

Note by the Secretary-General

Report of the council on the implementation of the strategic plan and activities of the Union

Summary

This Report combines the Annual Activities Report (CV 102) and the Report on the Implementation of the Strategic Plan (CV 61; Resolution 71 (Rev. Busan, 2014)). It highlights the main activities of the Union since the last Plenipotentiary Conference in 2014 and summarizes progress in the implementation of the Strategic Plan from the end of 2014 to 2018. In accordance with the request by the Council at its Session in April/May 2018, this report has been finalized under the supervision of the Chairman of the Council with the assistance of the secretariat.

Action required

The Plenipotentiary Conference is invited to endorse this document.

References

CV 82, Resolution 71 (Rev. Busan, 2014)



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This Annual Progress Report is aligned with the new ITU strategic plan 2016-2019 approved at PP-14. Progress made towards the achievement of the strategic goals and objectives is measured and presented in this report using the indicators endorsed by the membership in the operational plans of the three Sectors and the General Secretariat.

ITU Radiocommunication Sector (ITU-R)

- ITU-R hosted its major events, RA-15 and WRC-15. These were well attended and successfully brokered a consensus on important issues, including Global Flight Tracking for civil aviation and a number of global allocations to the mobile, fixed-satellite and Earth-exploration satellite services, as well as global identifications for International Mobile Telecommunications (IMT).
- ITU-R has advanced significantly with preparations for RA-19 and WRC-19 to underpin growth in the mobile, satellite and broadcasting industries. Consensus is being built on IMT allocations/identifications above 24 GHz.
- Good results were achieved in multilateral meetings hosted by ITU-R to resolve cases of harmful interference and to coordinate frequencies for the transition to digital television broadcasting and the allocation of the digital dividend.
- Through its radiocommunication seminars, insightful workshops, and free online access policy, ITU-R continues to work closely with national administrations, influential policy-makers and leading industry executives in outreach and capacity-building on the application of the Radio Regulations and their significance.
- Development of the radio-interface specifications for IMT-2020 has proceeded on schedule towards the timely delivery of the fifth generation (5G) of mobile broadband services. Specifications for UHD TV television with High Dynamic Range (HDR) were also approved in 2017.
- ITU celebrated the [110th anniversary of the Radio Regulations](#) in 2016 and the [90th Anniversary of the CCIR/ITU-R Study Groups](#) in 2017. These celebrations provided an opportunity to showcase the vital role of ITU-R in enabling and shaping the sustainable development of radiocommunications globally.

ITU Standardization Sector (ITU-T)

- ITU-T provides leadership in the standardization of broadband access and home networks and infrastructures for ultra-high-speed transport. High priority has been assigned to ITU-T standardization work on the wireline elements of IMT-2020 (5G) systems. Primetime Emmy Award-winning ITU video compression standards continue to dominate the global marketplace.
- New ITU-T Sector memberships taken up by companies in the automobile and insurance industries reflect the growing importance of ITU-T support for vertical markets such as health care, transport, energy and financial services.
- ITU-T has completed a set of highly anticipated broadband access technologies in G.fast, a new standard capable of delivering 2 Gbit/s over traditional telephone wires; 10G symmetric Fibre to the Home (XGS-PON); and 40G Fibre to the Home (NG-PON2), the first series of standards to provide fibre-optic access speeds beyond 10 Gbit/s. The revision of a key ITU standard underlying the Optical Transport Network will enable optical transport at rates higher than 100 Gbit/s, meeting industry demand for increased capacity in metro and long-haul transport networks.

- The prestige of the collaborative video coding work of ITU, ISO and IEC was recognized with a Primetime Emmy Award in August 2017 for “High Efficiency Video Coding” (HEVC, published as ITU H.265 | ISO/IEC 23008-2), the video compression standard that has emerged as the primary coding format for Ultra-High-Definition TV. This is the second Primetime Emmy Award to recognize this video coding collaboration, following the 2008 award for HEVC’s predecessor, ITU-T H.264 | MPEG-4 AVC.
- ITU-T Study Group 20 (Internet of Things or IoT and Smart Cities and Communities), established in June 2015, is building greater coordination in IoT standardization and application, and bringing together policy and technical communities to encourage the application of IoT technologies in smart city strategies.
- A new ITU-T Focus Group on “Machine learning for future networks including 5G” is establishing a basis for ITU standardization to assist machine learning in bringing more automation and intelligence to ICT network design and management. Three other ITU-T Focus Groups are studying “Data processing and management to support IoT and smart cities and communities”, “Application of distributed ledger technology”, and “Digital currency, including digital fiat currency”.
- The “Financial Inclusion Global Initiative” is a three-year programme of collective action led by ITU, the World Bank Group and the Committee on Payments and Market Infrastructures, with support from the Bill & Melinda Gates Foundation. The initiative is designed to advance research in digital finance and accelerate digital financial inclusion in developing countries, building on the 85 policy recommendations issued by the ITU-T Focus Group on Digital Financial Services.
- The “United for Smart Sustainable Cities” (U4SSC) initiative advocates for public policy to ensure that information and communication technology (ICT) standards play a definitive role in smart cities. The collaboration encouraged by U4SSC has led over 50 cities to join a pilot project implementing the Key Performance Indicators for Smart Sustainable Cities, developed by ITU and the United Nations Economic Commission for Europe (UNECE).

ITU Development Sector (ITU-D)

- The 7th World Telecommunication Development Conference (WTDC-17) was successfully organized in Buenos Aires, Argentina, from 9 to 20 October 2017, under the theme of “ICT for Sustainable Development Goals (ICT4SDGs)”. WTDC-17 adopted the Buenos Aires Declaration; an ITU-D Contribution to the ITU Strategic Plan for 2020-2023; and the Buenos Aires Action Plan (BaAP) comprising regional initiatives, new and revised resolutions and recommendations to support the fulfilment of the Sector’s objectives, and 18 final reports and 14 new Questions to be studied by ITU-D study groups.
- ITU celebrated the 25th anniversary of ITU-D in 2017 and marked this event with special celebration activities at WTDC-17, which included Ministerial roundtables, which re-affirmed the importance of ICTs in development and in contributing to the implementation of SDGs.
- ITU-D convened global and regional forums to discuss global regulatory trends to promote strategic dialogue on policy, legal and regulatory issues, as well as on economic and financial issues and market developments. ITU-D provided data, research, analysis and knowledge exchange tools, and platforms to support membership. ITU-D worked closely with other sectors in all regions to develop infrastructure and services.
- To contribute to bridging the innovation divide and accelerating digital transformation, ITU-D developed strategic tools for ICT innovation policies guidance, undertook ICT-Centric Innovation Ecosystem reviews measured ICT innovation capabilities, hosted knowledge-sharing dialogues, and implemented projects.
- To enhance partnership with mobilizing resources to support development initiatives and projects, between 2014 and 2017, BDT has signed 197 partnership agreements and created

various products and tools, including databases on partners, partnership agreements and websites for sponsorship opportunities.

- ITU-D's cybersecurity activities have helped to strengthen Member States' capacity to incorporate and implement cybersecurity policies and strategies into national plans, and have also resulted in enhanced organizational capacity. BDT's efforts were also aimed at facilitating the development and use of ICT applications and services that supported sustainable development, including in the fields of public administration, business, education and training, health, employment, environment, agriculture and science.
- ITU-D contributed to strengthening the capacities of ITU Member States by implementing a new ITU Centre of Excellence (CoE) Strategy in line with WTDC Resolution 73 (Rev. Dubai, 2014). ITU hosts the world's most comprehensive and up-to-date collection of ICT data and statistics relating to ICT infrastructure, access and usage, policy and regulation, and cost and tariff policy issues. The work of ITU has resulted in the enhanced availability and dissemination of internationally comparable ICT statistical databases.
- ITU-D supported members to design national digital skills development strategies and ICT accessibility policies, including for women and persons with disabilities, promoted digital skills for decent jobs for youth, and encouraged girls and young women to pursue ICT studies and careers. ITU-D raised awareness and provided concentrated assistance to LDCs, LLDCs, and SIDS.
- ITU-D contributed to climate change mitigation and adaptation through the development of satellite communication capacity and by providing emergency communications solutions. ITU has facilitated emergency disaster response, strengthened capacity and improved communications for disaster relief, and has helped several Member States affected by disasters to re-establish their communication networks by delivering direct assistance and infrastructure damage assessments and by helping in the reconstruction and rehabilitation of infrastructure. In contributing to the mitigation of epidemics, ITU-D developed and implemented a big-data project to combat Ebola.
- The Telecommunication Development Advisory Group (TDAG) met annually to advise the BDT Director on the implementation of the WTDC-14 Action Plan and the preparations for WTDC-17. ITU-D study groups provided an opportunity for the membership to share experiences, present ideas, exchange views, and achieve consensus on strategies to address telecommunication/ICT priorities.

Inter-Sectoral objectives and results

- The year 2015 marked a major milestone in the history of ITU as it celebrated its 150th anniversary, focusing on the achievements of both ITU and its membership in connecting the world. The key celebration was held on 17 May 2015 under the theme: "Telecommunication/ICTs: Drivers of innovation", together with multiple activities all around the world.
- The World Telecommunication and Information Society Day (WTISD) was celebrated every year on 17 May. In 2014, the theme was "Broadband for Sustainable Development". In 2015, "Telecommunications and ICTs as the drivers of innovation". In 2016, "ICT entrepreneurship for social impact". In 2017, "Big Data for Big Impact".
- During this period, ITU continued playing a leading role on activities related to the World Summit on the Information Society (WSIS). Activities included, but were not limited to, the organization of the Annual WSIS Forum, hosted by ITU and co-organized by ITU, UNESCO, UNDP, and UNCTAD, in close collaboration with all WSIS Action Line Facilitators/Co-Facilitators (UNDESA, FAO, UNEP, WHO, UN Women, WIPO, WFP, ILO, WMO, UN, ITC, UPU, UNODC, UNICEF, and UN Regional Commissions).
- ITU Telecom World events took place every year. In 2014, it was held in Doha, Qatar; in 2015 in Budapest, Hungary; in 2016 in Bangkok, Thailand; and in 2017 in Busan, Republic of Korea.

- The Broadband Commission continued its work during this period. Following adoption of the UN's Sustainable Development Goals in September 2015, the Commission was re-launched as the Broadband Commission for Sustainable Development to showcase and document the power of ICT and broadband-based technologies for sustainable development by bringing together a high-powered community, including top CEO and industry leaders, senior policy-makers and government representatives, international agencies, academia and organizations concerned with development. The Commission embraces a range of different perspectives in a multi-stakeholder approach to promoting the roll-out of broadband, as well as providing a fresh approach to UN and business engagement.
- There were continuous activities related to other inter-sectoral activities such as cybersecurity, Internet issues, climate change, emergency telecommunications, accessibility, e-health, Smart Sustainable Cities, e-waste, gender, and empowerment of youth through ICTs. Their results are described in the corresponding sections for the sector and inter-sectoral objectives.
- As a United Nations Specialized Agency, ITU collaborated, participated and interacted all along this period within the United Nations system. Key areas of interest and interaction include ICTs for development (digital divide, gender, youth, inclusion, climate change, technology transfer, capacity building); the WSIS follow-up process; ITU/ICT-related issues (Security Council, Outer Space, Cyber Security); MDG follow-up; Post-2015 Development Agenda/SDGs; and above-mentioned the Broadband Commission.

