

RESOLUTION 47 (Rev. Baku, 2025)

Enhancement of knowledge and effective application of ITU Recommendations in developing countries, including conformance and interoperability testing of systems manufactured on the basis of ITU Recommendations

The World Telecommunication Development Conference (Baku, 2025),

recalling

- a)* Resolution 177 (Rev. Bucharest, 2022) of the Plenipotentiary Conference, on conformance and interoperability (C&I);
- b)* Resolution 139 (Rev. Bucharest, 2022) of the Plenipotentiary Conference, on use of telecommunications/information and communication technologies (ICTs) to bridge the digital divide and build an inclusive information society;
- c)* Resolution 123 (Rev. Bucharest, 2022) of the Plenipotentiary Conference, on bridging the standardization gap between developing¹ and developed countries;
- d)* Resolution 15 (Rev. Kigali, 2022) of the World Telecommunication Development Conference (WTDC), on applied research and transfer of technology;
- e)* Resolution 37 (Rev. Baku, 2025) of this conference, on bridging the digital divide;
- f)* Resolution 40 (Rev. Baku, 2025) of this conference, on the group on capacity-building initiatives;
- g)* Resolution 62 (Rev. Baku, 2025) of this conference, on assessment and measurement of human exposure to electromagnetic fields (EMF);
- h)* Resolution 76 (Rev. New Delhi, 2024) of the World Telecommunication Standardization Assembly (WTSA), on C&I testing, assistance to developing countries and a possible future ITU Mark programme;

¹ These include the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition.

i) Resolution ITU-R 62-3 (Rev. Dubai, 2023) of the Radiocommunication Assembly, on studies related to testing for conformance with ITU Radiocommunication Sector (ITU-R) Recommendations and interoperability of radiocommunication equipment and systems;

j) Resolution 96 (Rev. New Delhi, 2024) of WTSA, on ITU Telecommunication Standardization Sector (ITU-T) studies for combating counterfeit and tampered telecommunication/ICT devices,

considering

a) that Resolution 177 (Rev. Bucharest, 2022), on C&I, calls to assist developing countries in establishing regional or subregional C&I centres suitable to perform C&I testing, as appropriate and according to their needs;

b) the efforts made by regions and regional organizations (e.g. Maghreb, the Economic Community of West African States, the Caribbean Telecommunications Union, South America and the East African Community), with the collaboration of the Telecommunication Development Bureau (BDT), to promote the collaboration and creation of societies aimed at promoting the efficient use of infrastructures for testing conformance, such as the harmonization of standards and testing services in laboratories;

c) that strengthening the capacity of Member States in the matter of conformance assessment and testing, as well as the availability of facilities for national and regional conformance assessment testing, can help to combat counterfeit telecommunication/ICT equipment and devices;

d) that the deployment of emerging ICTs requires advanced C&I testing frameworks to ensure interoperability, security and safety;

e) that sustainable ICT practices, including energy efficiency and circular economy considerations, should be integrated into C&I testing,

considering further

a) the action plan of the ITU C&I programme as updated by the ITU Council at its 2013 session, the pillars of which are: 1) conformity assessment; 2) interoperability events; 3) capacity building; and 4) establishment of test centres and a C&I programme in developing countries;

b) that ITU should take a leading role in the implementation of the ITU C&I programme, with ITU-T taking lead responsibility for Pillars 1 and 2, and the ITU Telecommunication Development Sector (ITU-D) for Pillars 3 and 4;

c) that C&I of telecommunication/ICT equipment and systems, thanks to the implementation of relevant programmes, policies and decisions, can enhance market opportunities and reliability, and promote world integration and trade,

recognizing

a) that the provisions of ITU Recommendations may guide ITU Member States in the development of national standards;

b) the importance of bridging the standardization gap in the application of appropriate ITU Recommendations that relate to C&I issues;

c) that Resolution 44 (Rev. New Delhi, 2024) of WTSA instructs the Director of the Telecommunication Standardization Bureau (TSB), in collaboration with the Directors of the Radiocommunication Bureau (BR) and BDT, to provide support and assistance to developing countries, if requested, in drafting/developing a set of guidelines on the application of ITU-T Recommendations at the national level in order to enhance their participation in ITU-T study groups, with the assistance of the ITU regional offices, for bridging the standardization gap, and to assist developing countries with their studies, in particular in respect of their priority questions and towards developing and implementing ITU-T Recommendations;

d) that conformance systems and testing, encompassing items such as security, electromagnetic compatibility, interoperability, spectrum occupancy, quality and national technical regulation of ICT equipment, constitute important tests from the standpoint of ICT infrastructure and the consumer;

e) the importance of assisting developing countries in identifying human and institutional capacity-building and training opportunities on C&I testing and in establishing regional or subregional C&I centres suitable to perform C&I testing, as appropriate, encouraging cooperation with governmental and non-governmental, national and regional organizations and international accreditation and certification bodies;

