

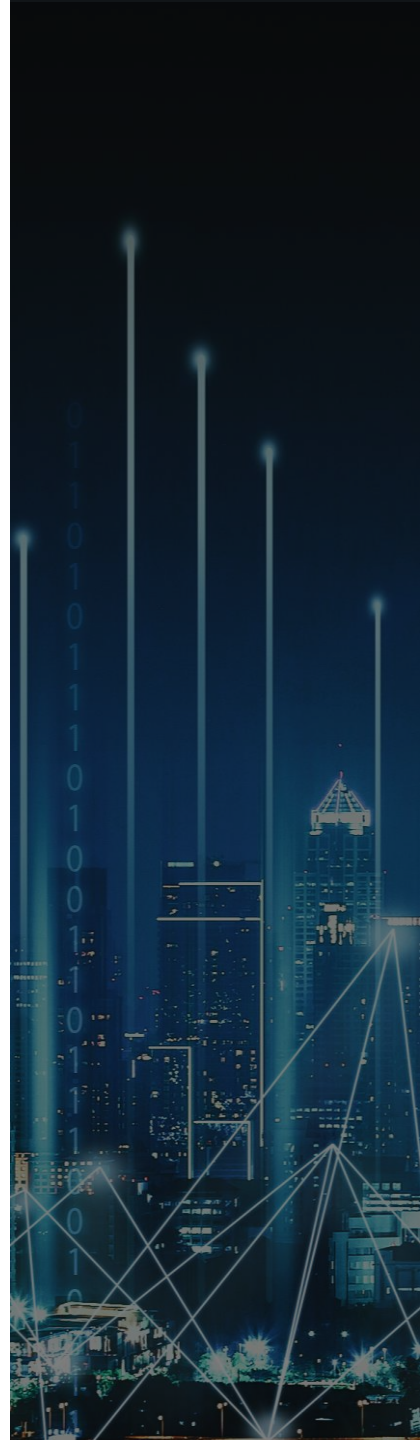
Setting International Standards for Digital Transformation

Bilel Jamoussi
Chief of the Study Groups Department, TSB, ITU

8 June 2023



Africa faces dramatic demographic development



Digital transformation driving economic growth in Africa

The Africa tech ecosystem is strong and rapidly getting stronger.

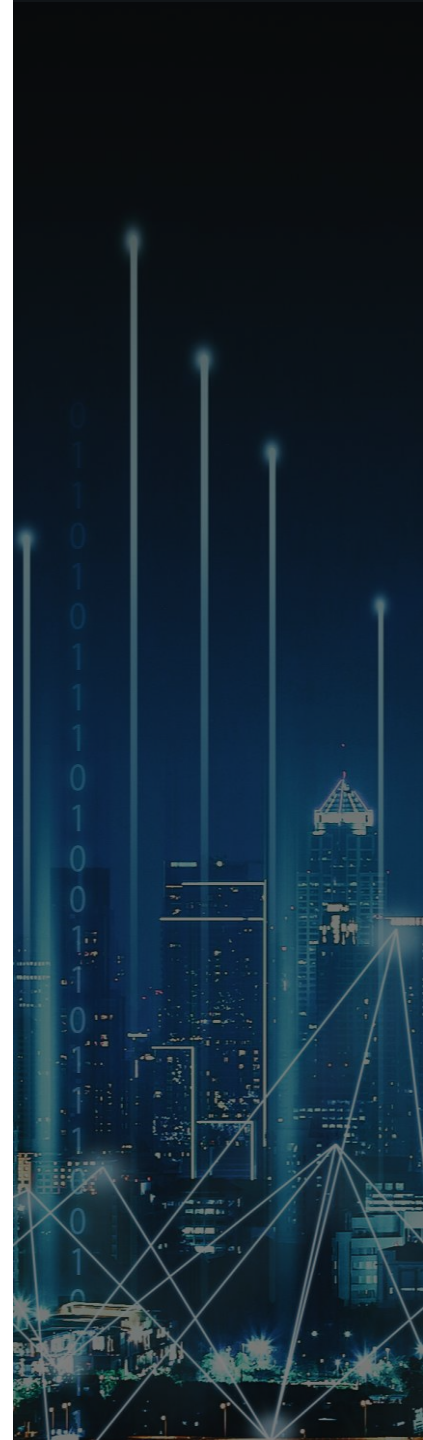


The Internet economy could contribute up to **\$180B** to the African economy **by 2025**



40% of the population in Africa is online. It is expected to expand by **11%** over the next decade to comprise **16%** of the global total

(Source: Accenture, ITU)



ITU is Global



The [International Telecommunication Union \(ITU\)](https://www.itu.int) is the United Nations specialized agency for information and communication technologies (ICTs)