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1 Introduction: Aim of this Report

This Annual Progress Report is aligned with the new ITU strategic plan 2016-2019, including goals, targets and objectives, and focuses on progress made towards achievement of these strategic goals and objectives. The progress is measured and presented in this report using the indicators endorsed by the membership in the operational plans of the three Sectors and the General Secretariat.

2 Strategic Goals of the Union

The *Connect 2020 Agenda* was adopted by the 2014 Plenipotentiary Conference as part of ITU's strategic plan for the 2016-2019 quadrennium. At the heart of the Agenda and the ITU Strategic Plan are four goals relating to:

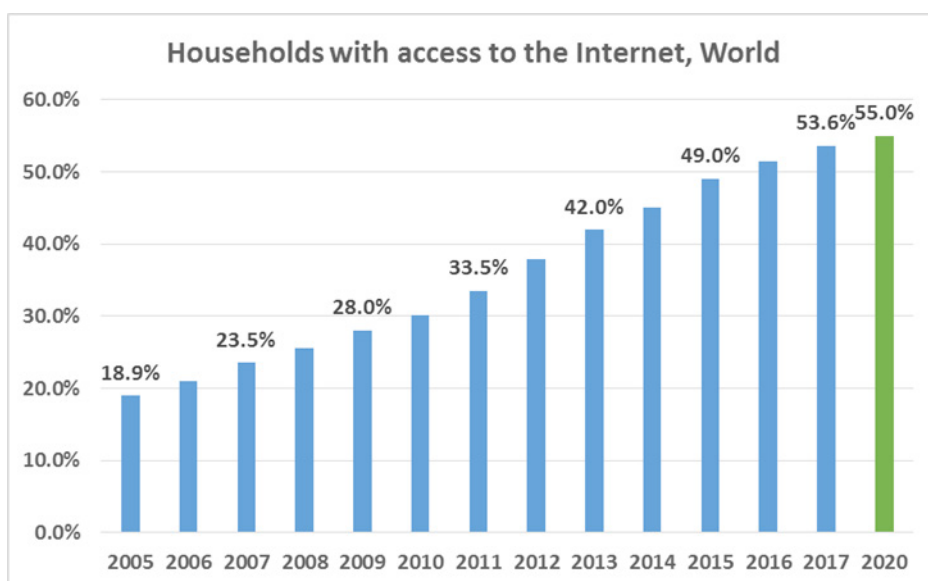
- **Growth** – enabling and fostering access to and increased use of ICTs.
- **Inclusiveness** – bridging the digital divide and providing broadband for all.
- **Sustainability** – managing challenges resulting from ICT development.
- **Innovation and partnership** – leading, improving and adapting to the changing technology environment.

The four goals include 17 targets designed to track progress in each of the goals up to 2020 and to help ITU and other stakeholders to focus their priorities during that period.

2.1 Goal 1: Growth

Target 1.1: Worldwide, 55% of households should have access to the Internet by 2020

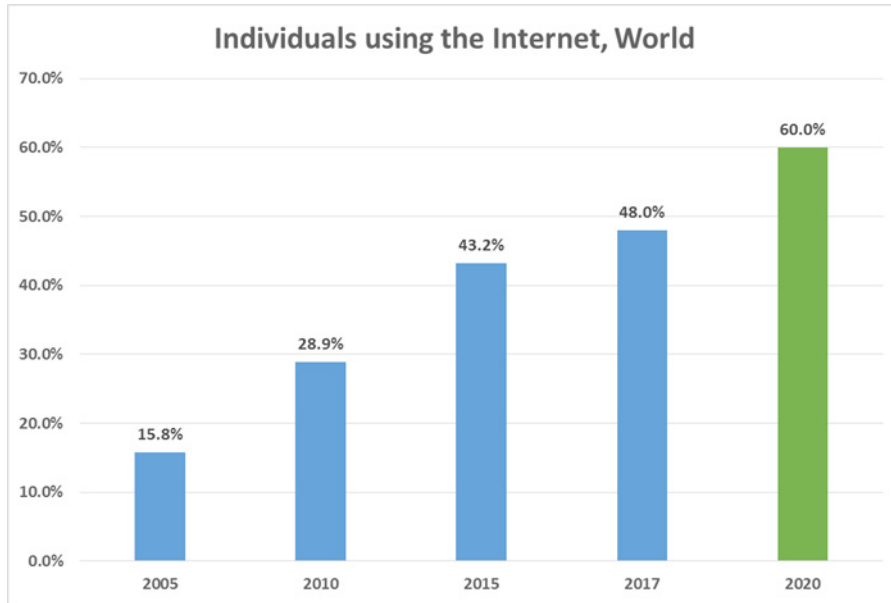
In 2015, 49% of households worldwide had access to the Internet. That figure rose to 51.5% by 2016. By the end of 2017, the figure was 53.6%. The worldwide number of households connected to the Internet benefits in particular from a strong rise in the number of connected households in developing countries and LDCs.



Source: ITU, Measuring the Information Society Report 2017

Target 1.2: Worldwide, 60% of individuals should be using the Internet by 2020

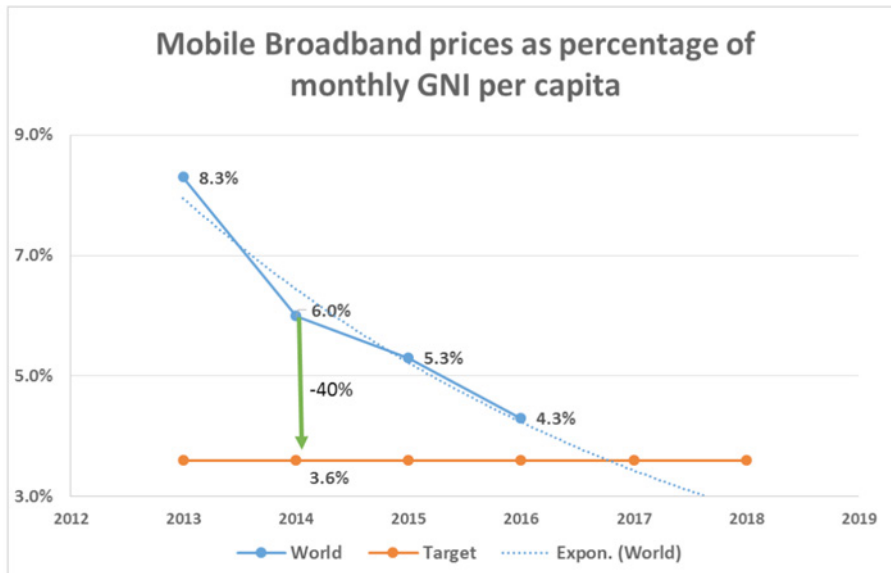
The proportion of individuals using the Internet worldwide in 2015 was 43.2%, which increased to 45.9% by 2016. In 2017, the proportion of individuals worldwide using the Internet was 48%.



Source: ITU, Measuring the Information Society Report 2017

Target 1.3: Worldwide, telecommunication/ICT should be 40% more affordable by 2020

In the period between 2014 and 2017, the affordability of telecommunications/ICT fell by just over 32%. If these values are broken down by developing and developed world, the respective disaggregated values are also just over 32%.

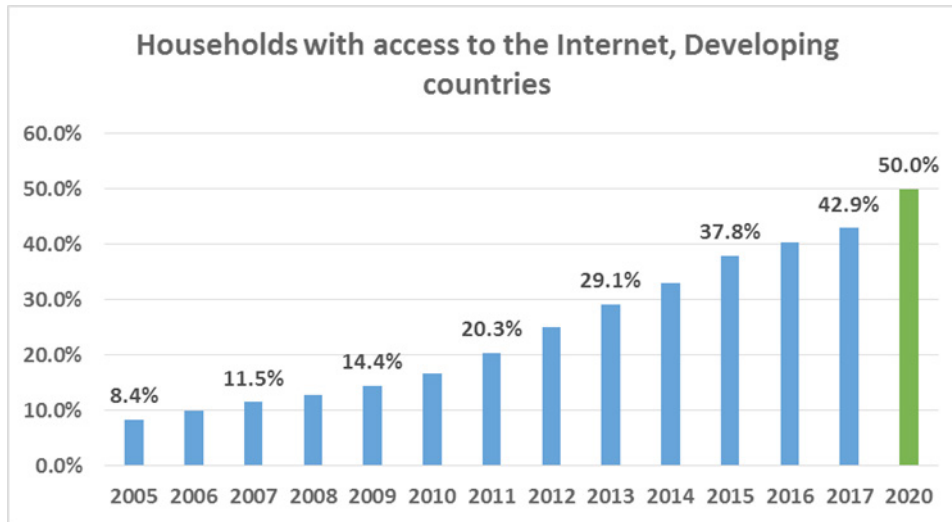


Source: ITU, Measuring the Information Society Report 2016

2.2 Goal 2: Inclusiveness

Target 2.1.A: In the developing world, 50% of households should have access to the Internet by 2020

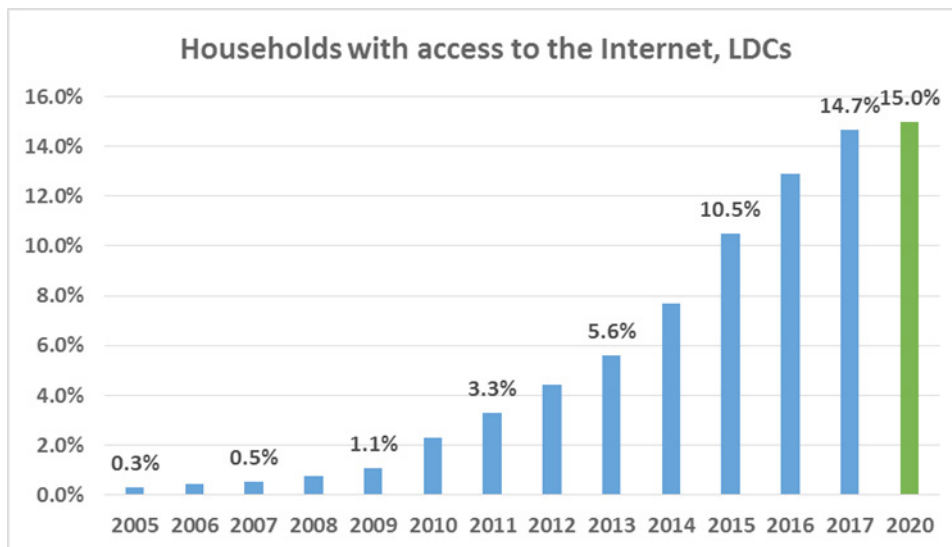
In 2015, the proportion of households in developing countries that had access to the Internet was 37.8%. By the end of 2017, the number of Internet-connected households in developing countries reached 42.9%.



