many ways. UN Web Buy Plus offers a wide range of the most essential products, tailored to the development and aid sector. The cost-competitive and public sector-compliant online platform create time, budget and value chain efficiencies that optimize the procurement of goods in emergency and non-emergency contexts.

United Nations World Tourism Organization (UNWTO)

f. Digital Futures (UNWTO)

Link: https://www.unwto.org/digitalfutures

Type: Capacity-building support

Related SDG(s): 8, 9

Target audience: Private sector (SMEs in the tourism sector)

Short description:

UNWTO Digital Futures seeks to accelerate economic recovery of the tourism sector by scaling up innovative Small and Medium-sized Enterprises (SMEs) to unleash digital technologies to create jobs and enhance future resilience in the linkages of the tourism value chain post COVID-19.

4. Digital trade

United Nations Economic Council for Europe (UNECE)

a. Regional Report 2021 on Digital and Sustainable Trade Facilitation (UNECE)

Link: https://unece.org/sites/default/files/2022-01/ECE_TRADE_467E.pdf

Type: Guidelines

Related SDG(s): 1, 2, 5, 8

Target audience: Policymakers, regulatory bodies

Short description:

The UNECE Regional Report 2021 on Digital and Sustainable Trade Facilitation has been produced based on the results of the United Nations Global Survey on Digital and Sustainable Trade Facilitation. The Global Survey (ECE/TRADE/467) is a joint initiative under the Joint United Nations Regional Commissions' Approach, agreed in Beirut in January 2010 by the Executive Secretaries of the five Regional Commissions. The fourth version of the Survey was conducted between February and June 2021 and resulted in responses from 44 member States of the United Nations Economic Commission for Europe (UNECE).

b. Standard for message exchanges for the sustainable management of fisheries (FLUX) (UNECE)

Link:
https://unece.org/fileadmin/DAM/cefact/SustainableFisheriesTeamOfSpecialists/2019_SecondMtg/TOSSF_2019-INF_05_UNFLUX-Subsidies-IUU.pdf

Type: Guidelines

Related SDG(s): 14

Target audience: Policymakers, regulatory bodies

Short description:

This briefing note illustrates the scope and potential applications of UN/FLUX standard messages, and how the UN/FLUX standard can help the fight against Illegal Unreported and Unregulated (IUU) fishing and can prevent subsidizing IUU and overfishing, in support of Sustainable Development Goal 14, of the United Nations Agenda for Sustainable Development.

c. Toolkit on Transport and Trade Connectivity in the Age of Pandemics (UNECE)

Link: https://unttc.org/stream/electronic-trade-and-transport-documents-and-data

Type: Toolkit

Related SDG(s): 8, 9

Target audience: Policymakers, regulatory bodies, private sector, academia

Short description:

As part of the high-profile multi-agency United Nations Development Account Project Transport and Trade Connectivity in the Age of Pandemics, UNECE has developed a segment focusing on the harmonization of standards for the digitalization of data and document exchange in multimodal transport and trade. The objective is to use the standards of the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), a UNECE subsidiary body, notably the UN/CEFACT Multimodal Transport Reference Data Model, to provide for interoperability and data exchange between documents, modes of transport and sectors. This will allow for a seamless exchange of information, for example, in digital corridors, and will limit person-to-person contacts in the supply chain. The use of United Nations standards and modern IT tools, provided as international public goods, help improve the efficiency and safety of international transport and trade in the face of the COVID-19 pandemic.

d. Trade Facilitation and Electronic Business Resources for COVID-19 Response (UNECE)

Link: https://unece.org/trade/uncefact/covid-19-response

Type: Guidelines

Related SDG(s): 8

Target audience: Policymakers, regulatory bodies, private sector, academia

Short description:

Trade Facilitation and Electronic Business Resources for COVID-19 Response. The COVID-19 pandemic has evolved from a health crisis into an economic crisis causing major disruption in global trade. The United Nations Economic Commission for Europe (UNECE) and its subsidiary inter-governmental body - the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) have several recommendations, standards, tools and resources that can be used to address the immediate and long-term challenges posed by the COVID-19 pandemic to facilitate global trade. The aim of this website is to provide a non-exhaustive list of such resources on trade facilitation and digitalization.

e. Trade Facilitation Implementation Guide (UNECE)

Link: https://tfig.unece.org/

Type: Toolkit

Related SDG(s): 17

Target audience: Policymakers, regulatory bodies, private sector, academia, general public

Short description:

Information and communication technology (ICT) offers huge potential as ICT can process large amounts of data faster, speed up the clearance process and facilitate risk management. Whilst ICT can offer immense opportunities for simplification, this potential can only be developed if its introduction is accompanied by the redesign of procedures and organization structures, and the application of e-business solutions.

This itinerary provides examples of ICT applications in the fields of transport and logistics and governmental services, such as Customs clearance.

5. Digital health

United Nations Population Fund (UNFPA)

a. Capacity-building tools VIC ("Virtual Contraceptive Consultation") (UNFPA)

Link: https://vic.eeirh.org/

Type: Guidelines

Related SDG(s): 3

Target audience: General Public (Healthcare providers, medical students)

Short description:

UNFPA Capacity-building tools VIC ("Virtual Contraceptive Consultation") is an interactive learning package for evidence-based family planning developed by the UNFPA Regional Office for Eastern Europe and Central Asia (EECA RO) and the East European Institute for Reproductive Health (EEIRH). Targeted at family-planning providers at all levels (primary, secondary, and tertiary healthcare), as well as residents and medical students, it offers consistent, high-quality training in order to minimise the conveying of misinformation, outdated information, and biased personal opinions during family-planning consultations.

United Nations Children's Fund (UNICEF)

b. Designing Digital Interventions for Lasting Impact - A Human-Centred Guide to Digital Health Deployment (UNICEF)

Link: https://www.unicef.org/innovation/reports/designing-digital-interventions-lasting-impact

Type: Toolkit

Related SDG(s): 3, 17

Target audience: Policy Makers, General Public (Healthcare providers)

Short description:

This toolkit introduces human-centred design, a problem-solving process that starts with understanding the community and context surrounding a challenge. Designing for people and their everyday interactions allows us to solve for the right problems. A well-functioning digital solution fails if it only works in theory and does not anticipate issues faced by frontline workers, members of the community, caregivers, and the existing systems that surround them. No health expert or digital strategist has more knowledge than a Community Health Worker or Nurse about how to solve their

problem. The methodologies in this toolkit acknowledge this by focusing on observing, interacting with, and designing for the people that we seek to serve in addition to looking at technical constraints and specifications.

c. Applying the Human-Centred approach to demand-related challenges in Health Services (UNICEF)

Link:
https://www.unicef.org/innovation/media/10051/file/Demand%20for%20Health%20Services:%20A%20Human-Centred%20Field%20Guide%20for%20Investigating%20and%20Responding%20to%20Challenges.pdf

Type: Capacity-building tools

Related SDG(s): 3, 17

Target audience: Policy Makers, General Public (Healthcare providers)

Short description:

This field guide introduces human-centred design as an approach to address challenges related to community demand for basic health services such as immunization.