193

Member states



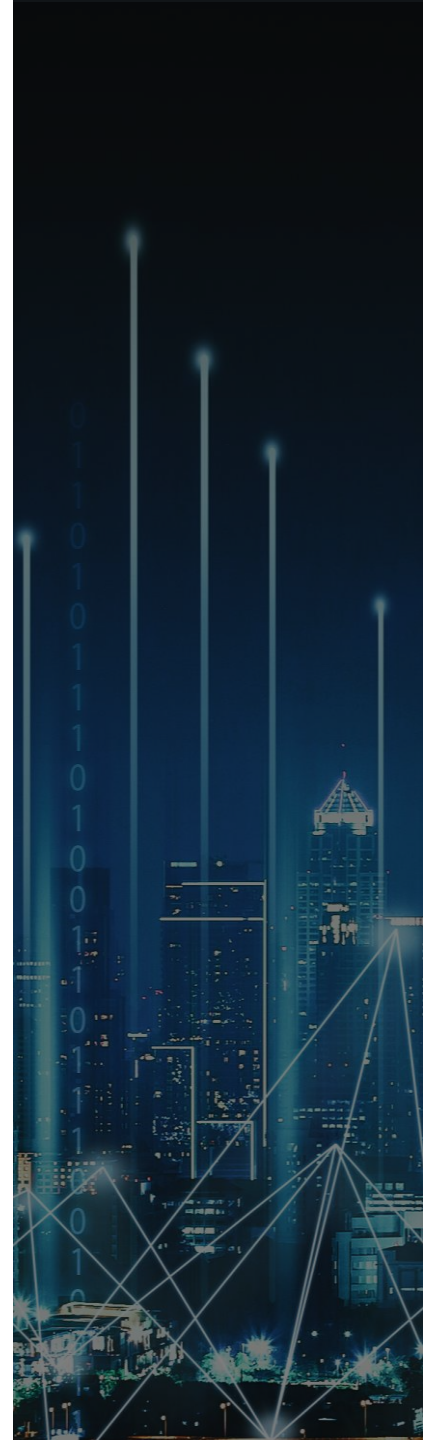
+700

Private sector organizations

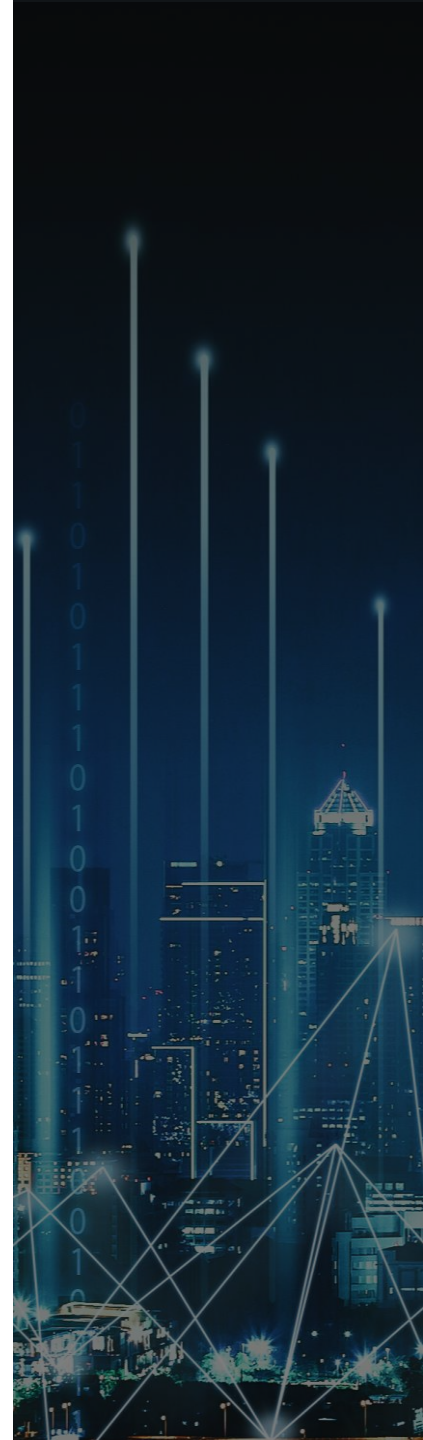
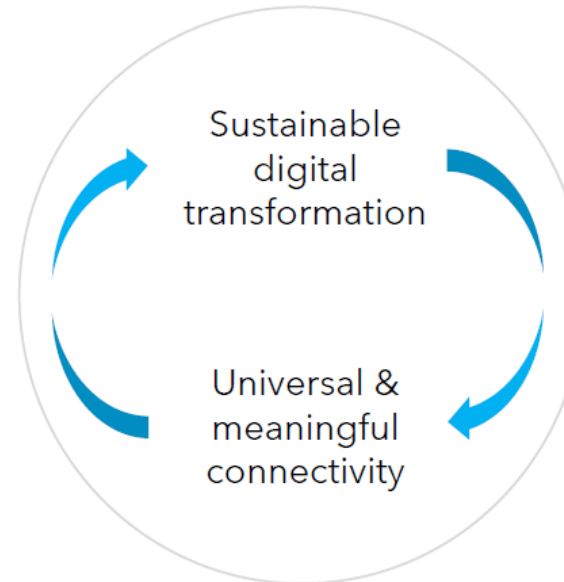
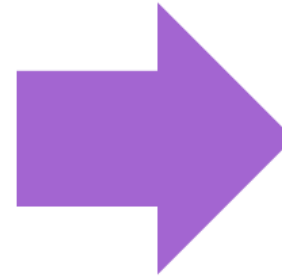


+150

Academia members



Our starting point: the strategic goals





ITU standardization: Global community



Study Groups

Membership-driven study groups develop international standards



Focus Groups

Open-to-all focus groups define new directions in ITU standardization

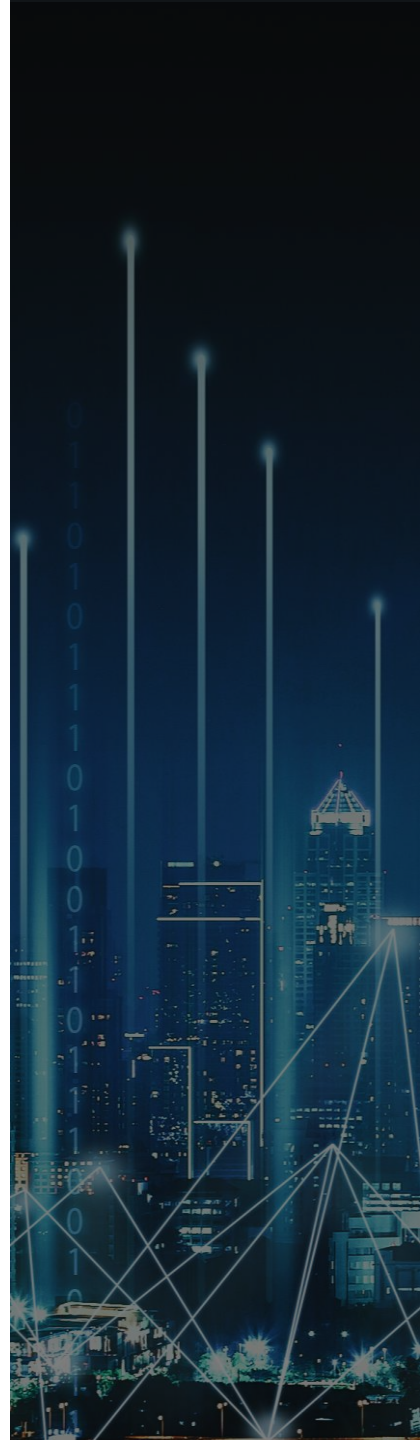


Forums & Workshops

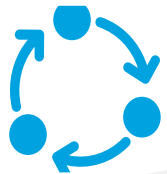
Open-to-all events analyze emerging trends and encourage peer-learning



Reduced ITU membership fees available for academia, start-ups and SMEs, and companies of all sizes in developing countries