Source: ITU, Measuring the Information Society Report 2017

Target 2.1.B: In the least developed countries (LDCs), 15% of households should have access to the Internet by 2020

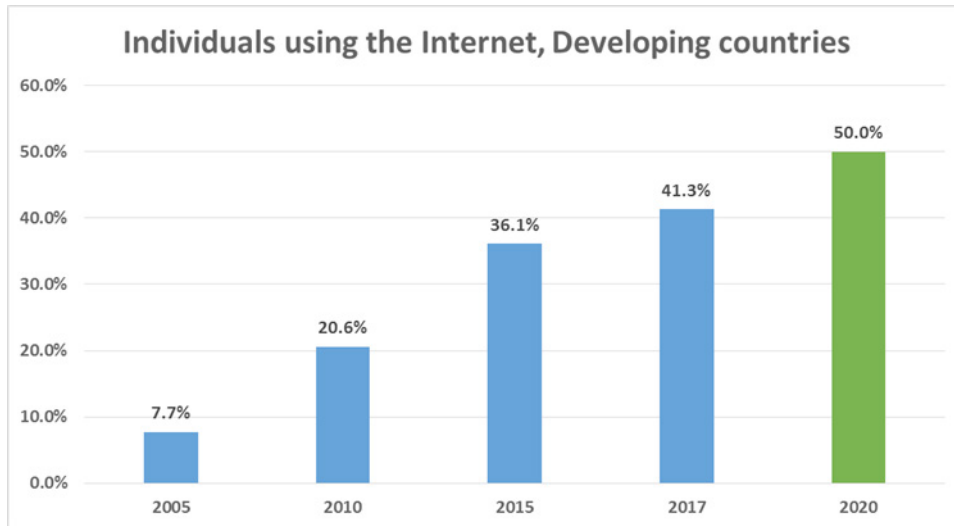
In LDCs in 2015, 10.5% of households had access to the Internet; this proportion increased to 12.9% in 2016. By the end of 2017, the number of connected households reached 14.7%, just 0.3% shy of the target (for 2020).



Source: ITU, Measuring the Information Society Report 2017

Target 2.2.A: In the developing world, 50% of individuals should be using the Internet by 2020

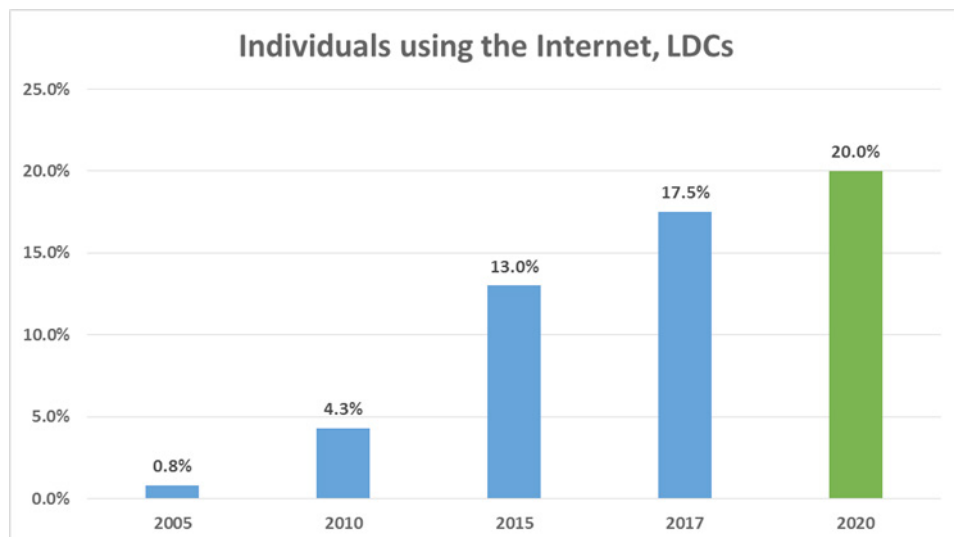
In 2015, in the developing world, 36.1% of individuals were using the Internet, which increased to 39.0% in 2016. By the end of 2017, the proportion of Internet-connected individuals in the developing world reached 41.3%, meaning that an 8.7 percentage point increase is still required between 2018-2020 to meet the target of 50%.



Source: ITU, Measuring the Information Society Report 2017

Target 2.2.B: In the least developed countries (LDCs), 20% of individuals should be using the Internet by 2020

The proportion of the population living in developing countries that were using the Internet in 2015 was 13.0%; over the following year, this increased to 15.6%. By 2017, the proportion of the population using the Internet reached 17.5%, leaving just 2.5 percentage points to meet the Connect 2020 target of 20%.

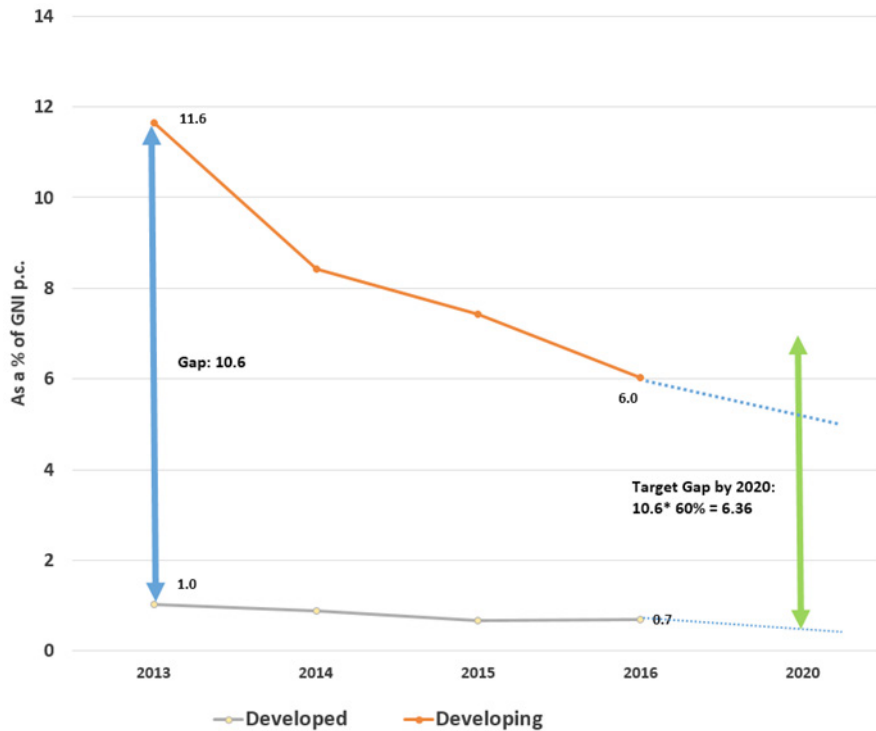


Source: ITU, Measuring the Information Society Report 2017

Target 2.3.A: The affordability gap between developed and developing countries should be reduced by 40 per cent by 2020

The difference in the affordability of fixed broadband and mobile-cellular services between developed and developing countries fell significantly during the period 2008-2012, followed by a slowdown over the period 2012-2014 and even an increase in the case of fixed broadband in 2014. The gap continued to narrow between 2014 and 2015. The difference in the affordability of mobile broadband services fell from 2013 to 2014 and continued to decrease, albeit only slightly, between 2014 and 2015.

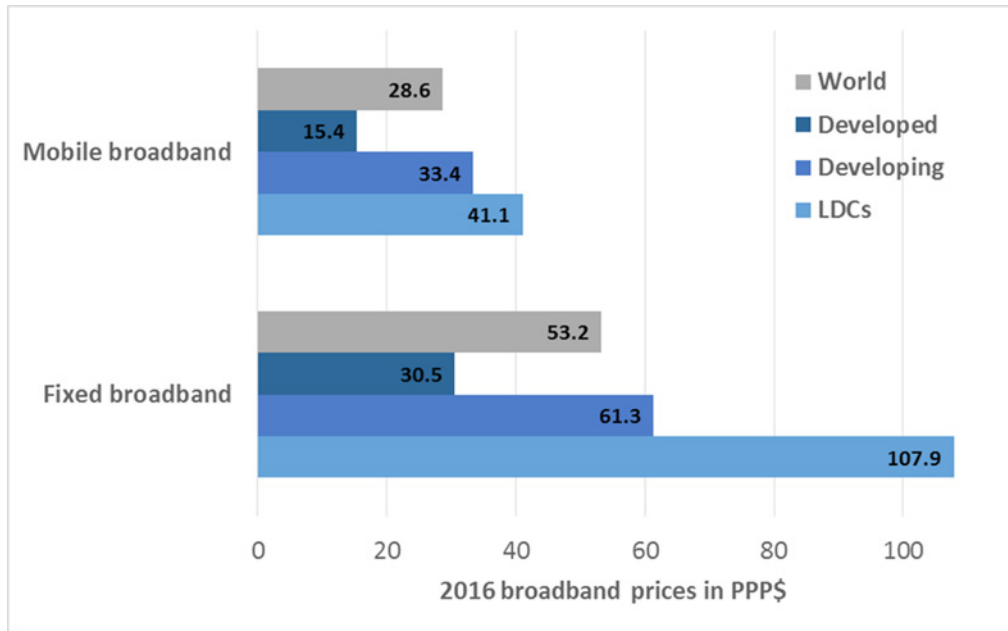
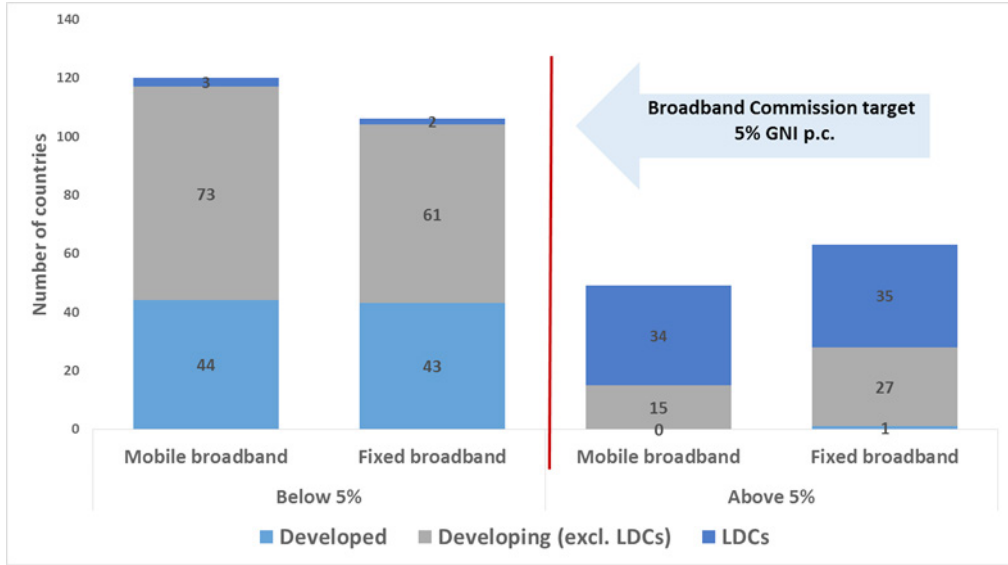
Mobile broadband prices as a percentage of GNI per capita - Affordability gap between developed and developing countries



Source: ITU, Measuring the Information Society Report 2016

Target 2.3.B: Broadband services should cost no more than 5% of average monthly income in developing countries by 2020