United Nations Office for Project Services (UNOPS)

d. Productive Delivery System (UNOPS)

Link: https://proyectosaludmexico.org/en/

Type: Framework

Related SDG(s): 3, 17

Target audience: National Governments

Short description:
As part of the Project for the Procurement of Medicines and Healing Materials in Mexico, UNOPS has developed a custom IT system to manage the high level of delivery orders (80,000+) that need to be processed. This Product Delivery System (PDS) refers to the suppliers of medicines. Thanks to PDS, suppliers were able to upload: invoices, delivery evidence documentation and quality certificates, as well as having an overview of their delivery orders and payments. The development of PDS has been a key element for the success of the project. PDS has considerably improved the communication between UNOPS and the project's suppliers, ensuring transparency and preventing manual errors, reducing significantly the processing time of each delivery order. UNOPS is now working on making PDS a more generic system that can easily be implemented in other countries/projects by external partners and the suppliers of goods.

World Health Organization (WHO) / International Telecommunication Union (ITU)

e. Digital Health Platform Handbook: Building a Digital Information Infrastructure (Infostructure) for Health (WHO)

Link: https://www.itu.int/dms_pub/itu-d/opb/str/D-STR-E_HEALTH.10-2020-PDF-E.pdf

Type: Guidelines

Related SDG(s): 3, 9, 17

Target audience: Policymakers, regulatory bodies, private sector, academia, general public

Short description:

Digital Health Platform Handbook, a new toolkit designed to help countries create and implement a digital health platform (DHP) to serve as the underlying infrastructure for an interoperable and integrated national digital health system. The Digital Health Platform Handbook represents the culmination of efforts by various organizations and experts from across the health and ICT sectors. It also builds on and supplements other important digital health resources, including the National eHealth Strategy Toolkit and the WHO Planning, Costing Guide for Digital Interventions for Health Programmes. Taken together, these materials constitute a comprehensive approach for harnessing ICT applications and digital technologies to strengthen health systems and, ultimately, deliver improved health and well-being to all.

f. Be He@lthy, Be Mobile Handbook (WHO)

Link: https://www.itu.int/hub/publication/d-str-e_health-11-2018/

Type: Guidelines

Related SDG(s): 3, 10, 17

Target audience: General Public

Short description:

Part of a joint global initiative by the World Health Organization and the ITU, mAgeing is a programme designed to assist older people in maintaining functional ability and living healthily and independently. Using text messaging, monitoring and evaluation, coordinators look to influence patient behaviour through regular communications — such as encouragement to participate in activities — that lead to better self-managed care and decisions on personal health. Be He@lthy, Be Mobile — A Handbook on How to Implement mAgeing is a guide for health-care practitioners in achieving better outcomes, physically and mentally, in the care of older people.

World Health Organization (WHO) / United Nations Children's Fund (UNICEF)

g. Digital implementation investment guide (DIIG): quick deployment guide (WHO-UNICEF)

Link: https://www.who.int/publications/i/item/9789240056572

Type: Guidelines

Related SDG(s): 3

Target audience: Policy Makers, General Public (Healthcare providers)

Short description:

The Digital implementation investment guide (DIIG) (1) was developed by the World Health Organization to help governments and technical partners plan a digital health implementation focusing on one or more health programmes supporting national health system goals. It is designed to provide users with step-by-step guidance through planning, costing and implementing digital health interventions within a digital health enterprise.
The Quick deployment guide complements the DIIG and is intended to be a shortened 'how-to' manual in designing and implementing digital health interventions that are part of a digital health enterprise. Each step in this document includes exercise worksheets that encourage users to think through the health programme processes and programme needs, identify opportunities to implement digital interventions and develop functional requirements designed to benefit different end-users.

h. Guidance on the use of digital solutions to support the COVID-19 national deployment and vaccination plans (WHO-UNICEF)

Link: https://www.digitalhealthcoe.org/knowledgebase/guidance-on-the-use-of-digital-solutions-to-support-the-covid-19-national-deployment-and-vaccination-plans

Type: Guidelines

Related SDG(s): 3

Target audience: Policy Makers, General Public (Healthcare providers)

Short description:

This guide provides an overview of the most promising evidence based digital innovations and procedures that can be deployed at different times during vaccine planning, distribution and scaling up in low- and middle-income settings, using the NDVP framework.

World Health Organization (WHO)

i. A call to strengthen data in response to COVID-19 and beyond (WHO)

Link: https://academic.oup.com/jamia/article/28/3/638/6020261

Type: Academic paper

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

The COVID-19 (coronavirus disease 2019) pandemic has underscored the critical need for all countries to strengthen their health data and information systems and ensure the routes the data travel, from submission to use, are unobstructed. Timely, credible, reliable, and actionable data are key to ensuring that political decisions are data driven and facilitate understanding, monitoring, and forecasting. To ensure that critical decisions related to the wider health and socioeconomic effects of this pandemic are data driven, each country needs to develop or enhance a national data governance plan that includes a clear coordination mechanism, well-defined and documented data processes (manual or electronic), the exchange of data, and a data culture to empower users. In addition, countries should now more than ever invest and enhance their data and health information systems to ensure that all decisions are data driven and that they are prepared for what is next.

j. Artificial intelligence and its impact on the domains of universal health coverage, health emergencies and health promotion: An overview of systematic reviews (WHO)

Link: https://www.sciencedirect.com/science/article/pii/S1386505622001691?via%3Dihub

Type: Academic paper

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

To perform a systematic overview of systematic reviews on the application of artificial intelligence in the people's health domains as defined in the GPW13 and provide a comprehensive and updated map on the application specialties of artificial intelligence in terms of methodologies, algorithms, data sources, outcomes, predictors, performance, and methodological quality.

k. Data and Digital Solutions to Support Surveillance Strategies in the Context of the COVID-19 Pandemic (WHO)

Link: https://www.frontiersin.org/articles/10.3389/fdgth.2021.707902/full

Type: Academic paper

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

In order to prevent spread and improve control of infectious diseases, public health experts need to closely monitor human and animal populations. Infectious disease surveillance is an established, routine data collection process essential for early warning, rapid response, and disease control. The quantity of data potentially useful for early warning and surveillance has increased exponentially due to social media and other big data streams. Digital epidemiology is a novel discipline that includes harvesting, analysing, and interpreting data that were not initially collected for healthcare needs to enhance traditional surveillance. During the current COVID-19 pandemic, the importance of digital epidemiology complementing traditional public health approaches has been highlighted.

The aim of this paper is to provide a comprehensive overview for the application of data and digital solutions to support surveillance strategies and draw implications for surveillance in the context of the COVID-19 pandemic and beyond.

l. Equity within digital health technology within the WHO European Region: a scoping review (WHO)

Link: https://apps.who.int/iris/handle/10665/365326

Type: Academic paper

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

Health-care providers are increasingly using digital health technology (DHT) to enable patients and the public to manage their health and engage with health-care systems; a process that rapidly accelerated as the COVID-19 pandemic shifted services online. The uptake and development of digital health systems has the potential for widespread benefits through more efficient and targeted health care. Yet a focus on digital approaches may inadvertently widen existing inequities in health if known inequalities in access, use and engagement with digital technology are not considered and addressed. Equitable patient-centred approaches are at the centre of the proposed action plan for digital health for the WHO European Region.

This scoping review explores the extent of inequities in digital health across a comprehensive range of specific characteristics. It also identifies key areas that need to be considered when integrating digital health into health-care systems to ensure equity.