ITU standardization: ITU-T Study Groups



SG2: Operational aspects



SG3: Economic and policy issues



SG5: Environment, EMF and circular economy



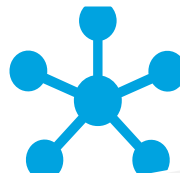
SG9: Broadband cable and TV



SG11: Protocols, testing & combating counterfeiting



SG12: Performance, QoS and QoE



SG13: Future networks



SG15: Transport, access and home



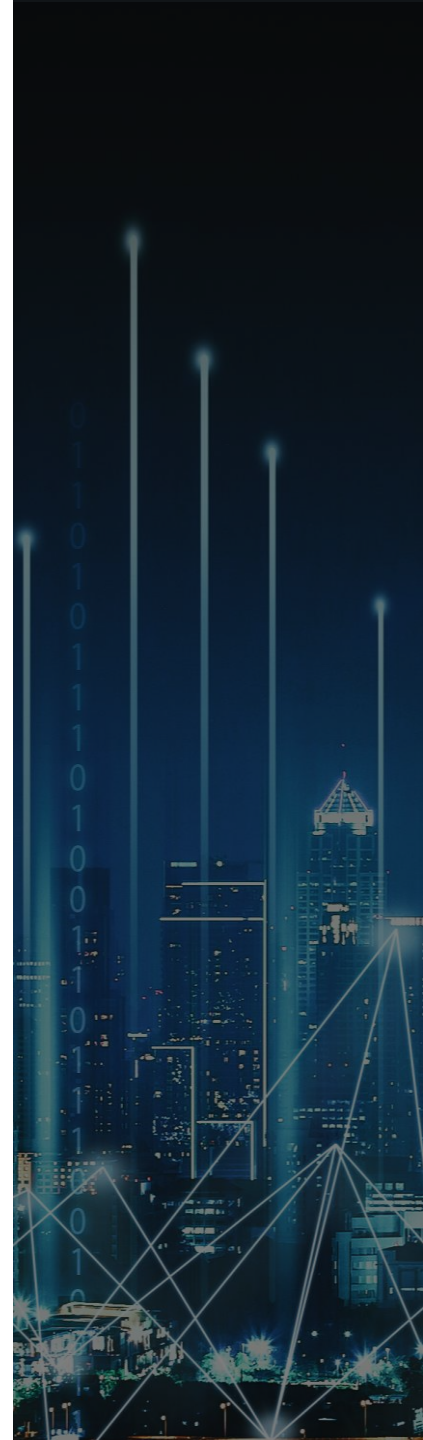
SG16: Multimedia & digital technologies



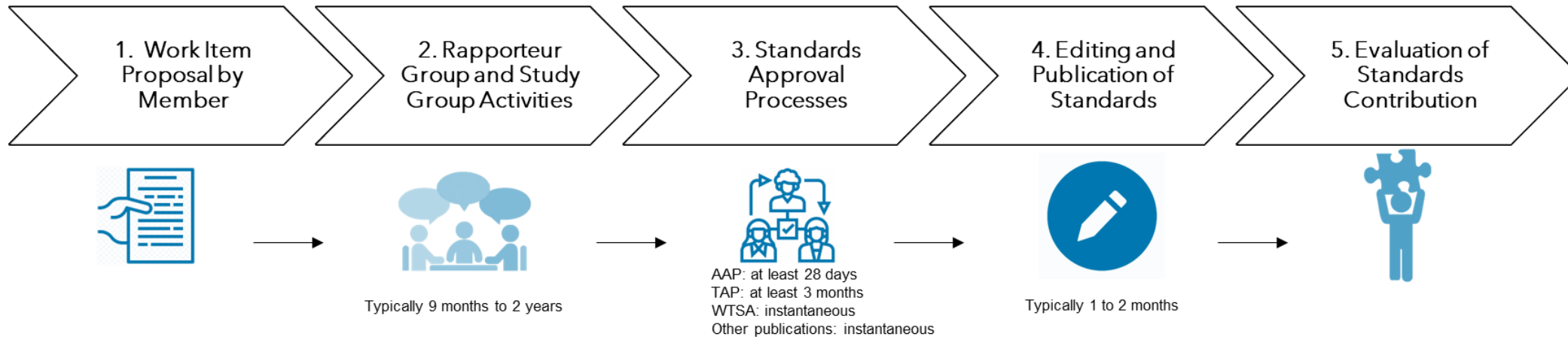
SG17: Security



SG20: IoT, smart cities & communities



The Standards Development Process of ITU-T



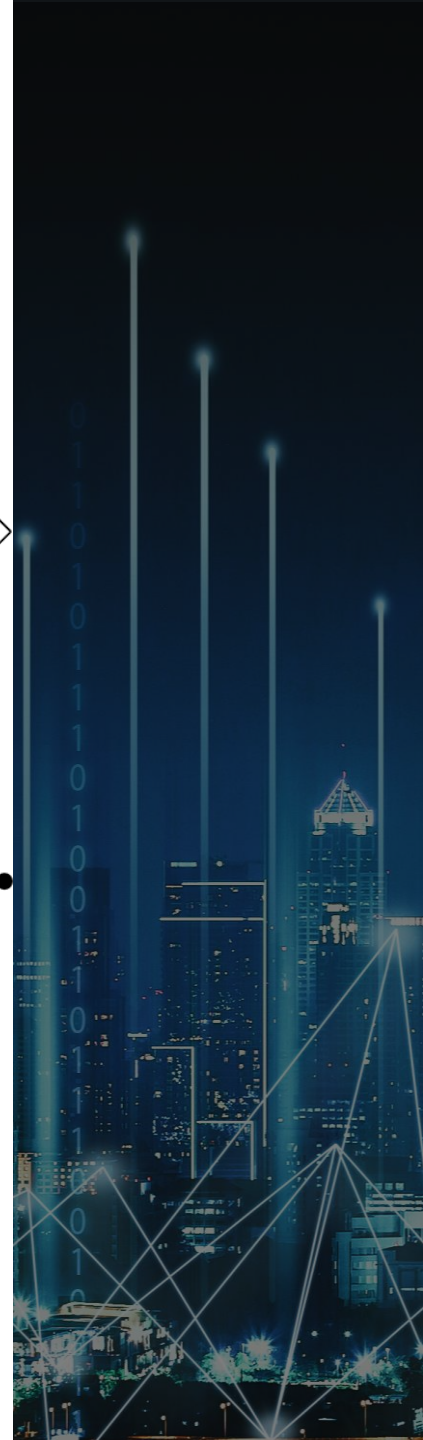
- ❖ Work item is proposed by one or more members in the form of a Contribution and submitted to the relevant Question within a Study Group (SG).
- ❖ Study Group (SG) experts decide whether or not to initiate work item, either as submitted or with Modifications.
[614 average new work items per year]

- ❖ Work items are developed over time in meetings and correspondence activities.
- ❖ Once the text is mature, Study Group experts initiate the Approval process.
[9 months to 2 years for approval process]

- ❖ Four types of approval processes are used depending on nature of the work item:
 - Traditional Approval Process (TAP).
 - Alternative Approval Process (AAP).
 - Agreement for non-normative work items.
 - WTSA if considered necessary by the study group.
- [17,000 pages approved per year]

- ❖ Prior to publication, Approved Recommendations are reviewed by TSB for logical consistency, clarity, page style and graphics.
- ❖ TSB may seek clarification from the experts via communication with the Editor.
[316 Standards published per year with 44 days average time spent for editing and publication each year]

- ❖ Evaluation of the relevance of ITU-T standards towards the ITU strategic plan.