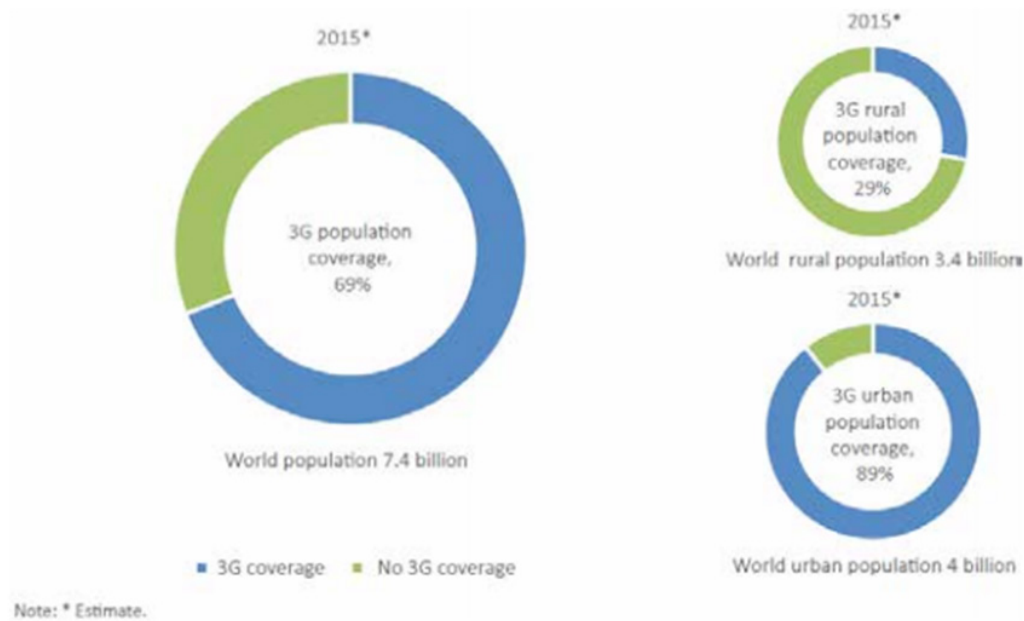
By 2017, a total of 120 economies (out of 160 for which data were available) had achieved the target of broadband services costing no more than 5% of average monthly income, including all developed countries and 78 developing economies, 18 countries more than in early 2015. Altogether, 18 developing countries and 38 LDCs for which data were available need to achieve further reductions in broadband prices in order to achieve the target, together, it should be assumed, with a number of other countries for which no data were available.



Source: ITU

Target 2.4: Worldwide, 90% of the rural population should be covered by broadband services by 2020

It is estimated that 3G network coverage grew from 45% of the world population in 2011 to 84% in 2016 (mobile-broadband networks; 3G or above), but to only 67% of the rural population.

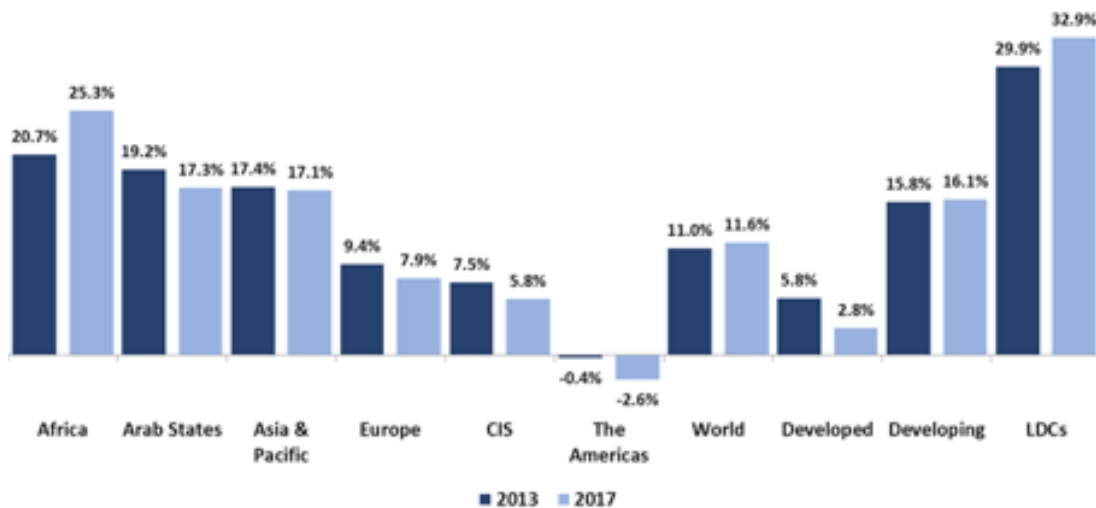


Source: Measuring the Information Society 2017

Target 2.5.A: Gender equality among Internet users should be reached by 2020

Data on Internet usage broken down by gender points to a clear and growing gender divide. In the vast majority of countries, the proportion of men using the Internet is higher than the proportion of women. ITU reports an Internet user gender gap in 2016¹ of 12.2%, which is a rise compared to the 2013 gender gap of 11.0%. Differences in levels of education and school enrolment are important factors that could explain why more men than women use the Internet. Some of the countries in which more women than men are Internet users are also countries that do well on the gender parity index (GPI), which measures parity between girls and boys in terms of school enrolment ratios.

Internet user gender gap, percentages, 2013 and 2017

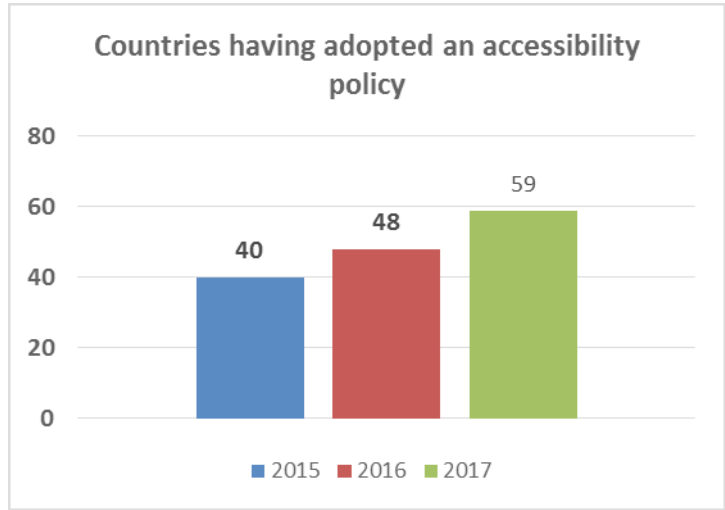


Source: ITU, Measuring the Information Society Report 2017

¹ Gender gap is defined as the difference between the Internet user penetration rate for males and females in relation to the Internet user penetration rate for males, expressed as a percentage.

Target 2.5.B: Enabling environments ensuring accessible telecommunication/ICT for persons with disabilities should be established in all countries by 2020

For the past four years, ITU-D has been raising awareness and building the capacity of ITU members to design enabling environments ensuring accessible telecommunications/ICTs for persons with disabilities. In particular, ITU-D has developed extensive training resources, and delivered in-person and online training courses, national web accessibility programmes, and made available self-paced online tutorials. The ITU-D Regulatory Survey collects data on the number of ITU Member States with accessible ICT policies and regulations. This data forms the basis for assessment of this target.

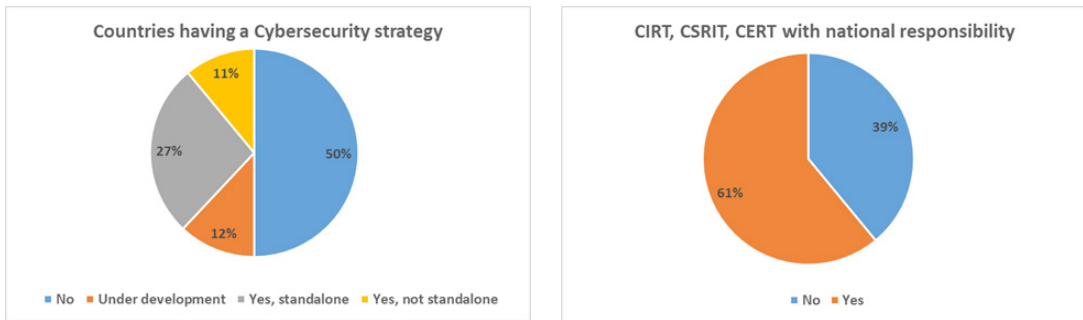


Source: ITU

2.3 Goal 3: Sustainability

Target 3.1: Cybersecurity readiness should be improved by 40% by 2020

ITU has formed a partnership to bring together other parties involved in measuring cybersecurity. To measure improvement in cybersecurity using the Connect 2020 Agenda, ITU proposes to combine the Global Cybersecurity Index (GCI) results with key indicators of cybersecurity vision and capabilities at the country level such as the existence of national cybersecurity strategies and national Computer Incident Response Teams (CIRTs), among others. By combining the growth in the average GCI scores with the growth of the above-mentioned additional capabilities, it will be possible to determine with more accuracy whether the 40% improvement target in cybersecurity between 2014 and 2020 has been achieved.

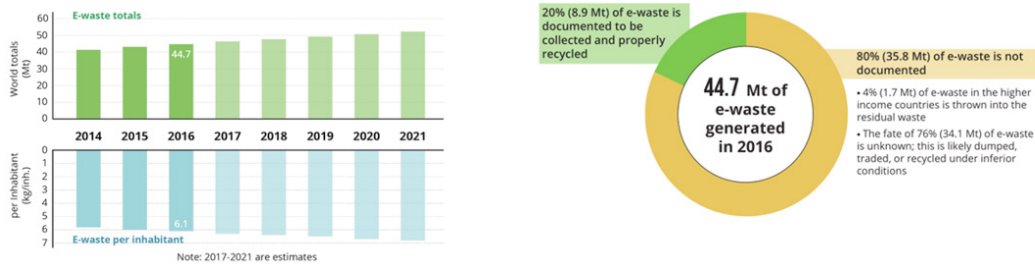


Source: Global Cybersecurity Index 2017

Target 3.2: Volume of redundant e-waste to be reduced by 50% by 2020

ITU, together with the United Nations University (UNU) and ITU membership, has been developing a policy and regulatory and technical framework to steer production, handling, growth, and innovation in the ICT sector in a sustainable direction.

It was ascertained in quantified terms that in 2016 only 8.9 Megatonnes of e-waste (20% of the total) were documented as having been properly recycled, whereas 35.8 Megatonnes (80%) were not. In 2014, only 44% of the global population was covered by national e-waste legislation. By 2017, the proportion had risen to 66%.