While there are many different definitions of digital health, for the purpose of this report the WHO definition was used: "the field of knowledge and practice associated with the development and use of digital technologies to improve health". This will include digital consumers using a range of connecting devices and will encompass other digital technologies such as artificial intelligence, big data and robotics.

m. Health Information Systems in the COVID-19 Pandemic: A Short Survey of Experiences and Lessons Learned From the European Region (WHO)

Link: Frontiers | Health Information Systems in the COVID-19 Pandemic: A Short Survey of Experiences and Lessons Learned From the European Region (frontiersin.org)

Type: Academic paper

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

The COVID-19 crisis provides an opportunity to reflect on what worked during the pandemic, what could have been done differently, and what innovations should become part of an enhanced health information system in the future.

An online qualitative survey was designed and administered online in November 2020 to all the 37 Member States that are part of the WHO European Health Information Initiative and the WHO Central Asian Republics Information Network.

n. Impact of Big Data Analytics on People's Health: Overview of Systematic Reviews and Recommendations for Future Studies (WHO)

Link: https://www.jmir.org/2021/4/e27275

Type: Academic paper

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

Although the potential of big data analytics for health care is well recognized, evidence is lacking on its effects on public health.

The aim of this study was to assess the impact of the use of big data analytics on people's health based on the health indicators and core priorities in the World Health Organization (WHO) General Programme of Work 2019/2023 and the European Programme of Work (EPW), approved and adopted by its Member States, in addition to SARS-CoV-2–related studies. Furthermore, we sought to identify the most relevant challenges and opportunities of these tools with respect to people's health.

o. Infodemics and health misinformation: a systematic review of reviews (WHO)

Link: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9421549/

Type: Academic paper

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

To compare and summarize the literature regarding infodemics and health misinformation, and to identify challenges and opportunities for addressing the issues of infodemics.

Available evidence suggests that infodemics during health emergencies have an adverse effect on society. Multisectoral actions to counteract infodemics and health misinformation are needed, including developing legal policies, creating and promoting awareness campaigns, improving health-related content in mass media and increasing people's digital and health literacy.

p. Regional digital health action plan for the WHO European Region 2023–2030 (WHO)

Link: https://apps.who.int/iris/handle/10665/360950

Type: Framework

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

This draft regional digital health action plan for the WHO European Region 2023–2030 intends to support countries in leveraging and scaling up digital transformation for better health and in aligning digital technology investment decisions with their health system needs, while fully respecting the values of equity, solidarity and human rights.

The regional digital health action plan aims to contribute to (i) the achievement of the health-related Sustainable Development Goals, the WHO European Programme of Work, 2020–2025, and the WHO Thirteenth General Programme of Work, 2019–2025; and (ii) the operationalization of the WHO Global strategy on digital health 2020–2025.

q. Seventy-second Regional Committee for Europe Tel Aviv, 12 – 14 September 2022: resolution: leveraging digital transformation for better health in Europe: Regional digital health action plan for the Who European Region 2023 - 2030

Link: https://www.who.int/europe/publications/i/item/EUR-RC72-R2

Type: Framework / Resolution

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

Health ministers and delegates from WHO/Europe's 53 Member States have adopted the Region's first-ever digital health action plan – an ambitious agenda that will leverage digital transformation in Europe and central Asia with the aim of improving people's health and well-being.

Meeting on 12 September 2022 at the 72nd session of the WHO Regional Committee for Europe, the ministers and delegates approved a resolution recognizing the critical role and potential of digital tools in the health sector, and building on the lessons learned during nearly 3 years of the COVID-19 pandemic.

r. Routine Health Information Systems in the European Context: A Systematic Review of Systematic Reviews

Link: https://www.mdpi.com/1660-4601/18/9/4622

Type: Academic paper

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

The aim of this study is to provide a better understanding of the requirements to improve routine health information systems (RHISs) for the management of health systems, including the identification of best practices, opportunities, and challenges in the 53 countries and territories of the WHO European region. (2) Methods: We conducted an overview of systematics reviews and searched the literature in the databases MEDLINE/PubMed, Cochrane, EMBASE, and Web of Science electronic

databases. After a meticulous screening, we identified 20 that met the inclusion criteria, and RHIS evaluation results were presented according to the Performance of Routine Information System Management (PRISM) framework. (3) Results: The reviews were published between 2007 and 2020, focusing on the use of different systems or technologies and aimed to analyze interventions on professionals, centers, or patients' outcomes. All reviews examined showed variability in results in accordance with the variability of interventions and target populations. We have found different areas for improvement for RHISs according to the three determinants of the PRISM framework that influence the configuration of RHISs: technical, organizational, or behavioral elements. (4) Conclusions: RHIS interventions in the European region are promising. However, new global and international strategies and the development of tools and mechanisms should be promoted to highly integrate platforms among European countries.

s. Support tool to strengthen health information systems: guidance for health information system assessment and strategy development (WHO)

Link: https://www.who.int/europe/publications/i/item/9789289055741

Type: Guidelines

Related SDG(s): 3

Target audience: Policy Makers, Regulatory bodies

Short description:

This tool is an update of the 2015 Support tool to assess health information systems and develop and strengthen health information strategies. Both the global General Programme of Work and the European Programme of Work 2020–2025 emphasize the importance of supporting Member States for strengthening their health information systems (HISs) and this updated tool will be instrumental in this endeavour. The Tool has two main parts: guidance for performing an assessment of a full HIS and guidance for the subsequent development of an HIS strategy. The assessment methodology has been updated to reflect the current HIS context in the WHO European Region through achieving a better balance between data collection and actual data use and a better reflection of the growing importance of electronic health records and other digital solutions. Add-on modules provide support for more in-depth assessment of infectious disease surveillance, noncommunicable disease monitoring, health information for both programmes of work, human resources for health and health data governance. Finally, the guidance for HIS strategy development has been made more concise and practical.

t. Technological progress in electronic health record system optimization: Systematic review of systematic literature reviews

Link: Technological progress in electronic health record system optimization: Systematic review of systematic literature reviews - ScienceDirect

Type: Academic paper

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

This review examined the literature on some digital advancements that may potentially impact and leverage in electronic health record systems. Existing digital transformation solutions have showed potential for optimizing electronic health records systems. Challenges for implementation remain such as lack of regulatory frameworks, trust, scalability, security, privacy, low performance, and cost.

u. The Current Status of Telemedicine Technology Use Across the World Health Organization European Region: An Overview of Systematic Reviews (WHO)

Link: Journal of Medical Internet Research - The Current Status of Telemedicine Technology Use Across the World Health Organization European Region: An Overview of Systematic Reviews (jmir.org)

Type: Academic paper

Related SDG(s): 3

Target audience: Academia, General Public (Medical Students), Policymakers

Short description:

This overview of systematic reviews aimed to summarize findings regarding the use of telemedicine across the 53 member states and identify the medical fields and levels of care in and at which the effectiveness, feasibility, and applicability of telemedicine have been demonstrated. The barriers to and facilitators of telemedicine use were also evaluated and collated to help with the design and implementation of telemedicine interventions.

6. Digital agriculture

Food and Agriculture Organization of the United Nations (FAO)

Hand in Hand Geospatial Platform (HiH GP) (FAO)

Link: https://www.fao.org/hih-geospatial-platform/en/

Type: Digital tool

Related SDG(s): 1, 2, 10

Target audience: Policymakers, regulatory bodies, academia, digital agriculture experts, economists, non-government agencies

FAO's open-access Hand in Hand Geospatial Platform (HiH) is a platform that provides advanced data and information, including food security indicators and agricultural statistics, for more targeted agriculture interventions. The data on HiH is sourced from FAO and other leading public data providers across the UN and NGOs, academia, private sector and space agencies, including key FAO flagship databases such as FAOSTAT data on food and agriculture for over 245 countries and territories from 1961 to the most recent year available.