ITU standardization: ITU-T Focus Groups



Autonomous Networks
([FG-AN](#)) / SG13



Testbeds Federations
for IMT-2020 & beyond
([FG-TBFxG](#)) / SG11



Metaverse
([FG-MV](#)) / TSAG



AI for Health
([FG-AI4H](#)) / SG16



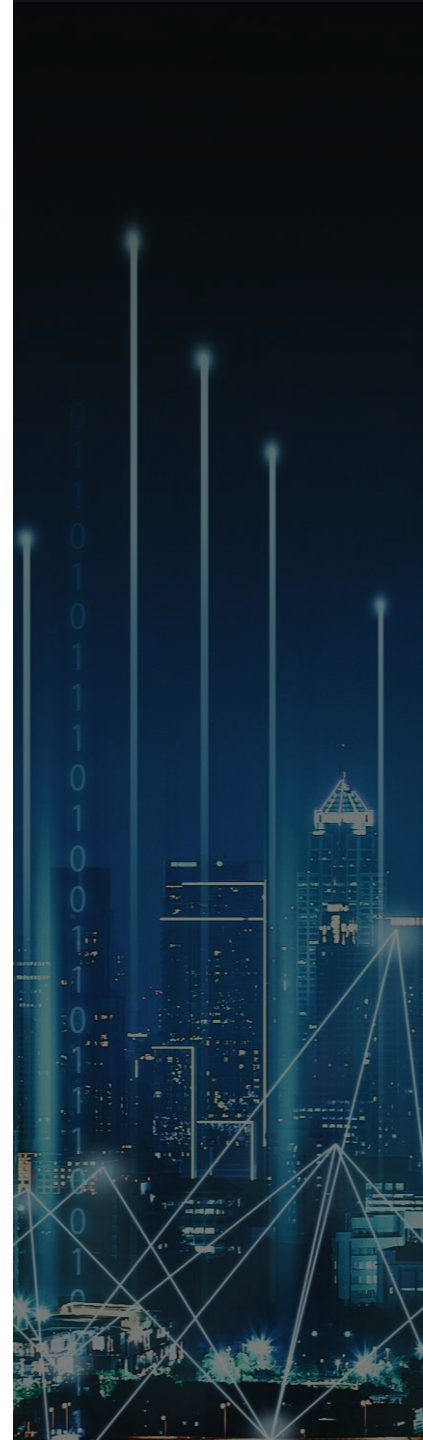
AI & IoT for Agriculture
([FG-AI4A](#)) / SG20



AI for Natural Disaster
Management
([FG-AI4NDM](#)) / SG2



Cost models for affordable data
services
([FG-CD](#)) / SG3



ITU-T Focus Group on "Artificial Intelligence (AI) and Internet of Things (IoT) for Digital Agriculture" (FG-AI4A)



Co-Chairs:

- Ramy Ahmed Fathy (Egypt)
- Sebastian Bosse (Fraunhofer HHI, Germany)

Working Groups



Working Group on Digital Agriculture Use Cases and Solutions (WG-AS)



Working Group on Data Acquisition and Modelling for digital agriculture (WG-DAM)



Working Group for Mapping and Analyzing AI and IoT standards related Activities in Digital Agriculture (WG-Roadmap)



Working Group on Ethical, Legal, and regulatory Considerations relating to the use of AI for agriculture (WG-ELR)



Working Group on Collaboration and Outreach (WG-CO)



Working Group on Glossary (WG-Gloss)

Topic Groups



TG-Data Science for surface and underground water monitoring



TG-Georeferenced Data Management



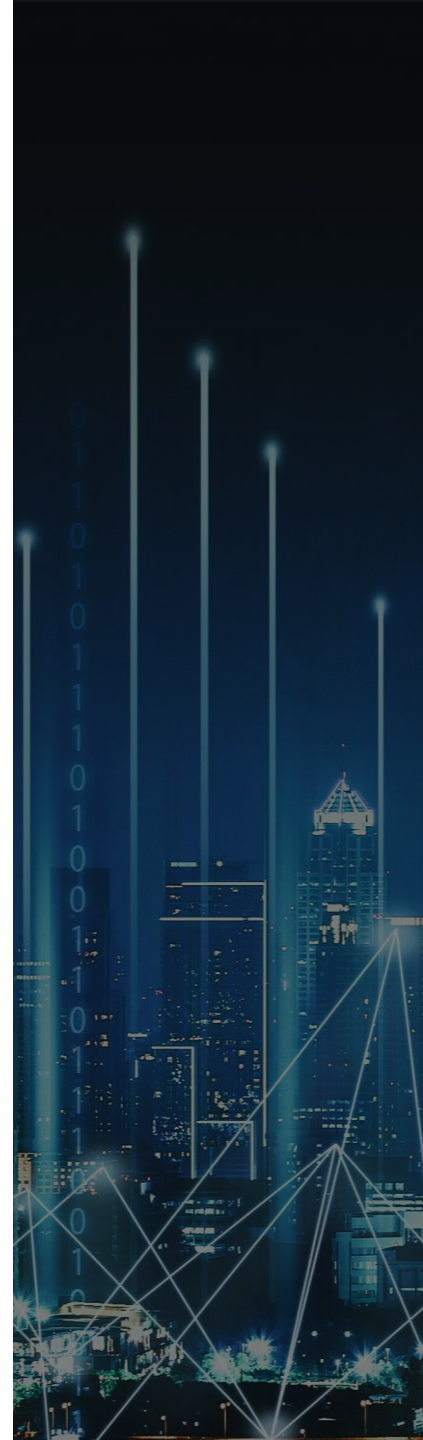
TG-Weather modelling and forecasting



TG-Irrigation strategy and smart water management

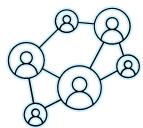


TG-Weather modelling and forecasting

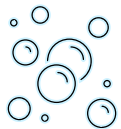




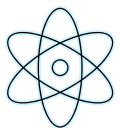
ITU's New Focus Group on metaverse (FG-MV)