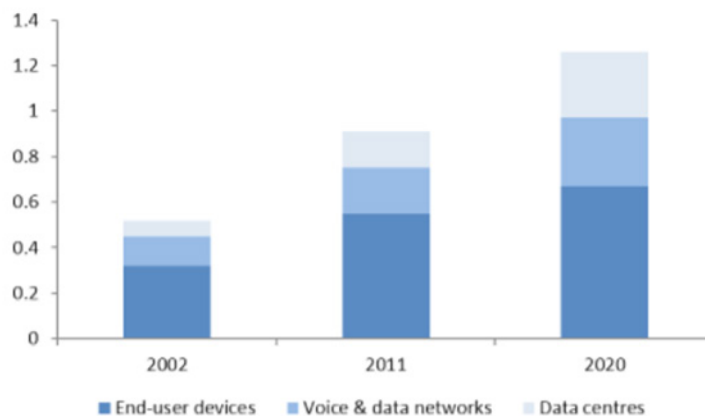
Source: Global E-waste Monitor 2017

Target 3.3: Greenhouse gas emissions generated by the telecommunication/ICT sector to be decreased per device by 30% by 2020

Together with its Sector Members and industry associations, ITU is developing a roadmap to address the challenges arising from these developments and the greenhouse gas (GHG) emissions associated with them. ITU-T Study Group 5 is working on a roadmap for GHG emissions reduction. Although global figures are not available, it is expected that this target may have been achieved as a result of the widespread adoption of mobile devices with significantly lower energy footprints.

It is estimated that by 2030, digitally enabled technology could help prevent up to 12.1 Gigatonnes of CO₂ equivalent emissions, compared to the “business as usual” scenario.

Global ICT emissions (gigatonnes of CO2 equivalent – GeSI estimates and projections)



Source: UNCTAD (2015), derived from GeSI (2011)

2.4 Goal 4: Innovation and partnership

ITU is working with partners to develop indicators to measure achievement of Targets 4.1 and 4.2.

Target 4.1: Telecommunication/ICT environment conducive to innovation

ITU is measuring innovation environments across a number of dimensions and provides comprehensive country-level overviews in the digital innovation profiles, country reviews, and ecosystem reviews. ITU has also developed tools to monitor ICT innovation capabilities which can be used to assess health of ICT innovation policies.

Target 4.2: Effective partnerships between stakeholders in the telecommunication/ICT environment

For Target 4.2, which is concerned with partnership, work is continuing to develop new indicators for innovation, which can be assessed alongside established indicators.

ITU Sector and Intersectoral Objectives

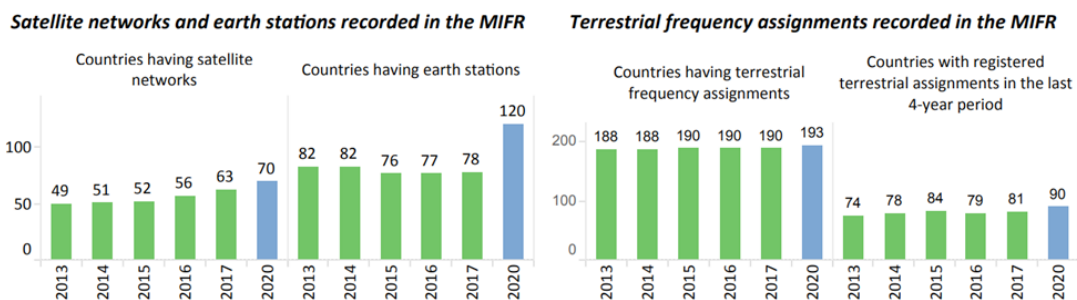
3 ITU-R objectives and results achieved (Radiocommunication Sector)

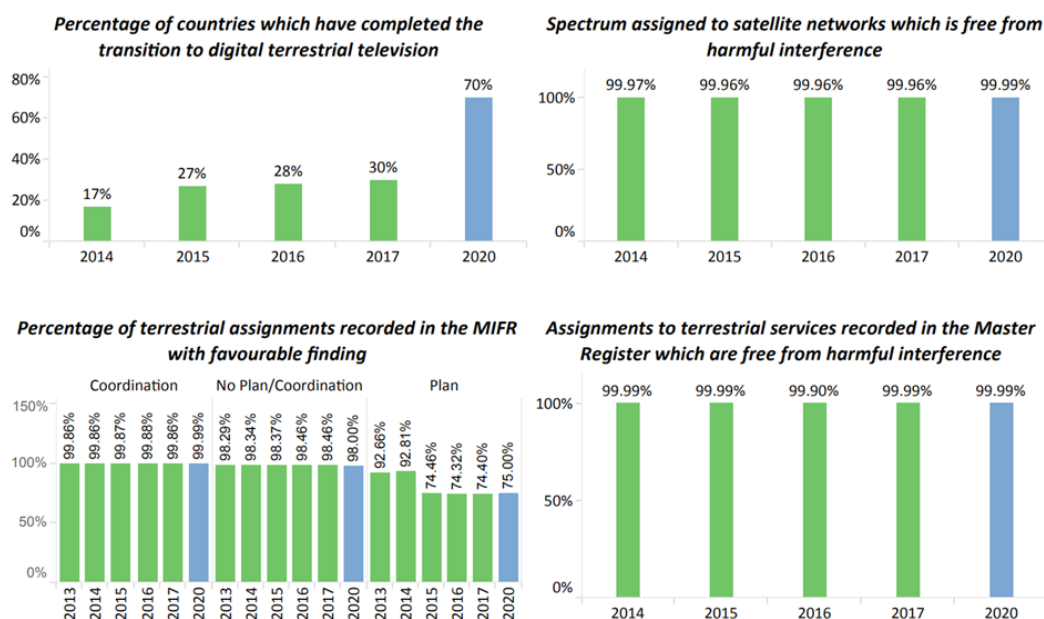
ITU-R Objectives		
R.1 Meet, in a rational, equitable, efficient, economical and timely way, the ITU membership's requirements for radio-frequency spectrum and satellite-orbit resources, while avoiding harmful interference	R.2 Provide for worldwide connectivity and interoperability, improved performance, quality, affordability and timeliness of service and overall system economy in radiocommunications, including through the development of international standards	R.3 Foster the acquisition and sharing of knowledge and know-how on radiocommunications

Objective R.1: Meet, in a rational, equitable, efficient, economical and timely way, the ITU membership's requirements for radio-frequency spectrum and satellite-orbit resources, while avoiding harmful interference

Outcomes:
R.1-1: Increased number of countries having satellite networks and earth stations recorded in the Master International Frequency Register (MIFR)
R.1-2: Increased number of countries having terrestrial frequency assignments recorded in the MIFR
R.1-3: Increased percentage of assignments recorded in the MIFR with favourable finding
R.1-4: Increased percentage of countries which have completed the transition to digital terrestrial television broadcasting
R.1-5: Increased percentage of spectrum assigned to satellite networks which is free from harmful interference
R.1-6: Increased percentage of assignments to terrestrial services recorded in the MIFR which are free from harmful interference

Progress achieved





Outputs

R.1-1 Final acts of world radiocommunication conferences, updated Radio Regulations (overview of the Activities for each Output)

The World Radiocommunication Conference 2015 (WRC-15) was held in Geneva from 2 to 27 November 2015, attended by 3 275 participants representing 162 Member States and 130 observer organizations. The updated version of the Radio Regulations ([2016 edition](#)) was published in December 2016 and made freely available to the public in electronic form.

The Conference adopted a number of decisions, which are reflected in the updated Radio Regulations or recorded in the minutes of plenary sessions. The key topics included consideration of spectrum to facilitate global flight tracking for civil aviation (as mandated by PP-14), global allocations to the mobile, fixed-satellite and Earth-exploration satellite services, as well as global identifications of frequency bands for the operation of IMT.

In addition, the Conference approved various resolutions relating to WRC-19 and WRC-23 and requesting studies by ITU-R, which are conducted with the support of the regional groups and other international organizations and **will be consolidated by the Conference Preparatory Meeting in March 2019. They** address, in particular:

- Earth stations on board unmanned aircraft²
- Earth stations in motion, non-geostationary systems in the fixed-satellite service, high-altitude platform stations (HAPS)³
- International Mobile Telecommunications (IMT)⁴
- Wireless Access Systems including radio local area networks (R-LAN)⁵

² WRC-15 Res. 155; WSIS Action Lines C2; SDG Targets 2.3, 2.4, 2.a, 14.a

³ WRC-15 Res. 158, 159, 160; WSIS Action Lines C2; SDG Target 9.c

⁴ WRC-15 Res. 238; WSIS Action Lines C2, C3, C7; SDG Targets 1.4, 3.8, 4.2, 4.3, 4.7, 5.b, 8.1, 8.2, 9.1, 9.3, 9.c, 10.2, 11.2, 13.1, 13.3, 16.7, 16.10

⁵ WRC-15 Res. 239; WSIS Action Lines C2, C3, C7; SDG Targets 3.8, 4.2, 4.3, 4.7, 5.b, 8.1, 8.2, 9.c, 10.2, 16.7, 16.10

- Intelligent Transport Systems (ITS)⁶
- Meteorological-satellite and Earth exploration-satellite services (space-to-Earth)⁷
- Machine-type communication infrastructures.⁸

R.1-2 Final acts of regional radiocommunication conferences, regional agreements

No regional radiocommunication conferences were organized during the period under consideration.

R.1-3 Rules of Procedure adopted by the Radio Regulations Board (RRB)

After the election of its members by PP-14, the Radio Regulations Board (RRB) met three times in 2015, 2016 and 2017. The RRB adopted 40 new or revised Rules of Procedure (RoPs) relating to decisions by WRC-15 and to practices by the Bureau in the application of the Radio Regulations and Regional Agreements. These were published as part of the 2017 edition of the RoPs.

R.1-4 Results of the processing of space notices and other related activities⁹

As shown in the table below, over the period 2014-2017, there was a significant increase in the treatment time for satellite notices (e.g. from four months in 2014 to six months in 2016 and 2017, for coordination requests). This was due to:

- modifications and updates in processing software as a result of WRC-15 decisions, and identification and correction of anomalies, which stalled the process for several months;
- multiple submissions of massive non-geostationary constellations in the fixed-satellite service;
- an increase in the number and complexity of geostationary satellite network notices received since WRC-15, as a result of decisions by WRC-15.

Year	Coordination and notification requests / corresponding number of assignments in unplanned bands	Requests for broadcasting-satellite and associated feeder links Plans / corresponding number of assignments	Requests for fixed-satellite service Plan / corresponding number of assignments
2014	829/319 818	94/43 996	89/3 530
2015	970/804 560	61/34 052	81/5 322
2016	1267/414 865	100/25 484	84/4 087
2017	1186/1 017 489	79/45 522	55/1 692
Total 2014-2017	4252/2 556 732	334/149 054	309/14 631

These difficulties have been regularly reported to RRB and the Radiocommunication Advisory Group (RAG), and corrective measures, including the recruitment of additional staff, have been implemented. The situation with respect to treatment time is expected to return to normal in 2018.

⁶ WRC-15 Res. 237; WSIS Action Lines C2, C3, C7; SDG Targets 3.6, 9.5, 9.c, 11.2

⁷ WRC-15 Res. 766; WSIS Action Lines C2, C3, C7; SDG Targets 1.5, 2.4, 3.9, 11.5, 11.b, 13.1, 13.3, 13.b, 14.1, 14.2

⁸ WRC-15 Res. 958; WSIS Action Lines C2, C3, C6, C7; SDG Targets 2.3, 2.4, 2.a, 3.6, 11.2, 11.5, 11.b, 13.1

⁹ Art. 12 of the CV; Council Dec. 482; Articles 9, 11, 13, 14, 15, 21 and 22, Appendices 4, 5, 7, 8, 30, 30A, 30B of the RR; Res. 4 (Rev.WRC-03), 49 (Rev.WRC-15), 55 (Rev.WRC-15), 85 (WRC-03), 148 (Rev.WRC-15), 539 (Rev.WRC-15), 552 (Rev.WRC-15), 553 (Rev.WRC-15); WSIS AL C2; SDG Target 9.c

After years of development, the software for the assessment of conformity of non-geostationary satellite constellations with the regulatory limits to protect geostationary satellite networks became operational by the end of 2017, which enabled the processing of the 46 filings of massive constellations received since 2013.