The platform unlocks millions of data layers from different domains and sources to serve as the key enabling tool for FAO's HiH Initiative and serve digital agriculture experts, economists, government and non-government agencies, and other stakeholders working in the food and agriculture sector. The Hand-in-Hand (HIH) Initiative supports the implementation of nationally led, ambitious programmes to accelerate agrifood systems transformations by eradicating poverty (SDG1), ending hunger and malnutrition (SDG2), and reducing inequalities (SDG10).

a. Land Degradation Neutrality Decision Support system (LDN DSS) (FAO)

Link: https://projectgeffao.users.earthengine.app/view/reu-ldn-assessment

Type: Digital tool

Related SDG(s): 15

Target audience: Policymakers, regulatory bodies, academia

Short description:

Land Degradation Neutrality Decision Support system (LDN DSS) provides accumulated evidence on the status of land degradation, land productivity, biodiversity and protected areas. LDN DSS aims to help stakeholders strategically select the areas where actions to conserve, sustainably manage and restore land should be implemented. The system is based on a Google Earth Engine (GEE) application. GEE is an innovative powerful tool that allows users to access a catalogue of public and free geospatial datasets and to perform analyses using Google computational infrastructure. LDN DSS allows to easily visualize and compare spatially explicit indicators while selecting a particular area of interest (e.g. a water catchment, and obtain summary statistics, charts and tables). The system allows decision makers, for example, to identify and obtain maps of forests that have been improving in terms of productivity and that have high levels of soil organic carbon, which could be areas to prioritize conservation measures for avoiding land degradation. Alternatively, decision makers might be interested in identifying pasture and cultivated lands where land productivity is declining but that have a high potential to sequester soil organic carbon. This tool is flexible and can be implemented and personalized with different data sources to build country- or project-specific Systems.

The concept of land degradation neutrality (LDN) was introduced into the global dialogue by the United Nations Convention to Combat Desertification (UNCCD), accepted by the international community during the Rio+20 conference in 2012 and adopted as part of the 2030 Agenda for Sustainable Development in 2015. LDN DSS supports FAO's efforts in deploying methodological tools and strengthening the capacity of countries in achieving land degradation neutrality.

b. Damage and Loss Assessment methodology (D&L) (FAO)

Link: https://www.fao.org/3/cb4265en/cb4265en.pdf

Type: Methodology

Related SDG(s): 1, 9, 15

Target audience: Policymakers, regulatory bodies, academia

Short description:

Damage and Loss Assessment methodology (D&L) is a FAO's tool that helps evaluate the impact of disasters in the agriculture sectors. D&L provides a set of procedural and computational steps for calculating damage and loss from disasters and can be applied to a wide range of disaster events, including climate-related events, from large-scale shocks to small-scale events. The methodology has five components that cover direct damage and loss to crops, livestock, forestry, aquaculture and fisheries. Together, they capture the total effect of disasters on agriculture. FAO's D&L methodology estimates the extent and value of damage and loss in each subsector based on two components - production (I.e. inputs and outputs) and assets (facilities, machinery, tools and infrastructure).

FAO's D&L is a useful tool for developing evidence-based policies for reducing risk and building resilience in agricultural sector. It can be applied to a wide range of disaster events, including climate-related events, from large-scale shocks to small-scale events. It also helps countries report on climate change and monitor the Sendai Framework for Disaster Risk Reduction (SFDRR) indicator C2 on direct agricultural loss from disasters. Finally, it provides baseline data for monitoring global targets on resilience.

c. Digital Services Portfolio (DSP) (FAO)

Link: https://www.fao.org/digital-agriculture/digital-portfolio/en/

Type: Digital tool

Related SDG(s): 9, 10

Target audience: Governments, development practitioners, farmers

Short description:

FAO's Digital Services Portfolio (DSP) is a highly customizable web-based application to deliver information and advisory services to farmers. The DSP application can be implemented at different degrees of complexity and depth, tailored to the local context and aligned with the national and local stakeholders' visions and goals. By default, DSP contains four themes: weather and crop calendars, AgriMarket Place, Livestock and e-Nutrifood. Moreover, DSP is designed to give countries independence and major flexibility in managing the application's structure, themes and content in the form of key advisory messages vital to the local context. The app is a Digital Public Good, so any government or agency can easily adopt it.AgriD (FAO)

d. AgriD (FAO)

Link to pilot: https://data.apps.fao.org/catalog/dataset/agrid/resource/1f7f5986-747d-42fc-9518-4ca4ba2982e4

Type: Digital tool

Related SDG(s): 9

Target audience: Policymakers, regulatory bodies, academia, development practitioners, general public

Short description:

FAO in Europe and Central Asia is building an open regional database of digital solutions and good practices applied in agriculture under the name of AgriD. This open and live database will provide a mapping of the regional digital agriculture landscape and give key insights to development partners, policymakers, investors and practitioners, serving as a critical instrument for disseminating knowledge of digital solutions and good practices applied in agriculture in Europe and Central Asia. A proof-of-concept was created on the Hand-in-Hand Geospatial Platform featuring 10 digital solutions, whereas a more advanced version will be available in Q2 2023 for the public, featuring approximately 100 initiatives. AgriD will support the identification and dissemination of knowledge on digital solutions applied in agriculture while prioritizing the ones that are relevant, accessible and affordable to smallholders. For more information, please, contact reu-digital-agriculture@fao.org.

e. Global Information and Early Warning System on Food and Agriculture (GIEWS) (FAO)

Link: https://www.fao.org/giews/earthobservation/index.jsp?lang=en

Type: Digital tool

Related SDG(s): 1

Target audience: General public, academia, regulatory bodies

Short description:

FAO'sGlobal Information and Early Warning System (GIEWS) monitors the condition of major food crops across the globe for assessing production prospects as well as food demand and other key indicators for assessing the overall food security situation in all countries of the world. GIEWS issues regular analytical and objective reports on prevailing conditions and provides early warnings of impending food crises at country or regional level. To support the analysis and supplement ground-based information, GIEWS utilizes remote sensing data that can provide a valuable insight on water availability and vegetation health during the cropping seasons. The platform allows access to rainfall estimates and the Normalized Difference Vegetation Index (NDVI), as well as the Agricultural Stress Index (ASI), a quick-look indicator for the early identification of agricultural areas probably affected by dry spells, or drought in extreme cases.

Through assessments and reports, GIEWS alerts national and international decision makers on impending food crises, aiming to guide their intervention. GIEWS provides comprehensive market intelligence on agricultural commodities and supports national and regional initiatives to establish and enhance early warning systems. At the request of national authorities, GIEWS supports countries in gathering evidence for policy decisions, or planning by development partners, through its Crop and Food Security Assessment Missions (CFSAMs), fielded jointly with World Food Programme. In country-level application of tools for earth observation and price monitoring, GIEWS also strengthens national capacities in managing food security related information.

f. Digital Villages Readiness Assessment (FAO)

Link: The tool will be made publicly available on the regional DVI platform in 2023.