Build a community of experts and practitioners



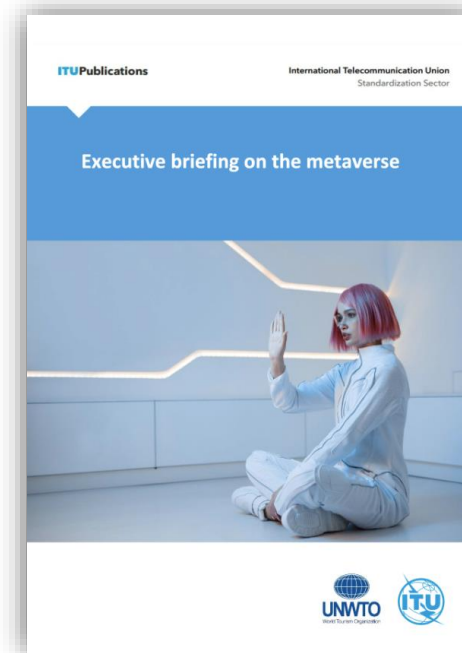
Facilitate dialogues and sharing findings



Identify stakeholders and liaise with other organisations



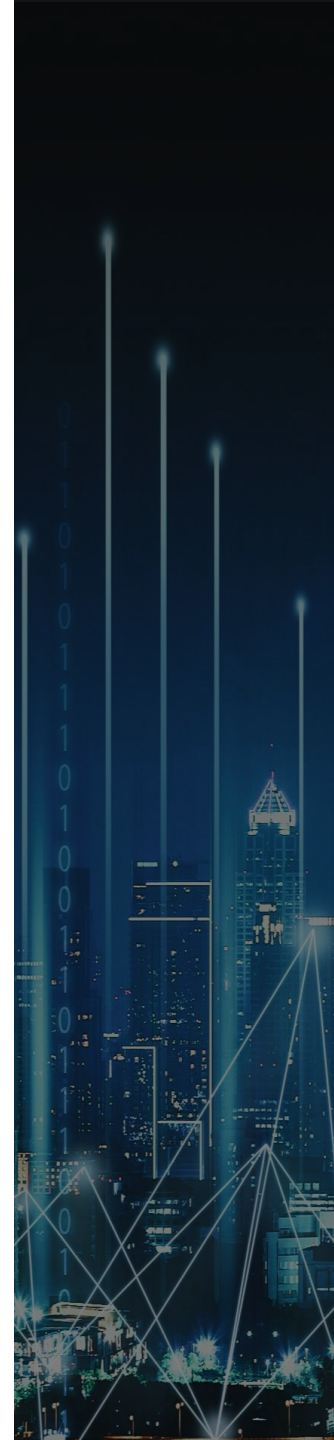
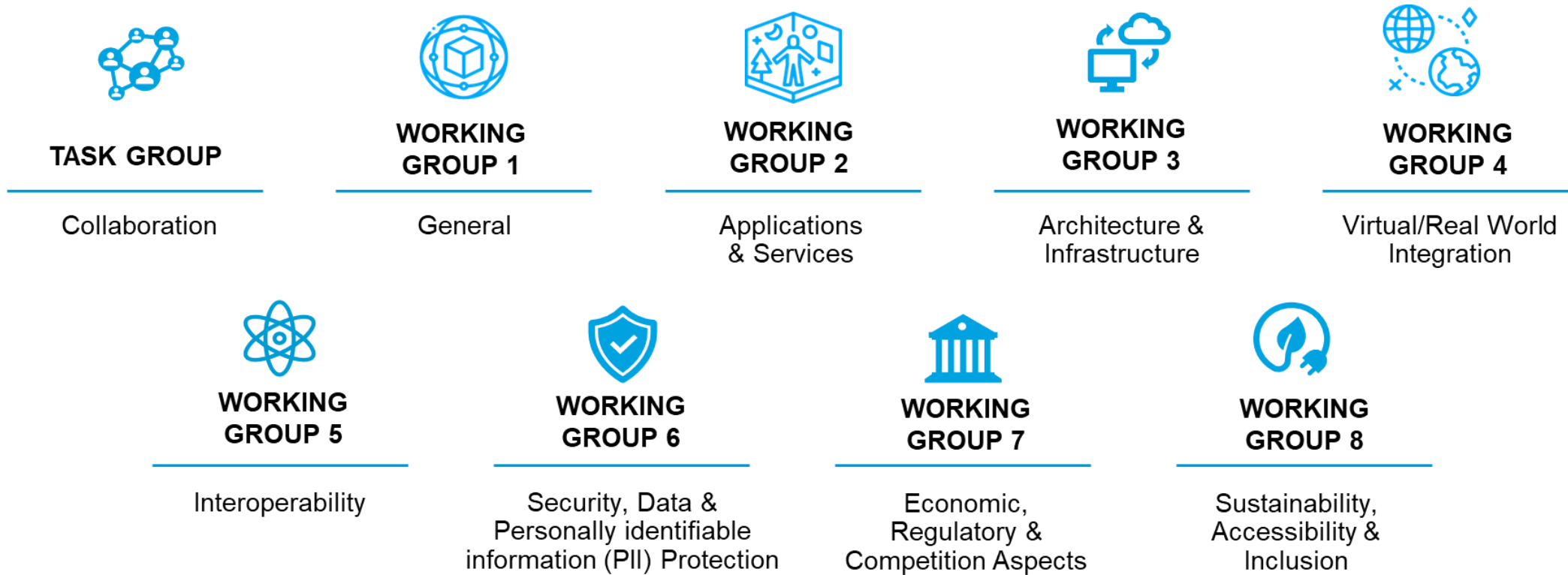
Stimulate international collaboration



Second ITU Forum on "Creating a metaverse for all through international standards" that will take place on 7 July 2023. in Shanghai China