Concerning satellite cost recovery in application of Council Decision 482, the total invoiced amount (excluding free entitlements) increased from CHF 13'745'128 in 2014, CHF 14'727'833 in 2015 to CHF 17'688'111 in 2016 and CHF 18'865'668 in 2017. The percentage of invoices paid in a timely manner (i.e. within six months of the date of issue) remained constantly higher than 99% over the period 2014-2017. The implementation of this Decision by BR did not give rise to any specific administrative difficulty. At its 2017 session, the Council instructed BR to provide elements toward the application of full cost recovery for non-geostationary satellite systems. These elements were discussed in ITU-R study groups and the RRB and made available to the Council at its 2018 session.

BR also acted as a facilitator for the resolution of disputes between administrations with regard to sharing access to orbit/spectrum resources, and provided assistance for the coordination of space or earth stations (around 80 cases of assistance for space stations and 350 of assistance for earth stations on average per year over the period 2014-2017). BR was also involved in the resolution of a number of cases of harmful interference (around 10 to 30 cases per year). The ITU membership was kept regularly informed of processing activities through [circular letters](#).

R.1-5 Results of the processing of terrestrial notices and other related activities¹⁰

BR continued to process notices to terrestrial services in accordance with the procedures set out in the Radio Regulations and Regional Agreements within the defined periods. The table below summarizes the various areas and corresponding outputs of this processing for the period 2015-2017.

Notices recorded in the MIFR/Plans	549 070
Review of findings for terrestrial stations recorded in the MIFR	44 111
Suppression from the MIFR at the end of the transition period defined by the GE06 Agreement (17 June 2015)	17 554
Notifications of coast and ship stations for recording in the ITU maritime database	
High-frequency broadcasting requirements	60 037
Monitoring observations concerning the monitoring programme at 2 850- 28 000 kHz and 406-406.1 MHz	115 483
Reports of harmful interference	7 062

On 17 June 2015, following the end of the transition period defined by the GE06 Agreement, all UHF and relevant VHF analogue entries were cancelled from the GE06 Plan. Examination of the status of the analogue television assignments recorded in the MIFR resulted in the suppression of 17 554 assignments of 28 administrations, and the retention in the MIFR, for information only, of 26 330 assignments of 56 administrations.

¹⁰ Art. 12 of the CV; Art. 9, 11, 12, 13, 14, 15, 16, 19, 20, 21, 23, 24, 27, 28, 43, 50, 51, 52, 56, 58, Appendices 4, 5, 17, 25, 26, 27 of the RR; Res. 1 (Rev.WRC-97), 12 (Rev.WRC-15), 13 (Rev.WRC-97), 122 (Rev. WRC-07), 205 (Rev.WRC-15), 207 (Rev. WRC-15), 331 (Rev.WRC-12), 339 (Rev.WRC-07), 356 (Rev.WRC-07), 417 (Rev. WRC-15), 424 (WRC-15), 535 (Rev.WRC-15), 612 (Rev.WRC-12), 647 (Rev.WRC-15), 749 (Rev.WRC-15), 760 (WRC-15), 906 (Rev.WRC-15); Regional Agreements ST61, GE75, RJ81, GE84, GE85-M, GE85-N and GE06; WSIS ALC2; SDG Target 9.c

Significant progress was made in resolving recurring cases of harmful interference/spill-over in the VHF/UHF band (broadcasting and mobile), through multilateral meetings between the administrations concerned, mediated and assisted by the BR.

The ITU membership was kept regularly informed of processing activities through [circular letters](#), website real-time updates and regulatory and service publications according to standard mechanisms:

- The BR International Frequency Information Circular (BR IFIC), published in DVD-ROM format.
- The List of Coast Stations and Special Service Stations (List IV) and the List of Ship Stations and Maritime Mobile Service Identity Assignments (List V) published every two years and every year respectively, in CD-ROM format, with a quarterly update of all changes notified to ITU.
- The High-Frequency Broadcasting Schedules (HFBC), published monthly.
- The Manual for Use by the Maritime Mobile and Maritime Mobile-Satellite Services, published after each WRC.

R.1-6 RRB decisions other than the adoption of Rules of Procedure

The Board adopted its [Report on Resolution 80 \(Rev. WRC-07\)](#), which brought several issues to the attention of WRC-15 on cases presented to the Board. All of the Board’s reported decisions were endorsed by WRC-15. RRB decisions taken in 2015-17 on specific cases of satellite networks are summarized in the following table.

Extension of the regulatory deadlines of satellite networks	Cases referred to WRC while continuing to take into account the satellite network	Maintain satellite networks in or suppress them from the MIFR	Resubmission of satellite networks	Reinstatement or re-examination of satellite networks with unchanged date of receipt	Transfer of a satellite network to another notifying administration
13 cases accepted (9 for <i>force majeure</i> , 4 for co-passenger delay) Other cases were referred to WRC-15 or WRC-19 (see next column)	5 cases referred to WRC-15 (4 late requests for suspension, 1 case of extension of date of bringing into use) 2 cases referred to WRC-19 (2 late positioning of real satellites but no <i>force majeure</i> or co-passenger delay)	2 cases maintained 4 cases suppressed	1 case accepted 1 case noted	4 cases accepted (2 due to late payment, 1 related to CS Article 48, 1 related to Appendix 30B) 2 cases refused (1, related to Resolution 553, 1 related to § 6.6 of Appendix 30B)	1 case rejected 1 case not accepted based on elements provided

The RRB regularly reviewed the longstanding situation of harmful interference caused by Italian television and sound broadcasting stations in the VHF and UHF bands to its neighbouring countries. Concerning television, a three-year legal, financial and regulatory effort by the Italian Administration resulted in the successful switch-off of Italian TV transmissions causing harmful interference to the services of other countries on 61 frequencies.

The RRB also regularly reviewed the harmful interference caused by the Iridium satellite network (HIBLEO-2) to the radio astronomy service (RAS) in the band 1 610.6 – 1 613.8 MHz. Resolution of this issue is expected once the new constellation of Iridium satellites becomes fully operational in 2018.

R.1-7 Improvement of ITU-R software

Over the period 2015-2017, the Bureau continued to develop software applications and databases to enable efficient and timely processing of notices and to facilitate the use of ITU-R outputs by the ITU membership.

Activities for space applications resulted in the following achievements:¹¹

- Delivery of new and updated versions of the reference databases
- Migration of several software applications from Ingres to SQL Server
- Development of a secure communications system with and among administrations, in response to Resolution 907 (Rev. WRC-15), with expected delivery in 2019
- In 2015, delivery to administrations of the web application for the electronic submission and publication of space network filings, in line with Resolution 908 (Rev. WRC-12), upgraded in 2018 following WRC-15 decisions
- In 2018, delivery of the Space Interference Reporting and Resolution System (SIRRS), in response to Resolution 186 (PP-14)
- Delivery of new and improved versions of space services processing software for external use (BR IFIC (Space))
- In 2017, integration of the software for the assessment of conformity of non-GSO constellations with the regulatory limits (epfd).

For terrestrial services, these activities resulted in the following achievements:

- In 2016, delivery of new and updated versions of all terrestrial services processing software and reference databases, both for internal (TerRaSys) and external (BR IFIC (Terrestrial)) use, taking into account WRC-15 and RRB decisions
- Continuing integration of the various terrestrial Plans in **TerRaSys** (GE06, GE75, RJ81)
- Development of web applications providing online access to the MIFR and validation of notices
- Migration from Ingres to SQL server of various databases used in the processing of terrestrial notices
- Integration of the relevant BR outgoing correspondence in the myAdmin portal for broadcasting services, ensuring reliable communications with administrations
- Delivery of additional online calculation tools for Regional Plans and regional frequency coordination activities in the VHF and UHF bands.

The above-mentioned online web applications are currently used by more than 175 administrations. The Bureau also continued to improve the security aspects of its databases and software applications, including disaster recovery and business continuity procedures, isolation and protection from outside exposure. In addition, the Bureau developed new application tools, which were made available to the membership in 2017/2018:

- [The ITU Radio Regulations Navigation Tool](#)
- A spectrum management tool on the Table of Frequency Allocations of Article 5 of the Radio Regulations, for use in preparations for WRCs and national spectrum management
- [A search tool for ITU-R Recommendations](#), developed with financial support and participation by experts from the Japanese Administration
- Two [mobile applications for RA-15 and WRC-15](#). Following the positive feedback received, work started to make these applications available for all ITU-R meetings.

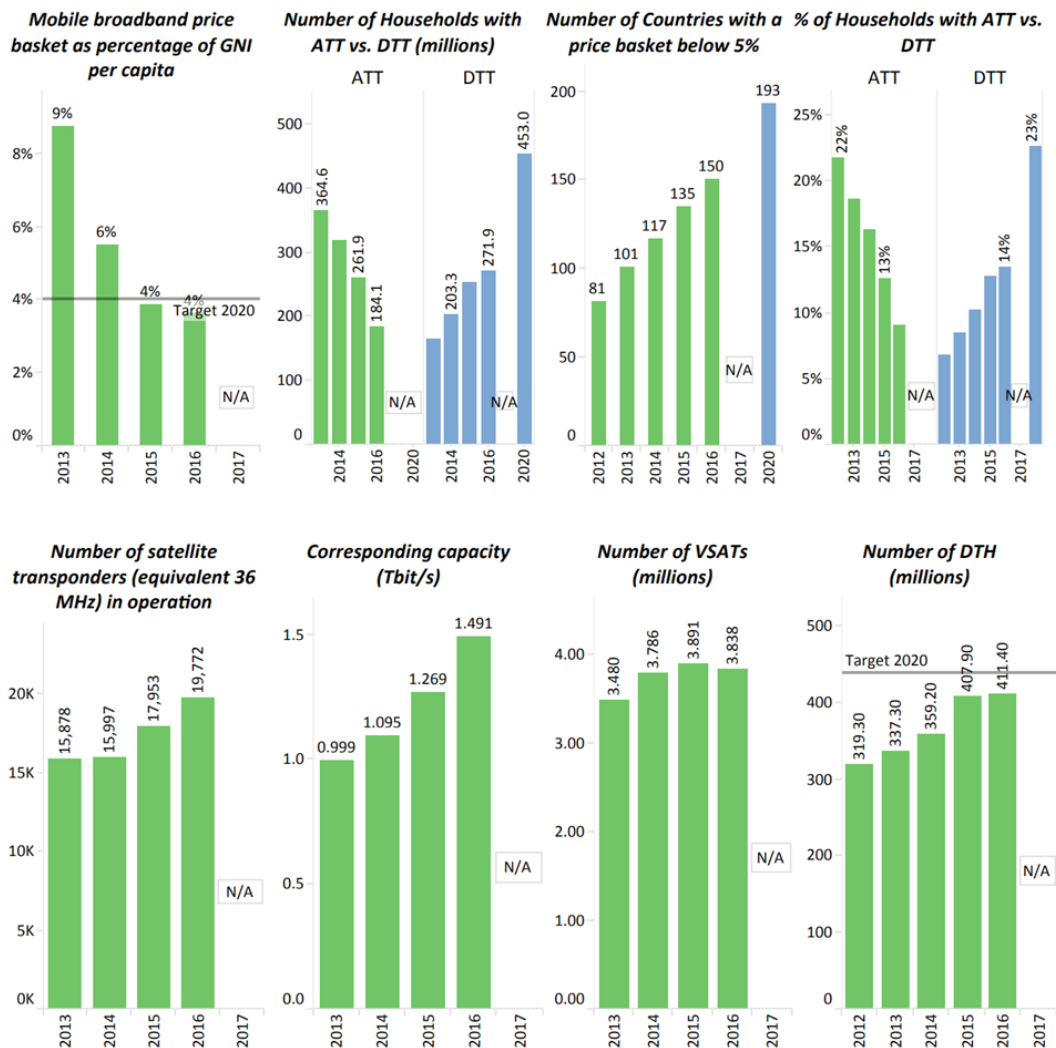
¹¹ PP Res. 186, Art. 12 of the CV, Art. 9, 11, 13, 14, 15, Appendices 4, 5, 7, 8, 30, 30A, 30B of the RR, Res. 85 (WRC-03), 163 (WRC-15), 164 (WRC-15), 417 (Rev. WRC-15), 907 (Rev. WRC-15), 908 (Rev. WRC-15); RRB RoP; RAG Advice to the Director; WP4A (Doc. 4A/669 Annex 14); WSIS Action Line C2; SDG Targets 1.4, 9.c, 17.7, 17.8, 17.9, 17.16