Type: Toolkit

Related SDG(s): 10, 11, 17

Target audience: Policymakers, development actors, FAO

Short description:

Digital Villages Readiness Assessment Tool for Europe and Central Asia is a tool that will help assess a village's readiness to engage in the FAO's Digital Villages Initiative (DVI). The overarching objective of the DVI Readiness Assessment is to analyse a rural community's particular strengths, local assets and actors, needs and challenges, and overall level of preparedness to undergo a digital transformation process. The tool is based on 17 criteria that look at 3 dimensions: digital ecosystem, strategic context, and leadership and governance of a rural community. The analysis of each criterion determines the level of maturity of the village. The tool with be made publicly available online on the regional DVI platform in 2023. Additionally, FAO in Europe and Central Asia will publish a practical guide conceptualizing the framework for introducing DVI in Europe and Central Asia, that will include a chapter on the Readiness Assessment Tool and its methodology.

g. Digital Public Goods Alliance - Open Foris Collect (FAO)

Link: Registry » Digital Public Goods Alliance

Type: Capacity-building tool

Target audience: Policy makers, expert community, farmers

Related SDGs: 2, 13, 15

Short description:

Open Foris Collect - is an open-source software DPG that facilitates environmental monitoring, paving the way for improved climate change mitigation plans. By creating an entry point for data collected in field-based inventories, it provides a fast, easy, flexible way to set up a survey with a user-friendly

interface. Collect handles multiple data types and complex validation rules, in a multilingual environment. Free open-source solutions for environmental monitoring.

Food and Agriculture Organization of the United Nations (FAO) / International Telecommunication Union (ITU)

h. E-Agriculture Strategy Guide (FAO-ITU)

Link: https://www.itu.int/en/ITU-D/ICT-Applications/Pages/e-agriculture-strategies.aspx

Type: Guidelines

Related SDG(s): 2, 9, 14, 15

Target audience: Policymakers

Short description:

FAO and ITU jointly prepared the e-agriculture strategy guide and toolkit to provide a methodology and a set of tools to assist countries in developing a national e-agriculture vision, action plan and implementation strategy. The guide is designed to support the development of a national e-agriculture strategy for countries that have yet to put one in place. But it can also be used to improve on existing strategies, for countries that have already embarked on this approach. In all cases, it is expected to facilitate achieving the country's agricultural goals and priorities in a timely, effective and efficient manner. The strategy guide is intended for use by agriculture sector managers/leaders in ministries, departments and agencies who will manage the development of an e-agriculture strategy in close consultation with the ecosystem.

United Nations Economic Council for Europe (UNECE)

i. Sustainable textile value chains in the garment and footwear domain (UNECE)

Link:https://unece.org/DAM/cefact/cf_plenary/2019_plenary/ECE_TRACE_C_CEFACT_2019_026E.pdf

Type: Toolkit

Related SDG(s): 12

Target audience: Policymakers, regulatory bodies, private sector, academia, general public

Short description:

The garment and footwear (GF) industry has one of the highest environmental footprints, and risks for human health and the society. At the same time, the complexity and opacity of the value chain makes

it difficult to identify where such impacts occur and to devise necessary targeted actions. In the next decades, fast fashion trends, coupled to growing demand in emerging economies, are going to intensify the effects on the environment and human health of practices and processes, and on working conditions. Key actors in the industry have identified interoperable and scalable traceability and transparency of the value chain, as crucial enablers of more responsible production and consumption patterns, in support of Sustainable Development Goal (SDG) 12 of the United Nations 2030 Agenda for Sustainable Development.

j. Facilitating trade to feed the world (UNECE)

Link:https://unece.org/fileadmin/DAM/cefact/cf_plenary/2016_plenary/ECE_TRADE_C_CEFACT_2016_19E.pdf

Type: Guidelines

Related SDG(s): 2

Target audience: Policymakers

Short description:

This document explains how the standards and recommendations of the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) achievement of Sustainable Development Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture. Through its contribution to trade facilitation and supply chain optimization, UN/CEFACT makes international and national logistics more efficient and cost effective. A reach the market in good condition, s a result, the food produced is more likely to be consumed and is less likely to be wasted. In this way, UN/CEFACT makes an important contribution to the eradication of hunger.

7. Digital sustainability

International Telecommunication Union (ITU)

a. Green GovStack (ITU)

Link: https://www.itu.int/en/ITU-D/Environment/Pages/Priority-Areas/Green-GovStack.aspx

Type: Capacity building tool

Related SDG(s): 9, 12, 13, 17

Target audience: Policymakers

Short description:

Since January 2022, as part of a two-year-long project funded by GIZ on behalf of the German Federal Government, ITU complements these efforts by ensuring that the capabilities of GovStack support environmental efforts and does not produce additional burden for the climate. ITU will:

- Guide governments to procure environmentally friendly equipment on which to run GovStack;
- Identify and report climate-friendly technologies to be used within the GovStack infrastructure; and
- Help select countries in implementing policies and regulations to treat the electronic and electrical waste resulting from GovStack infrastructure, and other origins, in an environmentally sound manner.

b. Thought paper: Digital solutions for a circular electronics value chain explores the applicability and scope of digital technologies for enabling circularity in the lifecycle of electronic devices (ITU)

Link: https://www.itu.int/en/ITU-D/Environment/Pages/Priority-Areas/Developing-Technology-Solutions.aspx

Type: Guidelines

Related SDG(s): 9, 12

Target audience: Policymakers, regulatory bodies, private sector, academia, general public

Short description:

The paper maps out major digitalization trends and highlights use cases of digital technologies across the electronics value chain, ranging from simple digital platforms and online materials marketplaces to AI-enabled e-waste recognition. Such examples are drawn from both established and emerging digital solutions, while case studies provide a deeper look into real-world applications of digital technologies across the electronics value chain.

United Nations Development Programme (UNDP)

c. National Carbon Trading Credit Registry System (UNDP)

Link: https://app.digitalpublicgoods.net/a/10403

Type: Digital Tool, DPG

Related SDG(s): 7, 8, 9, 12, 13, 17

Target audience: Policymakers, regulatory bodies

Short description:

The National Carbon Registry enables carbon credit trading in order to reduce greenhouse gas emissions.

United Nation Environment Programme (UNEP)

d. Digital4Sustainability online course (UNEP-UNSSC)

Link: https://www.unssc.org/courses/digital4sustainability-learning-path

Type: Guidelines

Related SDG(s): 4, 9, 12, 13, 15

Target audience: UN agencies, governments, private sector, civil society, academia

Short description

The Digital4Sustainability course will have 4 sequential modules releasing over the next year covering applications and use cases for climate action, nature protection and pollution prevention. The first moduleintroduces digital transformation with a walk-through of relevant digital technologies and emerging trends. The course is designed as a digital public good and is free to access by all who sign-up. Digital certificates of competition will be issued by UNEP and the UNSSC for each module.

e. CODES (UNEP-UNDP)

Link: https://www.sparkblue.org/codesactionplanlaunch

Type: Framework

Related SDG(s): 9, 12, 13, 15, 17

Target audience: UN agencies, governments, private sector, civil society, academia

Short description: The CODES Action Plan for a Sustainable Planet in the Digital Age offers a vision for uniting digital transformation and sustainability into a twin transition. It is based on a 12 month consultation process with 1,000 stakeholders from 100 countries. It is a follow-up to the Secretary General's Roadmap for Digital Cooperation. The Action Plan calls for a series of 9 Impact Investments that work to align the transitions, mitigate the negative impacts and direct innovations towards accelerating sustainability.

f. CODES Stakeholder Map (UNEP-UNDP)

Link: https://airtable.com/shrfoWu9JbCnwJX3Y/tblxQ8wp5137rA9Et

Type: Framework

Related SDG(s): 9, 12, 13, 15, 17

Target audience: UN agencies, governments, private sector, civil society, academia

Short description: As part of the CODES Action Plan for a Sustainable Planet in the Digital Age, an extensive stakeholder mapping process was conducting of over 250 organizations on the digital sustainability nexus. New stakeholders are being added on a monthly basis as part of the CODES Community of Practice.

g. World Environment Situation Room (UNEP)

Link: https://data.unep.org

Type: Data and analytics

Related SDG(s): 6, 13, 14, 15, 17

Target audience: UN agencies, governments, private sector, civil society, academia

Short description: The World Environment Situation Room (WESR) is a big data platform that aggregates and analyzes the best available open data around key environmental issues such as climate change, biodiversity loss and pollution and waste to help stakeholders monitor trends, progress towards commitments and emerging solutions. WESR will continue to evolve with a focus on supporting Common Country Analysis (CCA). A prototype set of WESR CCA dashboards was established for 39 countries.