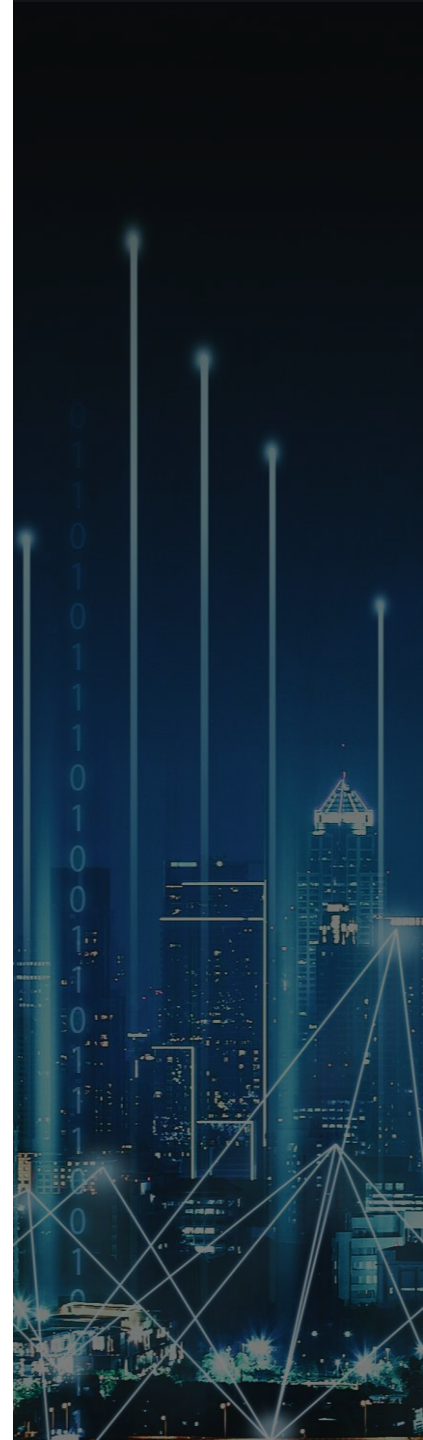


FG-MV Structure



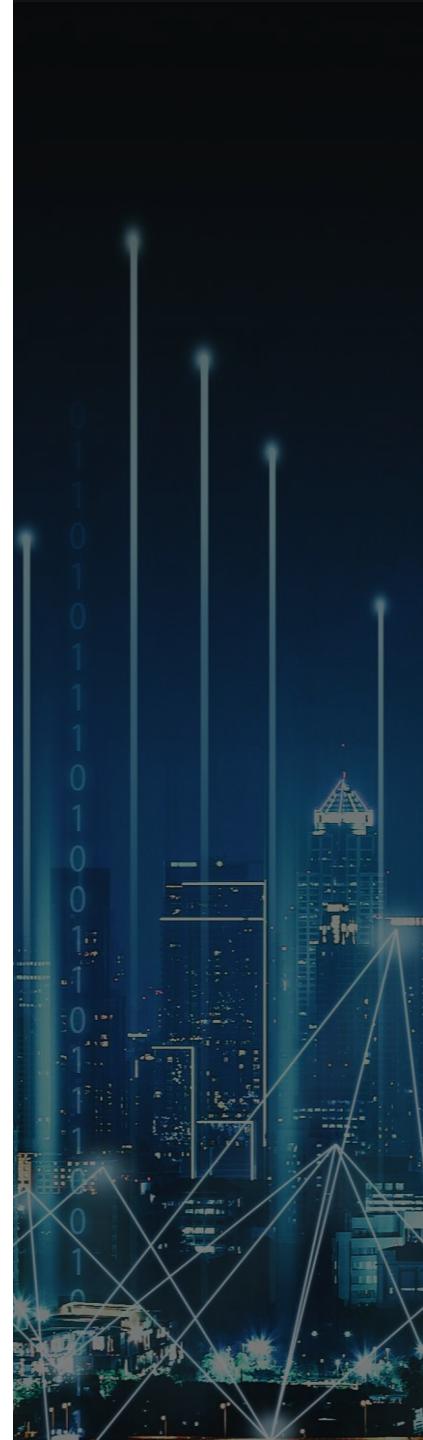
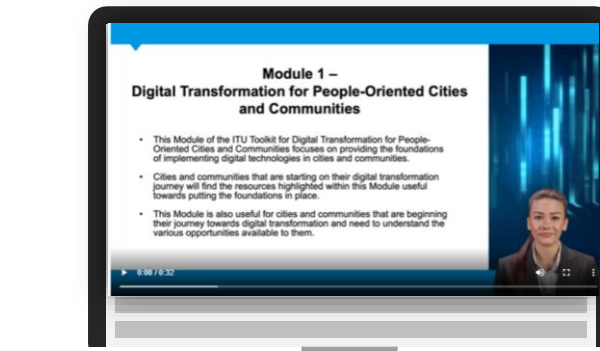
ITU standardization: Bridging the standardization gap

- i Hands-on study group effectiveness trainings**
 - Coaching in practical skills valuable to participation in ITU standardization
- i Fellowships**
 - Financial support to delegates from eligible developing countries
- i Regional groups within study groups**
 - Regional groups help to ensure that ITU standards are globally applicable
- i Online training course on ITU standardization working methods**
 - Training course on ITU standardization processes
- i Regional standardization forums**
 - Regional and interregional forums address working methods and topics under study
- i Electronic Working Methods**
 - Providing IT services to enable and facilitate inclusive participation, e.g., AI translation



Toolkit on Digital Transformation for Cities and Communities

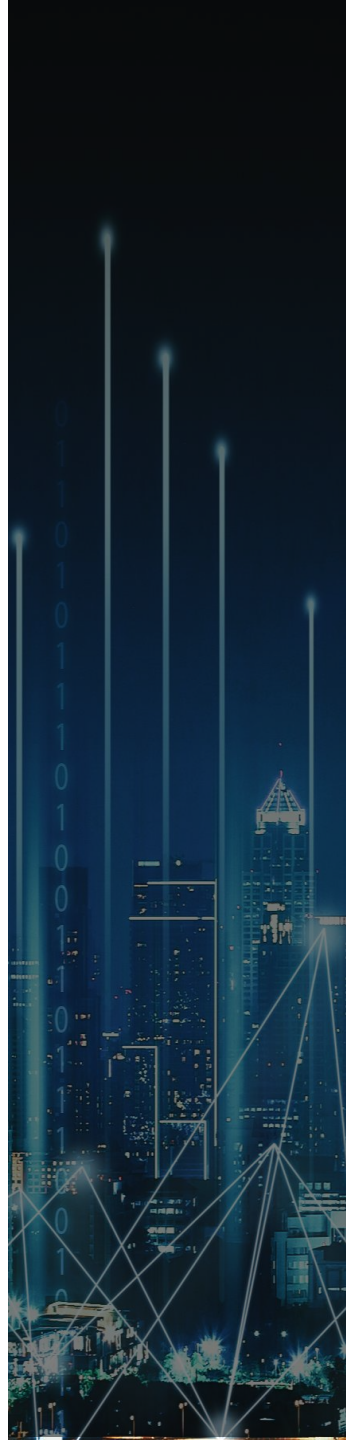
<p>Digital Transformation of Cities and Communities</p>	<p>Developing a Digital Transformation Strategy</p>	<p>Data Processing and Management</p>	<p>Connectivity, Digital Divide and Digital Inclusion</p>
<p>Accessibility and Digital Inclusion</p>	<p>Reduce the Environmental Impact of Cities</p>	<p>Smart Energy Management</p>	<p>Smart Water Management</p>
<p>Emergency Management</p>	<p>4IR and Smart Manufacturing</p>	<p>Smart Sustainable City Governance</p>	