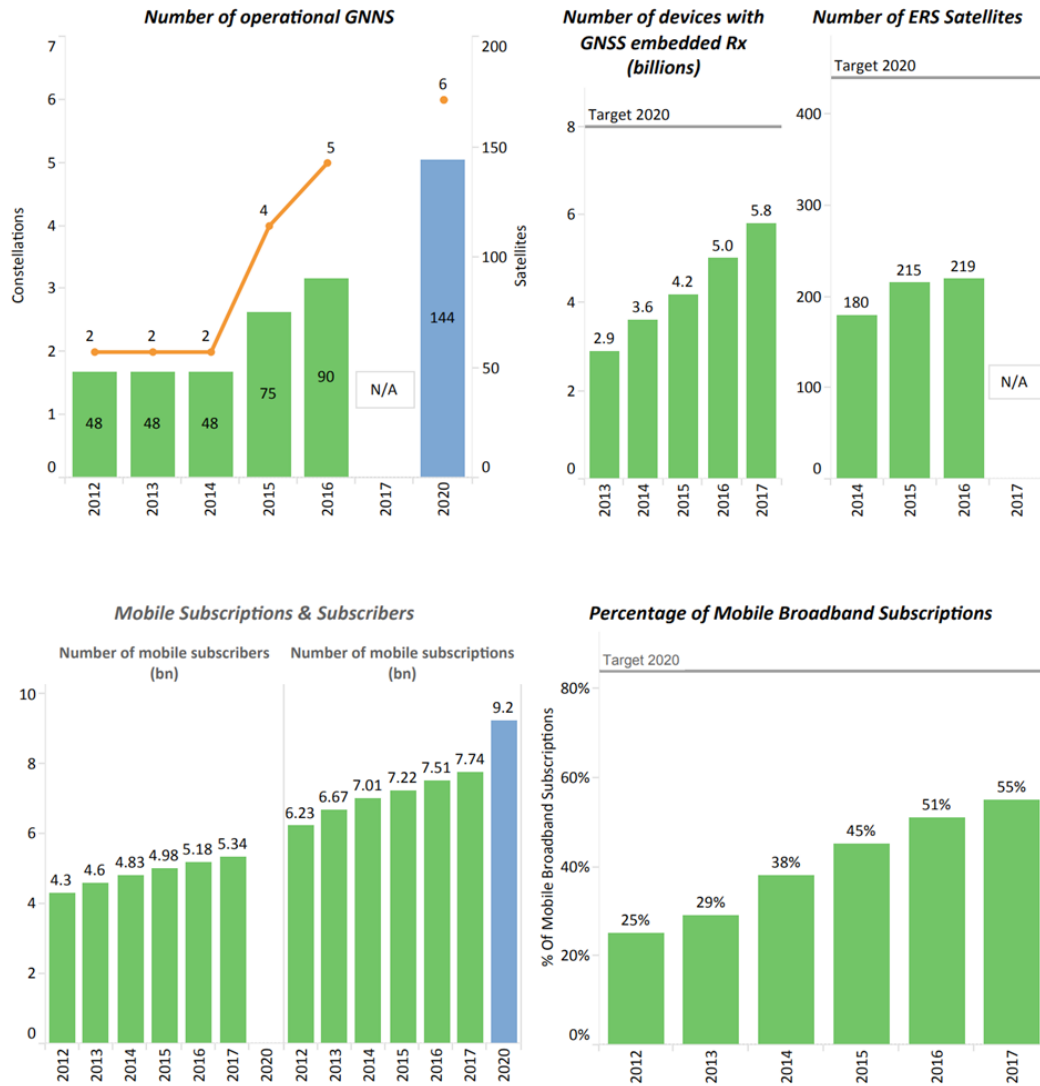
Objective R.2: Provide for worldwide connectivity and interoperability, improved performance, quality, affordability and timeliness of service and overall system economy in radiocommunications, including through the development of international standards

Outcomes:

- R.2-1: Increased mobile-broadband access, including in frequency bands identified for international mobile telecommunications (IMT)
- R.2-2: Reduced mobile-broadband price basket, as a percentage of gross national income (GNI) per capita
- R.2-3: Increased number of fixed links and increased amount of traffic handled by the fixed service (Tbit/s)
- R.2-4: Number of households with digital terrestrial television (DTT) reception
- R.2-5: Number of satellite transponders (equivalent 36 MHz) in operation and corresponding capacity (Tbit/s); Number of VSAT terminals; Number of households with satellite television reception
- R.2-6: Increased number of devices with radionavigation-satellite reception
- R.2-7: Number of Earth exploration satellites in operation, corresponding quantity and resolution of transmitted images and data volume downloaded (Tbytes)

Progress achieved





Outputs

R.2-1 Decisions of the Radiocommunication Assembly, ITU-R resolutions

The Radiocommunication Assembly 2015 (RA-15) was held from 26 to 30 October 2015, with 457 participants representing 96 Administrations and 38 Sector Members and Academia members. RA-15 made substantial revisions to the working methods of the ITU-R study groups to streamline and clarify the procedures, and approved 36 new or revised ITU-R resolutions, notably on:

- Studies of disaster prediction, detection, mitigation and relief (<http://www.itu.int/pub/R-RES-R.55>)¹²
- Reduction of energy consumption for environmental protection and mitigating climate change by use of ICT/radiocommunication technologies and systems¹³

¹² PP Res. 136; Res. ITU-R 55; WSIS AL C2, C7; SDG Targets 1.5, 2.4, 9.C, 11.5, 11.b, 13.1

¹³ Res. ITU-R 60-1; WSIS AL C2, C3, C7; SDG Targets 1.5, 2.4, 3.9, 7.3, 11.5, 11.b, 13.1, 13.3, 13.b, 14.1, 14.2

- Principles for the process of future development of IMT for 2020 and beyond (<http://www.itu.int/pub/R-RES-R.65>)¹⁴
- Studies related to wireless systems and applications for the development of the Internet of Things (IoT) (<http://www.itu.int/pub/R-RES-R.66>)
- Telecommunication/ICT accessibility for persons with disabilities and persons with specific needs (<http://www.itu.int/pub/R-RES-R.67>)¹⁵
- Improving the dissemination of knowledge concerning the applicable regulatory procedures for small satellites, including nanosatellites and picosatellites (<http://www.itu.int/pub/R-RES-R.68>)¹⁶
- Development and deployment of international public telecommunications via satellite in developing countries (<http://www.itu.int/pub/R-RES-R.69>).

R.2-2 ITU-R recommendations, reports (including the CPM report) and handbooks

Over the period 2014-2017, ITU-R approved 225 new or revised ITU-R Recommendations, 179 new or revised ITU-R reports, the Conference Preparatory Meeting Report to the World Radiocommunication Conference 2015 and eight new or revised ITU-R handbooks. Notably, adhering to its published schedule related to the development of IMT-2020 terrestrial radio interface technology, the three ITU-R Reports M.2410, M.2411 and M.2412 were completed on time in 2017. These reports make up the three critical pillars underpinning the IMT-2020 process for technologies to obtain global IMT-2020 designation from ITU by early 2020. The table below summarizes the outputs of ITU-R study groups over the period 2015-17 in terms of Recommendations and reports adopted.

Subject	New or revised ITU-R Recommendations approved	New or revised reports approved
International Mobile Telecommunications (IMT) vision, frequency arrangements, radio interface, spectrum sharing and global circulation of terminals, enabling global mobile broadband development	M.1036-5, 1457-13, 1579-2, 1580-5, 1581-5, 1850-2, 2012-2, 2014-1, 2070-1, 2071-1, 2083-0, 2090-0, and 2101-0	M.2039-3, 2290-0, 2320-0, 2324-0, 2334-0, 2370-0, 2373-0, 2374-0, 2375-0, 2376-0, 2410-0, 2411-0 and 2412-0
Maritime and aeronautical systems operational characteristics, identities and protection, including wireless avionics and global flight tracking	M.541-10, 585-7, 690-3, 1371-5, 2058-0, 2092-0 M.2059-0, 2067-0, 2068-0, 2085-0 and 2089-0	M.2231-1, 2317-0, 2358-0, 2371-0 and 2372-0, M.2318-0 and 2319-0 M.2396-0 and 2413-0 (flight tracking)
Land mobile communications, including cognitive radio systems, broadband wireless, railway communication and Intelligent Transport Systems (ITS) radio interface standards	M.2068-0, 2084-0 (ITS)	M.2014-3, 2227-1, 2330-0, 2378-0, 2395-0 and 2418-0 M.2228-1 (ITS)

¹⁴ PP Res.137, 139, 197, 200, and 203; Res. ITU-R 65; WSIS AL C2, C3, C7; SDG Targets 1.4, 3.8, 4.2, 4.3, 4.7, 5.b, 8.1, 8.2, 9.1, 9.3, 9.c, 10.2, 11.2, 13.1, 13.3, 16.7, 16.10

¹⁵ PP Res. 80 and 175; Res. ITU-R 67; WSIS AL C2, C4; SDG Targets 10.2, 11.2, 11.5, 11.B, 4.5, 4.A, 8.5