8. E-Waste Management

International Telecommunication Union (ITU)

a. E-waste Policy Toolkit (ITU)

Link: https://www.itu.int/en/ITU-D/Environment/Pages/Toolbox/WEEE-Africa-Toolkit.aspx

Type: Toolkit

Related SDG(s): 12

Target audience: Policymakers

Short description:

Drawing on experiences from developing countries and emerging markets, the toolkit provides governments with a guide that outlines the system requirements for the management of e-waste. The toolkit considers the need for an all-actors approach and for the fair, inclusive and timely application of the extended producer responsibility principle. Policymakers are invited to use this toolkit as a pragmatic guide to formulate and strengthen e-waste management systems. The toolkit can be referred to for the entire system or for the individual pillars of business and finance, policy and

regulation, technology and skills, monitoring and control, and marketing and awareness. The toolkit is designed to support members of the African Circular Economy Alliance. The toolkit is used by ITU as part of its technical assistance provided to Member States in the development of national e-waste management policy and regulation.

b. Handbook for the development of a policy framework on ICT/e-waste (ITU)

Link: https://www.itu.int/en/ITU-D/Climate-Change/Documents/2018/Handbook-Policy-framework-on-ICT-Ewaste.pdf

Type: Framework

Related SDG(s): 12

Target audience: Policymakers

Short description:

This Handbook provides guidance on the key aspects to be taken into account when designing, implementing and improving a legal, regulatory and policy framework on ICT/e-waste. The proposed framework is intended to facilitate the management of ICT/e-waste based on the concepts of sustainable development, green ICT and the circular economy.

c. WEEE Policy Support (ITU)

Link: https://www.itu.int/en/ITU-D/Environment/Pages/Priority-Areas/National-WEEE-Policy-Support.aspx

Type: Capacity-building tools

Related SDG(s): 12

Target audience: Policymakers

Short description:

It is estimated that 39% of all countries are covered by e-waste (WEEE) policy, legislation or regulation. To assist Member States to balance their economic and social development with their environmental management, ITU provides a programme dedicated to policy and regulatory development. The programme is guided by ITU's high-level targets, by 2023 to:

Increase the global e-waste recycling rate to 30% and raise the percentage of countries with a e-waste legislation to 50%. This self-paced course aims to support national stakeholders in developing national Waste Electrical and Electronic Equipment (WEEE) policy and regulation. Member States can request ITU technical assistance and capacity building to support national or regional e-waste policy development.

d. Learning sources on e-waste management (ITU)

Link: https://www.itu.int/en/ITU-D/Environment/Pages/Toolbox/learning-opportunities.aspx

Type: Capacity-building tools

Related SDG(s): 12

Target audience: policymakers, regulatory bodies, private sector, academia, general public

Short description:

While policy and regulation is vital for an effective e-waste management system, it is crucial that stakeholders are trained and understand the components of an effective framework. In its support to countries in the area of e-waste, ITU prioritizes capacity building of policy makers and other stakeholders. Through story maps and e-learning courses, ITU seeks to make knowledge on e-waste policy and management widely available. In its project activities in both data and policy workstreams, ITU also provides capacity building as a key element, providing training workshops to leaders in the field and preparing materials to support such capacity building.

e. Thought paper: Global and complementary actions for electronics extended producer responsibility (ITU)

Link: https://www.itu.int/en/ITU-D/Environment/Pages/Toolbox/thought-paper-2022.aspx

Type: Guidelines

Related SDG(s): 12

Target audience: Policymakers, regulatory bodies, private sector, academia, general public

Short description:

The thought paper, Global and complementary actions for electronics extended producer responsibility presents complementary solutions and concepts to propel e-waste collection rates in line with EPR-based regulation, whilst also delving into the perceived need for an international regime around EPR to assist with harmonization efforts. New and complementary solutions and concepts are urgently needed to turn the tide on the side of e-waste collection and to move towards a circular economy. Complementary actions can be wide in scope, from commercially or not-for-profit driven to solution-based actions, including deposit-return or refund schemes, public-private-partnerships, as well as the all-actors-approach and the best-of-two worlds philosophy.

International Telecommunication – SCYCLE Programme (UNU and UNITAR)

f. Global E-Waste Monitor (ITU)

Link: https://www.itu.int/hub/publication/d-gen-e_waste-01-2020/

Type: Guidelines

Related SDG(s): 12

Target audience: Policymakers, regulatory authorities, academia, private sector

Short description:

The Global E-waste Monitor is a collaborative effort between the International Telecommunication Union (ITU), the Sustainable Cycles (SCYCLE) Programme currently co-hosted by the United Nations University (UNU) and the United Nations Institute for Training and Research (UNITAR), and the International Solid Waste Association (ISWA). More and more people are joining the global information society and digital economy, and are benefiting from the opportunities they offer. In parallel, higher levels of disposable incomes, urbanization, and industrialization in many developing countries are leading to growing amounts of electrical and electronic equipment (EEE) and, consequently, to greater amounts of e-waste.

g. Greening digital companies: Monitoring emissions and climate commitments (ITU)

Link: https://www.itu.int/en/ITU-D/Environment/Pages/Toolbox/Greening-Digital-Companies.aspx

Type: Framework

Related SDG(s): 12, 13

Target audience: Private sector

Short description:

The report 'Greening digital companies: Monitoring emissions and climate commitments', jointly authored by the International Telecommunication Union (ITU) and the World Benchmarking Alliance (WBA) , was launched on 22 June 2022. The report documents the emissions and energy use of 150 of the world's leading tech companies. Beyond assessing corporate climate data and targets, the report highlights best practices for digital companies to slash their emissions and achieve carbon-neutral operations.

9. Digitization and ICTs for the weather, water and climate monitoring, observation, information management and services

World Food Programme (WFP)

a. Platform for Real-time Impact and Situation Monitoring (PRISM) (WFP)

Link: https://innovation.wfp.org/project/prism

Type: Capacity-building tool

Target audience: Policymakers, expert community

Related SDGs: 2, 3, 9, 13, 15, 17

Short description:

The Platform for Real-time Impact and Situation Monitoring (PRISM) is a DPG that assesses the potential risk and impact of extreme weather events on the most vulnerable communities in order to design risk reduction activities and target disaster responses. PRISM combines information from satellites and other remote sensing sources including data from national meteorological institutions with dynamic data on vulnerability to create actionable climate information for decision-makers, allowing them to prioritise assistance to those most in need.