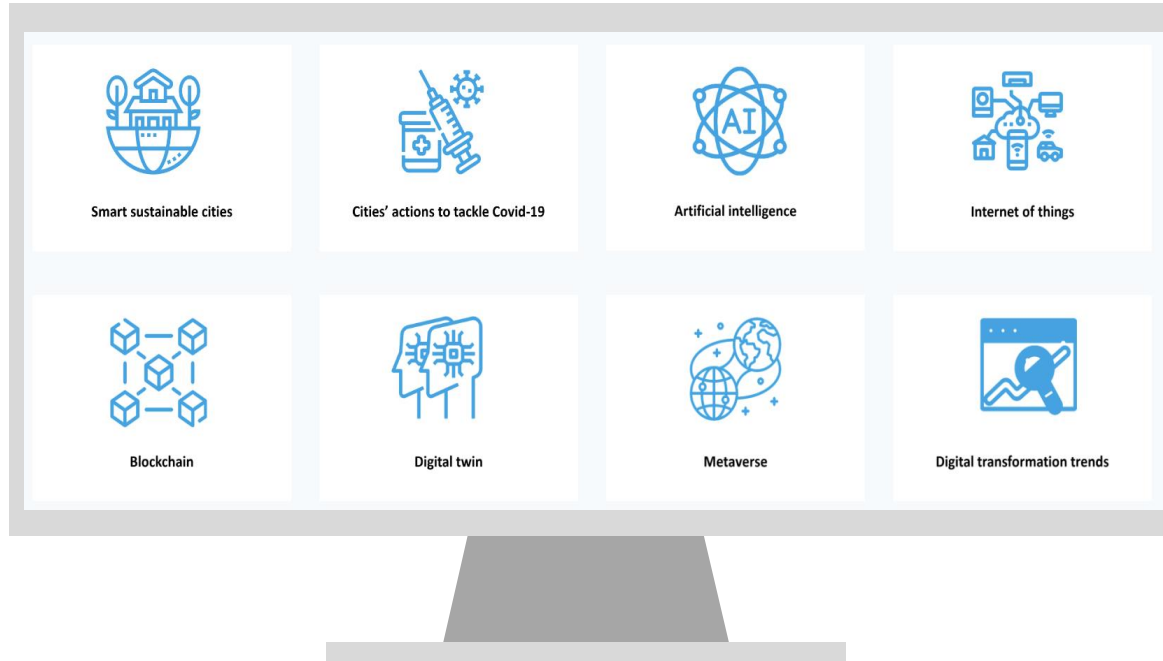
ITU's Digital Transformation Webinar Series



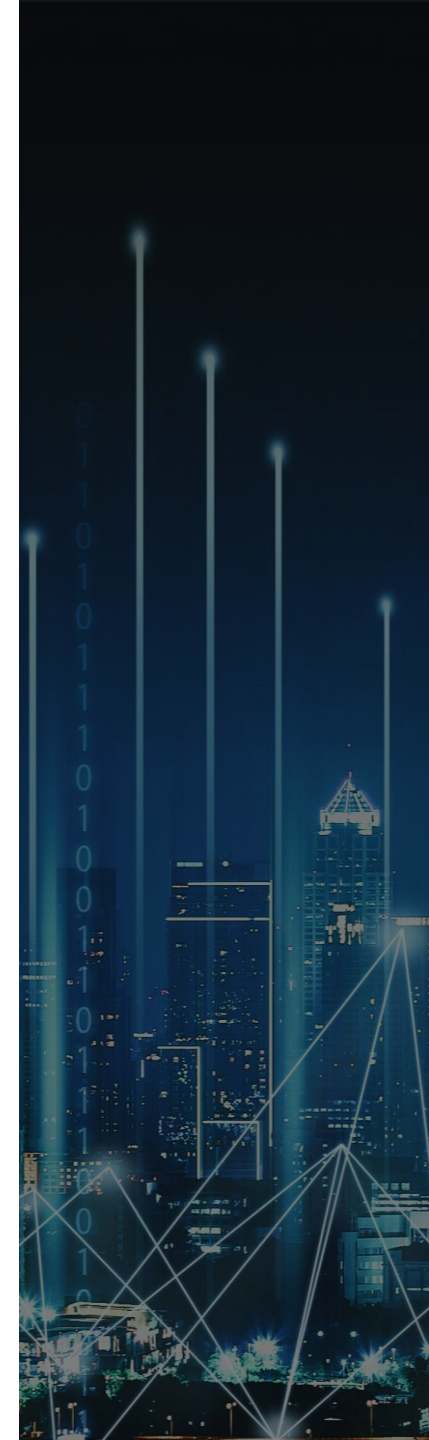
- *Episode on Digital transformation of mobility: paving the way for road safety (14 June 2023)*
- Episode on Digital transformation of testing: federated testbeds as a service (21 June 2023)
- Episode on Digital transformation and Ethical use of technology for animals (26 July 2023)
- Episode on Decade of healthy aging: role of digital technologies (22 August 2023)
- Episode on ChatGPT: risks and rewards of generative AI in cities (4 September 2023)
- Episode on Digital tourism: bridging the gap between communities and destinations (27 September 2023)
- Episode on “Fashioning” the metaverse to accelerate digital transformation: what has gone out of style (2 October 2023)
- Episode on Disaster risk reduction in the digital transformation age (13 October 2023)
- Episode on World cities day: digital transformation for a better urban life (31 October 2023)
- Episode on Digital transformation in the pharma Industry (14 November 2023)
- Episode on Buildings in action: the intersection of digital transformation smart technology and sustainability in cities (28 November 2023)
- Episode on Harnessing digital transformation for smart manufacturing (12 December 2023)



Interested in Exploring More?



Visit ITU's Digital Transformation Resource Hub!





Thank you!