- f) that having infrastructure applications in developing countries which are compatible with ITU Recommendations is desirable, so as to maintain a competitive environment, reduce costs, ensure a safe ICT environment, increase the chances of interoperability and ensure satisfactory quality of service and quality of experience;
- g) that interoperability of international telecommunication networks was the main reason for creating the International Telegraph Union in 1865, and that this remains one of the main goals in the strategic plan for the Union;
- h) that emerging technologies could have needs for C&I testing;
- i) that conformity assessment is the accepted way of demonstrating that a product adheres to an international standard and/or specific requirements, and conformity assessment procedures continue to be important in the context of World Trade Organization members' international standardization commitments under the Agreement on Technical Barriers to Trade;
- j) that particular needs of developing countries must be considered in conformity testing for ICT devices with regard to human exposure to EMF,

recognizing further

that the ITU C&I programme was initiated at the request of the ITU membership, particularly developing countries, in order to enhance the conformity and interoperability of ICT networks and products implementing ITU Recommendations or part thereof, solicit feedback to improve the quality of ITU Recommendations, and reduce the digital divide and the standardization gap by assisting developing countries with human-resources and infrastructure capacity building,

taking into account

that technical training and capacity building for testing and certification are essential for countries to increase global connectivity and promote the deployment of advanced telecommunication networks,

noting

- a) that some countries, especially developing countries, have not as yet acquired the capacity to test equipment and provide security with respect to the consumers in their countries;

- b) that the activities of ITU-D Study Group 2 under Question 4/2 and of ITU-T Study Group 11, especially in the field of C&I testing, have created growing interest in developing countries in building capacities related to C&I;
- c) that C&I testing can facilitate the interoperability of certain emerging technologies such as Internet of Things (IoT), optical access networks and International Mobile Telecommunications-2020 and beyond;
- d) that having infrastructure applications in developing countries which are compatible with the Recommendations and standards of ITU-T and/or other international and internationally recognized organizations is desirable, as against those based on proprietary technologies and equipment, so as to maintain a competitive environment, reduce costs, increase the chances of interoperability and ensure the safety of ICT users and satisfactory quality of service and quality of experience;
- e) the need for C&I testing in order to reduce the probability of errors being introduced during the network integration period, which can impact on commercial deployment schedules;
- f) that prior interoperability tests between ICT devices/equipment from different manufacturers is expected to ensure satisfactory quality of service;
- g) that ITU is implementing human resources capacity building in the regions on conformity, interoperability and testing, which will also be organized in cooperation with other relevant regional and international organizations, to clarify fundamental aspects and accreditation;
- h) that, along with ITU-T Recommendations, there are a number of specifications for C&I testing developed by other standards-development organizations (SDOs), forums and consortia;
- i) that understanding ITU Recommendations and related international standards in order to apply new technology to the network appropriately and effectively is essential for the implementation of Resolution 76 (Rev. New Delhi, 2024),

resolves

- 1 to continue engaging in activities to enhance knowledge and effective application of ICT standards, including ITU-R and ITU-T Recommendations, in developing countries;

2 to enhance efforts to introduce best practice and share experiences on the application of ICT standards, including ITU-R and ITU-T Recommendations, in, for example, but not limited to, fibre-optic transmission technology, broadband network technology, International Mobile Telecommunications, next-generation networks, IoT and emerging technologies, and building confidence and security in the use of ICTs, by organizing training courses and workshops especially for developing countries, involving academia in the process;

3 to evaluate the benefits of using equipment tested in accordance with ITU-T and ITU-R Recommendations, particularly in developing countries, and share necessary information and recommendations based on best practices;

4 to collaborate with other SDOs, in particular the International Electrotechnical Commission (IEC) and the International Organization for Standardization (ISO), to share experiences and best practices in conformity assessment, and to promote synergies between international standards,

instructs the Director of the Telecommunication Development Bureau, in close collaboration with the Directors of the Telecommunication Standardization Bureau and the Radiocommunication Bureau

1 to continue to encourage the participation of developing countries in training courses and workshops organized by ITU-D, so as to introduce best practices and to share experience in the application of ICT standards, including ITU-R and ITU-T Recommendations;

2 to assist developing countries in taking advantage of the guidelines established and developed by ITU-T on how to apply ITU-T Recommendations;