World Meteorological Organization (WMO)

b. Digital Public Goods Alliance - MET Norway Weather API (WMO)

Link: https://digitalpublicgoods.net/registry/met-norway-weather-api.html

Type: Capacity-building tool

Target audience: Policymakers, expert community

Related SDGs: 2, 3, 9, 13, 15, 17

Short description:

MET Norway API is a DPG that generates data and provides an interface to openly licensed world weather data produced by the Norwegian Meteorological Institute, also known as MET Norway. By providing free digital access to high-quality, reliable, and user-friendly 10-day weather forecast data for any geolocation in the world, MET Norway enables an ecosystem of related digital public goods

that leverage this information to address climate change adaptation, including many of the following solutions.

c. Digital Public Goods Alliance- VIPS (WMO)

Link: https://digitalpublicgoods.net/registry/vips.html

Type: Capacity-building tool

Target audience: Policymakers, expert community

Related SDGs: 2, 13, 15

Short description:

Short description:

VIPS is a DPG and an online forecast and information service that uses weather and climate information provided by MET Norway to deliver a tool for decision support in the integrated management of pests, diseases, and weeds. By using VIPS as the common technological platform, researchers and developers save time and resources when developing and implementing pest prediction models.

d. Climate Information Platform (CIP) (WMO)

Link: https://digitalpublicgoods.net/registry/climate-information-platform.html

Type: Capacity-building tool

Target audience: Policymakers, expert community

Related SDGs: 1, 2, 3, 6, 7, 9, 11, 12, 13, 15, 17

Short description:

Climate Information Platform (CIP) - Created by the Swedish Meteorological & Hydrological Institute, this platform is a collection of openly licensed datasets and content DPGs that provides climate scientists with easy access to pre-calculated climate indicators of weather and water in the past, present and future, for better planning of climate adaptation and mitigation activities.

e. Designated GDPFS Centres - Web portal for the Global Data-processing and Forecasting System (WMO)

Link: https://wmo.maps.arcgis.com/apps/dashboards/7c3d45e5003a417988bad63e91ad8748

Type: Capacity building tools

Related SDG(s): 13

Target audience: National Meteorological and Hydrological Services and other users of forecast products

Short description:

The web portal aims to make key meteorological analyses and forecast products more readily accessible. The portal aims to improve the availability and accessibility of information and products of designated GDPFS Centres. The Web Portal is a one-stop page for the Centres and integrates essential information, including their focal points and links to websites.

f. Hydrological Observing System (WHOS) web portals (WMO)

Link: https://community.wmo.int/whos-portals

Type: Capacity building tools

Related SDG(s): 13

Target audience: National Meteorological and Hydrological Services and other users of forecast products

Short description:

The river basin based portals provide a map interface with links to those National Hydrological Services that make their real-time and/or historical hydrological data available online.

g. World Weather Information Service (WWIS) (WMO)

Link: https://worldweather.wmo.int/en/home.html

Type: Data Archive

Related SDG(s): 13

Target audience: Policymakers, private sector

Short description:

World Weather Information Service (WWIS) is a global website that presents official weather observations, weather forecasts and climatological information for selected cities supplied by National Meteorological & Hydrological Services (NMHSs) worldwide. The NMHSs make official weather observations in their respective countries. Links to their official weather service websites and tourism board/organization are also provided whenever available. Weather icons are shown alongside worded forecasts in this version to facilitate visual inspection. By June 2022, WWIS provided official weather information for 3447 cities in which 3303 cities are available with forecast from 139 members while 2189 cities are available with climatological information from 170 member.

h. World Weather & Climate Extremes Archive (WMO)

Link: https://wmo.asu.edu/

Type: Data Archive

Related SDG(s): 13

Target audience: Policymakers, academia

Short description:

World Weather & Climate Extremes Archive was created as a world archive for verifying, certifying and storing world weather extremes.

i. Climate Information web portal (WMO)

Link: https://climateinformation.org/

Type: Toolkit

Related SDG(s): 13

Target audience: Policymakers, academia, private sector

Short description:

Climate Information web portal provides instant summary reports of climate change for any site on the globe, easy access to many pre-calculated climate indicators, based on state-of-the-art in climate science, of the past, present and future and guidance on how to link global changes to local observations.

World Health Organization (WHO) / World Meteorological Organization (WMO)

j. Climate and health global knowledge platform (WHO-WMO)

Link: https://climahealth.info/

Type: Knowledge platform

Related SDG(s): 13

Target audience: General public (including healthcare workers), policymakers

Short description:

Global knowledge platform dedicated to climate and health developed by the Joint Office of the World Health Organization (WHO) and World Meteorological Organization (WMO), with support from the Welcome Trust. It is in response to growing calls for actionable information to protect people from the health risks of climate change and other environmental hazards.

10.   ICT for disaster risk reduction

International Telecommunication Union (ITU)

a. Guidelines for National Emergency Telecommunication Plan (NETP) (ITU)

Link: https://www.itu.int/en/ITU-D/Emergency-Telecommunications/Pages/Publications/Guidelines-for-NETPs.aspx

Type: Guidelines

Related SDG(s): 9, 16, 17

Target audience: Policymakers, regulatory authorities

Short description:

The ITU Guidelines are a critical tool to assist policy makers and national regulatory authorities to develop a clear, flexible and user-friendly national emergency telecommunications plan with a multi-stakeholder approach. The guidelines can be used for developing tailored contingency plans for emergencies caused by natural hazards, epidemics and pandemics. This includes national policies and procedures as well as governance to support and enable the continued use of reliable and resilient ICT networks, services and platforms for disaster management.

b. Capacity building through emergency building online trainings (ITU)

Link: https://www.itu.int/en/ITU-D/Emergency-Telecommunications/Pages/Online-trainings.aspx

Type: Capacity building tools

Related SDG(s): 9, 16, 17

Target audience: Policymakers, regulatory authorities

Short description:

These online modules aim to build capacitties and increase knowledge on the topic of emergency telecommunications and to continue to build disaster resilience, even in times of the current pandemic. These self-paced courses, which are based on our publications, present the information in

an interactive way through a step by step process. The courses are available throughout the year and are free of charge.

International Telecommunication Union (ITU) / World Food Programme (WFP)-ETC

c. Emergency Telecommunication Preparedness Checklist (ITU-WFP)

Link: https://www.etcluster.org/document/emergency-telecommunications-preparedness-checklist

Type: Guidelines (Checklist)

Related SDG(s): 9, 16, 17

Target audience: Policymakers, regulatory authorities, humanitarian community

Short description:

As disasters continue to increase in frequency and scope across the world, the World Food Programme-led Emergency Telecommunications Cluster (ETC) and the International Telecommunication Union Development Sector (ITU-D) have jointly developed a resource to enable emergency telecommunications preparedness for disaster management. This Checklist focuses on understanding national readiness to enable communications in a disaster scenario, together with identifying targeted areas that may require attention. While intended for use by national governments, it is also an open resource for the humanitarian community at large.

11. Sustainable Smart Cities

International Telecommunication Union (ITU)

a. Toolkit on Digital Transformation for People-oriented Cities and Communities (ITU)

Link: https://toolkit-dt4c.itu.int/

Type: Toolkit

Related SDG(s): 9, 11, 17

Target audience: Policymakers, regulatory authorities, private sector

Short description:

The resources contained in this Toolkit include international standards and guidance, the latest research and projections, and cutting-edge reports on a variety of timely topics relevant to the digital transformation of cities and communities. The Toolkit can universally benefit cities and communities, as well as regions and countries regardless of their level of smart or digital development, or their geographical or economic status.