Email

digitaltransformation@itu.int



Website

[ITU-T, Smart Sustainable Cities](#)

ITU Resolutions on IoT and Smart Cities and Communities (1)



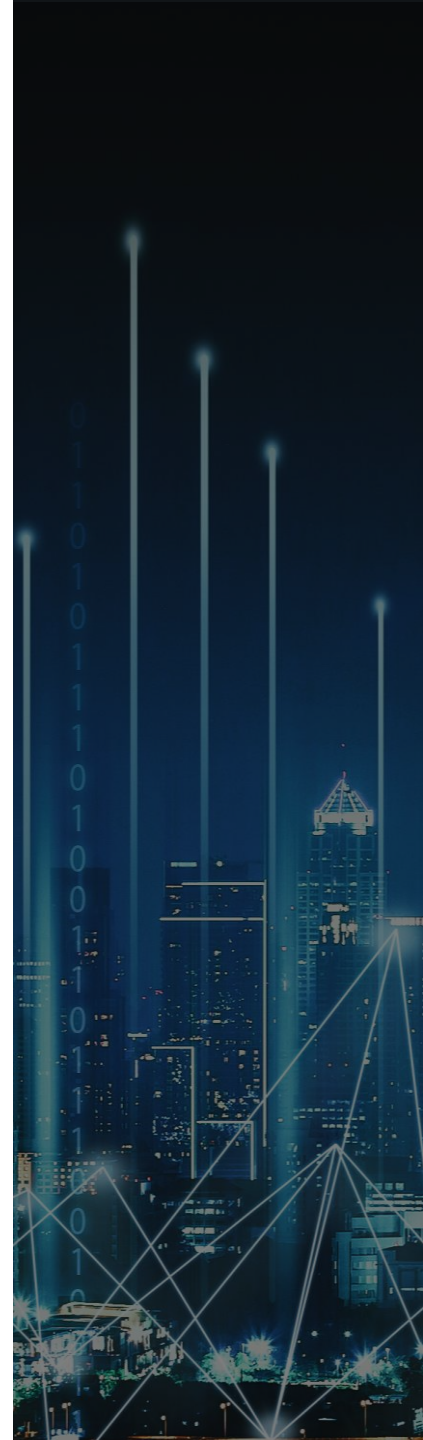
Resolution 197 – Facilitating the Internet of things and smart cities and communities

Resolves,

- to promote investment in and development of IoT and SSC&C in order to support the goals of the 2030 Agenda for Sustainable Development;
- to continue and further develop studies and activities on IoT and SSC&C within the remit of ITU, in order to promote the development of IoT and SSC&C and address any possible challenges for ITU members and relevant stakeholders.

Instructs the Directors of TSB and Radiocommunication Bureau:

- to support the work of relevant ITU-T and ITU-R study groups on IoT and SSC&C and to facilitate the emergence of diverse services in the globally connected world, in collaboration with relevant sectors;
- to continue cooperation with relevant organizations, including SDOs, for exchanging best practices and disseminating information to increase interoperability of IoT services, through joint workshops, training sessions, joint coordination activity groups and any other appropriate means;
- to encourage the development of IoT and SSC&C, taking into account the outcomes of the work of the relevant ITU study groups on various aspects of IoT and SSC&C,



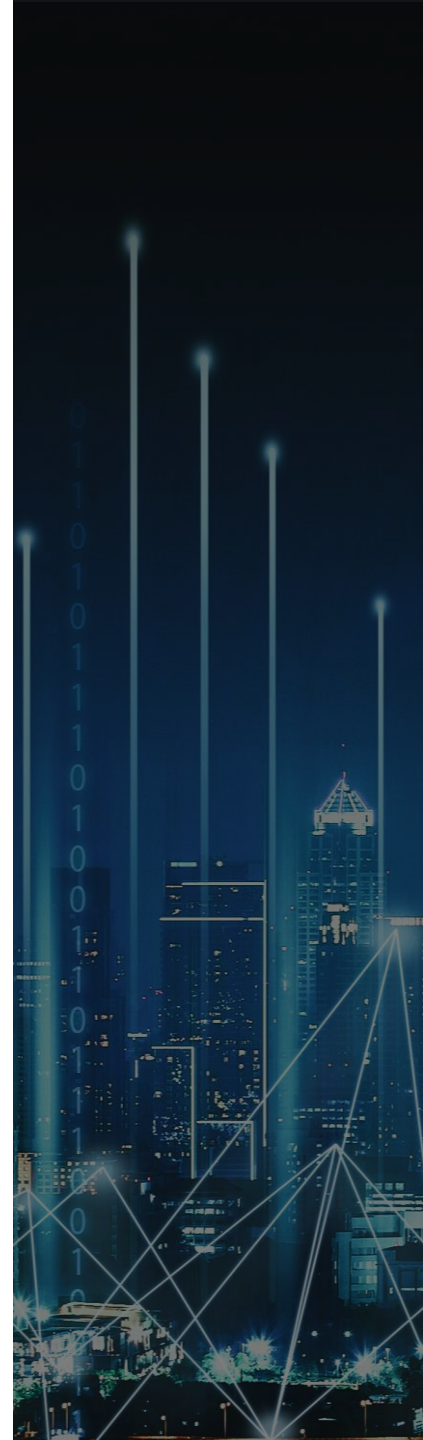
ITU Resolutions on IoT and Smart Cities and Communities (2)



Resolution 98 - Enhancing the standardization of Internet of things and smart cities and communities for global development

Resolves to instruct Study Group 20 of the ITU-T:

- to develop ITU T Recommendations aimed at implementing IoT and SC&C, including, but not limited to, on issues related to emerging technologies and vertical industries;
- to continue, within its mandate, to work with a special focus on the design of a roadmap and harmonized and coordinated international telecommunication standards for the development of IoT, taking into account the needs of each region and Member States, as well as the wide variety of use cases and applications, and the need for IoT to be open and adaptable, and fostering a competitive environment;
- to collaborate with IoT related standards organizations and other stakeholders such as industry forums and associations, consortia and SDOs, as well as other relevant ITU T study groups, taking into account relevant work;
- to collate, evaluate, assess and share IoT use cases from the interoperability and standardization standpoints for data and information exchange.



ITU Resolutions on IoT and Smart Cities and Communities (3)



ITU WTS-20 Resolution 78 - Information and communication technology applications and standards for improved access to e-health services

Instructs Study Groups 16 and 20 of the ITU Telecommunication Standardization Sector, each according to its mandate:

- to identify and document examples of best practice for e-health in the field of telecommunications/ICTs, for dissemination among ITU Member States and Sector Members;
- to coordinate activities and studies relating to e-health among the relevant study groups, focus groups and other relevant groups in ITU T, the ITU Radiocommunication Sector (ITU R) and ITU D, in order in particular to foster awareness of telecommunication/ICT standards pertaining to e-health;
- for ensuring the broad deployment of e-health services in diverse operating conditions, to study communication protocols relating to e-health, especially among heterogeneous networks;
- within the current mandate of the ITU T study groups, to give priority to the study of security standards (e.g. for communications, services, network aspects and service scenarios for databases and record handling, identification, integrity and authentication) relating to e-health, taking into account recognizing e)