3 to provide assistance in developing methodological guidance (manuals) on implementing ITU Recommendations;

4 to assist developing countries in building their capacity, in collaboration with the other Bureaux, so as to be able to perform conformance testing and interoperability testing of equipment and systems, relevant to their needs, in accordance with the relevant Recommendations, including the development or recognition of, as appropriate, conformity assessment bodies;

5 to assist the Director of TSB, in collaboration with the Director of BR and, as appropriate, with equipment and systems manufacturers and internationally and regionally recognized SDOs, in holding conformance assessment and interoperability testing events, preferably in developing countries, to encourage developing countries to attend these events;

6 to collaborate with the Director of TSB in order to build the capacity of developing countries to effectively participate and be involved in these events, and to provide the views of developing countries on this issue on the basis of a questionnaire addressed by the relevant BDT programme to the ITU members;

7 to promote, with the collaboration of regional C&I bodies (for example, regional standardization bodies, accreditation bodies, certification bodies and testing laboratories, among others), the establishment of technical collaboration with respect to conformance assessment;

8 to assist developing countries in establishing regional or subregional C&I centres and encourage public and private collaboration with governmental and non-governmental, national and regional organizations and international accreditation and certification bodies;

9 to identify regional and subregional ICT testing centres in developing countries as ITU Academy training centres (ATCs) for testing, training and capacity building of ITU members, as part of the strategies to fulfil the objectives of this resolution;

10 to use the ITU seed fund meant for projects and encourage donor agencies to fund annual capacity-building and training programmes in testing centres adopted as ATCs;

11 to coordinate and foster capacity building, by facilitating participation from developing countries in the work of international or regional test laboratories of organizations or entities specialized in conformance testing and interoperability testing, in order to gain on-the-job experience;

12 to collaborate with the Director of TSB in order to implement the recommended actions under Resolution 76 (Rev. New Delhi, 2024) in the C&I programme action plan as agreed by the Council at its 2012 session and revised at its 2013 session;

13 to assign to the BDT programme concerned the responsibility for following up implementation of this resolution;

14 to report on the implementation of this resolution to the Telecommunication Development Advisory Group and to the next WTDC;

15 to continue fostering the participation of developing countries in training courses and workshops organized by ITU-D to introduce suitable practices for implementing ICT standards, including ITU-R and ITU-T Recommendations;

16 to support the review, amendment, updating or drafting of various regulatory instruments such as technical standards, rules, conformance assessment procedures, guidelines for the type-approval and certification of products, equipment, devices or apparatus that can be connected to a telecommunication network;

17 to foster harmonization of C&I procedures, strengthening international, regional and national capacity in this matter;

18 to facilitate, through the ITU regional offices, meetings of experts at the regional and subregional levels, in order to promote awareness in developing countries on the question of the establishment of an appropriate C&I programme in such countries;

19 to assist Member States in enhancing their capabilities for conformance assessment and testing in order to combat counterfeit and tampered devices and to provide experts for developing countries;

20 to submit the progress reports on the activities to the Council for its consideration and required action;

21 to encourage the reduction of costs in C&I testing through relevant techniques;

22 to coordinate with other SDOs, e.g. ISO and IEC, for mutual recognition of testing results and shared best practices,

invites the ITU Council

to consider the report by the Director of BDT,

invites Member States and Sector Members

- 1 to contribute to the implementation of this resolution by means of the following, among others:
 - i) the specification of requirements to conduct C&I testing, actively submitting contributions to the relevant study groups;
 - ii) consideration of the possibility of collaborating in future C&I activities;
- 2 to encourage national and regional bodies in charge of ICT equipment and system conformance to contribute to the implementation of this resolution;
- 3 to exchange C&I expertise in order to enhance knowledge and share experiences;
- 4 to create an enabling environment for ICT equipment manufacturers to consider the local design and manufacture of equipment in developing countries;
- 5 to develop and improve the mutual recognition of C&I testing and results, including mechanisms and data analysis techniques between different regional testing centres;
- 6 to work together to combat counterfeit and tampered equipment using nationally and/or regionally established conformance assessment systems;
- 7 to evaluate the risks and costs of lack of conformity with acceptable international standards, especially in developing countries, and to share the necessary information and recommendations on best practices, in order to prevent losses;
- 8 to strengthen cooperation with relevant SDOs for harmonization of standards and mutual recognition of test results,

invites eligible organizations under Recommendation ITU-T A.5

in collaboration with the Director of BDT and the Director of TSB, in accordance with Resolution 177 (Rev. Bucharest, 2022), on C&I, to work on building the capacity of developing countries in C&I testing, including training.