The Toolkit is:

- A one-stop guide containing latest international standards and other ITU and UN resources, publications and reports.
- An endeavour to identify the challenges faced by cities as well as potential solutions that they can leverage for maximum positive impact.
- A comprehensive, yet non-exhaustive collation of information that is meant to inspire and support progress toward the SDGs, especially SDG 11, at the local level.

International Telecommunication Union (ITU) / United for Smart Sustainable Cities (U4SSC)

b. KPIs for Smart Sustainable Cities (ITU-U4SSC)

Link: https://u4ssc.itu.int/u4ssc-kpi/

Type: Framework

Related SDG(s): 9, 11, 17

Target audience: Policymakers, regulatory authorities

Short description:

The U4SSC Key Performance Indicators are a vital policy tool for cities wishing to achieve the UN Sustainable Development Goals. The KPIs support cities and communities worldwide in evaluating the role and contribution of ICTs and digital technologies in enabling smartness and sustainability, and to provide cities with the tools for self-assessment with the objective of achieving the UN SDGs.

International Telecommunication Union (ITU) / United Nations Economic Council for Europe (UNECE)

c. Guidelines for the development of sustainable smart cities – Action plan (ITU-UNECE)

Link:
https://unece.org/DAM/hlm/documents/Publications/Guidelines_for_SSC_City_Action_Plan.pdf

Short description:

UNECE and ITU developed jointly a definition of smart sustainable cities, through a multi-stakeholder approach which involved over 300 international experts. A smart sustainable city is an innovative city that uses ICTs and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, environmental as well as cultural aspects. This guidance document provides the necessary structure, definitions, and tools to aid in the development of a Smart Sustainable City Action Plan. City Action Plans are developed to implement the recommendations of Smart Sustainable City Profiles. The Plans list the recommendations of the City Profiles and provide a full and strategic, and practical scheme to implement the recommendations. Furthermore, the City Plans give information on the financial resources needed, the targets and goals for each recommendation/project and the people or departments responsible for the implementation.

IV. Assessing digital development

International telecommunication Union (ITU)

a. Wheel of Digital Transformation (ITU)

Link: https://www.itu.int/en/ITU-D/Regulatory-Market/Pages/digital-transformation-wheel.aspx

Type: Framework

Target audience: Policymakers, regulatory authorities, private sector, academia

Short description:

It is a 6-step approach to digital transformation to offer stakeholders with a clear framework on the digital development areas needed to address to bridge gaps and accelerate digital transformation wherever Member States may be on their journey. As countries set their national development strategies grounded in political, social, economic and environmental priorities, a sound framework is more than ever needed to understand how digital changes the game based on the interactions between people, technologies and data that generate the three streams powering the economy and society. Access is about creating the enabling governmental, economic and technological environment for everyone and everything to connect. Adoption is about making sure everyone is able to get online. Value creation is about enabling everyone to contribute and reap the benefits brought by a digitalized society and economy.

b. Digital Development Dashboard (ITU)

Link: https://www.itu.int/en/ITU-D/Statistics/Dashboards/Pages/Digital-Development.aspx

Type: Measurement tool

Target audience: Policymakers, regulatory authorities, private sector, academia, general public

Short description:

ITU Digital Development Dashboard provides an overview of the state of digital development of countries around world based on the ITU WTI Database.

c. ICT Eye (ITU)

Link: https://www.itu.int/net4/ITU-D/icteye#/

Type: Measurement tool

Target audience: Policymakers, regulatory authorities, private sector, academia, general public

Short description:

The ICT "eye" website is a one stop-shop for ICT information and provides telecommunication/ICT indicators and statistics, regulatory and policy profiles, and national tariff policies.

d. Statistics repository (ITU)

Link: https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx

Type: Measurement tool

Target audience: Policymakers, regulatory authorities, private sector, academia, general public

Short description:

As the UN specialized agency for ICTs, ITU is the official source for global ICT statistics. This Statistics repository is a webpage centralizing all ITU's statistical resources and ICT measurement tools.

e. DataHub (ITU)

Link: https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx

Type: Measurement tool

Target audience: Policymakers, regulatory authorities, private sector, academia, general public

Short description:

ITU DataHub is the world's richest source of ICT statistics and regulatory information. ITU DataHub helps stakeholder tracking digital transformation by featuring hundreds of ICT indicators on connectivity, markets, affordability, trust governance, and sustainability. Find, compare, and download data for nearly 200 economies.

f. World Telecommunication/ICT Indicators Database (WTID) (ITU)

Link: https://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx

Type: Measurement tool

Target audience: Policymakers, regulatory authorities, private sector, academia, general public

Short description:

The World Telecommunication/ICT Indicators Database contains time series data for the years 1960, 1965, 1970 and annually from 1975 to 2021 for more than 180 telecommunication/ICT statistics covering fixed-telephone networks, mobile-cellular telephone subscriptions, quality of service, Internet (including fixed- and mobile-broadband subscription data), traffic, staff, prices, revenue, investment and statistics on ICT access and use by households and individuals. Selected

demographic, macroeconomic and broadcasting statistics are also included. Data are available for over 200 economies.

g. Universal meaningful connectivity targets (ITU)

Link: https://www.itu.int/itu-d/meetings/statistics/umc2030/

Type: Measurement framework

Target audience: Policymakers, regulatory authorities, private sector, academia, general public

Short description:

The Office of the United Nations Secretary-General's Envoy on Technology and the International Telecommunication Union (ITU) have launched a new set of UN targets for universal and meaningful digital connectivity to be achieved by 2030. The 15 aspirational targets, developed as part of the work of the UN Secretary-General's Roadmap for Digital Cooperation Roundtable Group on Global Connectivity, co-chaired by ITU and UNICEF, prioritize universality, technology and affordability to ensure that everyone can fully benefit from connectivity. The roadmap had called for establishing a connectivity baseline and targets to aid in advancing a safer, more equitable digital world and a brighter and more prosperous future for all.

United Nations Development Programme (UNDP)

h. Digital Readiness Assessment (UNDP)

Link: https://www.undp.org/digital/transformations

Type: Assessment Framework

Related SDG(s): 9, 17

Target audience: Policymakers, goverments, regulatory bodies

Short description:

The Digital Readiness Assessment helps governments develop an realistic understanding of their countries digital strengths and weaknesses from a whole-of-society perspective, as understood via the Digital Transformation Framework. The assessment is a n't just a rating, but a cross-cutting, hybrid qualitative-quantitative analysis, delivering high-level results to governments and relevant stakeholders in a matter of months.in a matter of weeks what previously took months, or even years.

i. Digital Development Compass (UNDP)

Link: https://data.undp.org/digitalcompass/

Type: Policy tool, Data Navigator

Related SDG(s): 9, 17

Target audience: Policymakers, regulatory bodies

Short description:

The Digital Development Compass is the most extensive collection of publicly available data sets on digital indicators. The Compass, which was developed through an innovative partnership with GitHub, is UNDP's latest tool supporting member states' with their digital transformation journeys. It aggregates and synthesizes digital development indicators from over 180 public data sources into interactive dashboards across the pillars of UNDP's digital transformation framework.