¹⁶ PP Res. 80; Res. ITU-R 68; WSIS AL C6; SDG Target 17.6

Subject	New or revised ITU-R Recommendations approved	New or revised reports approved
<p>Television and sound signals coding, production, exchange and broadcasting for HDTV, UHD TV and 3D, and sharing of broadcasting with other services, laying the foundation of the development of advanced television and sound technologies</p>	<p>Television: BO.1784-1 and 2098-0, BT.709-6, 1203-2, 1206-3, 1306-7, 1364-3, 1367-2, 1368-13, 1543-1, 1674-1, 1680-1, 1735-3, 1833-3, 1847-1, 1848-1, 1852-1, 1870-1, 1871-1, 1893-1, 2020-2 and 2021-1 Sound: BS.774-4, 1114-9, 1116-3, 1196-5, 1348-3, 1534-3, 1660-7, 1679-1, 1738-1, 1770-4, 2051-1, 2076-1, 2088-0, 2094-1, 2102-0 and BT.1365-2</p>	<p>BO. 2019-1, BS.2054-4, 2159-7, 2213-3, 2213-4, 2214-2, 2217-2, 2266-2, 2300-0, 2340-0, 2384-0, 2388-1 and 2399-0, BT. 2049-7, 2069-7, 2140-9, 2140-10, 2142-2, 2215-6, 2245-1, 2245-3, 2246-5, 2246-6, 2247-3, 2249-5, 2252-3, 2254-2, 2254-3, 2265-1, 2267-5, 2267-6, 2267-7, 2293-1, 2295-1, 2295-2, 2298-0, 2301-1, 2301-2, 2302-0, 2337-0, 2338-0, 2339-0, 2341-0, 2342-0, 2343-1, 2343-2, 2344-1, 2380-1, 2381-0, 2382-0, 2382-1, 2383-0, 2383-1, 2384-0, 2385-0, 2386-1, 2387-0, 2389-0, 2390-2, 2390-3, 2400-0, 2407-0 and 2408-0</p>
<p>Fixed communications technical and operational characteristics, channelling arrangements and spectrum sharing for radio-relays and fixed wireless access</p>	<p>F.557-5, 758-6, 1247-4, 1249-4, 1336-4, 1497-2, 1509-3, 1763-1, 1777-1, 1778-1 and 2086-0 M.1450-5, 1824-1 and 2003-1</p>	<p>F.2323-0, 2326-0, 2327-0, 2328-0, 2331-0, 2333-0, 2379-0, 2393-0, 2394-0</p>
<p>Radars technical and operational characteristics, protection, including aeronautical, meteorological and automotive radars</p>	<p>M.1460-2, 1463-3, 1464-2, 1465-2, 1466-1, 1638-1, 1796-2, 1849-1, 2008-1, 2057-0, 2069-0</p>	<p>M.2316-0, 2321-0 and 2322-0</p>
<p>Search and rescue, Public Protection and Disaster Relief (PPDR) radio interface standards, frequency arrangements and provision of services, enabling global harmonization</p>	<p>M.1478-3, 2009-1, 2015-1 and BO.1774-2 and BS.2107-0, F.1105-3 and SM 1051-3</p>	<p>BT. 2299-1 and 2299-2 M.2291-1, 2359-0 and 2377-0</p>
<p>Fixed, mobile, broadcasting and radionavigation-satellite systems characteristics and sharing of orbit/spectrum resources among GSO and non-GSO satellite systems, enabling the sustainable development of the space ecosystem</p>	<p>BO.1443-3, 1784-1, 2063-0, 2098-0 M.1174-3, 1787-2, 1827-1, 1831-1, 1906-1, 2014-1, 2031-1, 2082-0 and 2091-0 S.1587-3, 1717-1, 2062-0 and 2099-0</p>	<p>BO. 2007-2 and 2397-0 M.2305-0, 2360-0, 2369-0 and 2398-0 S.2173-1, 2223-1, 2306-0, 2357-0, 2361-0, 2362-0, 2363-0, 2364-0, 2365-0, 2366-0, 2367-0, 2368-0 and 2409-0</p>
<p>Radio amateur communications</p>	<p>M.1544-1, 1732-2</p>	<p>M.2335-0</p>

Subject	New or revised ITU-R Recommendations approved	New or revised reports approved
Propagation measurement, data analysis, modelling and prediction in various parts of the spectrum up to 375 THz, laying the foundation for the design of radiocommunication systems and the assessment of interference	P.311-17, 341-6, 372-13, 452-16, 453-13, 525-3, 527-4, 530-17, 531-13, 533-13, 617-4, 618-13, 619-3, 620-7, 676-1, 678-3, 679-4, 681-10, 684-7, 832-4, 833-9, 834-9, 835-6, 836-6, 837-7, 840-7, 841-5, 1057-5, 1144-9, 1238-9, 1240-2, 1321-5, 1406-2, 1407-6, 1411-9, 1510-1, 1511-1, 1621-2, 1812-4, 1816-3, 2001-2, 2040-1, and 2108-0	P.2145-2, 2345-1, 2346-1, 2346-2 and 2402-0
Earth exploration-satellite, Meteorological-satellite, Space Research and Radioastronomy services characteristics, protection/sharing, including manned research, data relay, nano satellites, enabling prediction of weather, monitoring of Earth's resources and understanding of climate change	RA.1513-2, RS.2066-0 and 2065-0, RS.2042, 2043, 2064-0, 2105-0 and 2106-0, SA.510-3, 1014-3, 1018-1, 1019-1, 1026-5, 1027-5, 1155-2, 1159-4, 1160-3, 1161-2, 1276-5, 1414-2, 1810-1, 2078-0 and 2079-0.	RA.2332-0 and 2403-0 RS.2308-0, 2310-1, 2311-0, 2313-0, 2314-0, 2315-0, 2336-0 and 2350-0 SA. 2276-1, 2307-0, 2309-0, 2312-0, 2325-0, 2329-0, 2348-0, 2349-0, 2401-0, 2403-0
Spectrum Management , including methods for identification and elimination of interference, data dictionary, spectrum redeployment, spectrum use measurement, unlicensed and shared uses of spectrum, dynamic spectrum access, smart grids and wireless power transmission	SM.1046-3, 1268-3, 1268-4, 1413-4, 1541-6, 1600-3, 1603-2, 1875-2, 1880-2, 2060-0, 2061-0, 2080-0, 2093-0, 2096-0, 2097-0, 2103-0, 2104-0 and 2110-0	SM.2012-5, 2028-2, 2056-1, 2093-2, 2130-1, 2153-6, 2182-1, 2211-1, 2256-1, 2257-3, 2257-4, 2303-1, 2303-2, 2304-0, 2351-2, 2352-0, 2353-0, 2354-0, 2355-0, 2356-1, 2391-0, 2392-0, 2404-0 and 2405-0
Accurate Time and Frequency signals transmission, including consideration of the leap second	TF.374-6, 538-4, 1153-4	
Vocabulary and terminology harmonization	V.430-4, 431-8, 573-6, 574-5, 665-3	
Radiocommunication systems for persons with disabilities	M.1076-1	BT. 2207-3

ITU-R study groups also adopted eight new and updated handbooks: Computer-aided Techniques for Spectrum Management (CAT); Use of Radio Spectrum for Meteorology: Weather, Water and Climate Monitoring and Prediction; National Spectrum Management; Use of Radio Spectrum for Meteorology: Weather, Water and Climate Monitoring and Prediction; Amateur and amateur-satellite services; Guidance for bilateral/multilateral discussions on use of frequency range 1350 MHz-43.5 GHz fixed service systems; Global Trends in International Mobile Telecommunications and Digital Terrestrial Television Broadcasting networks and systems implementation.

R.2-3 Advice from the Radiocommunication Advisory Group

The Radiocommunication Advisory Group (RAG) reviewed the priorities and strategies adopted in the Sector and provided guidance for the work of the study groups. The outputs of the RAG included¹⁷ advice on the BR information system, the working methods of ITU-R study groups and radiocommunication assemblies, RA-19 and WRC-19 preparations, and coordination with ITU-D on WTDC Resolution 9 (Rev. Dubai 2014).

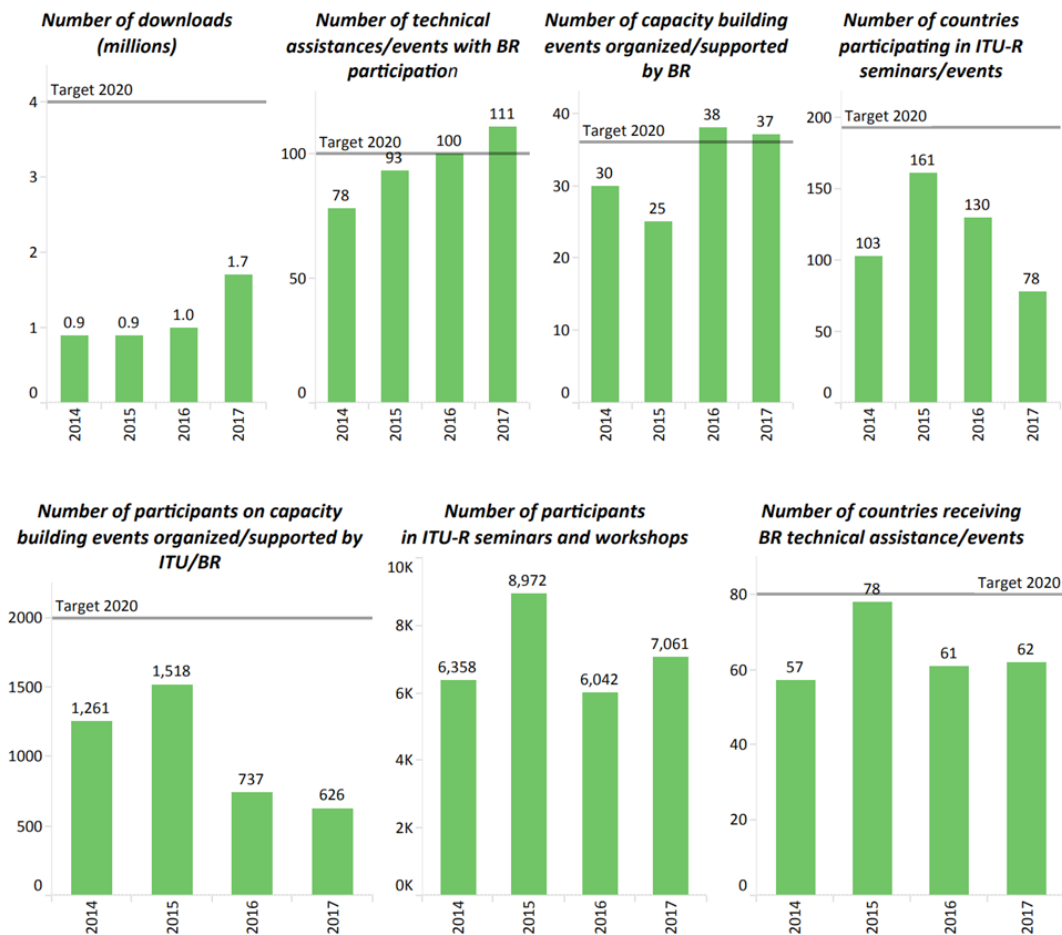
Objective R.3: Foster the acquisition and sharing of knowledge and know-how on radiocommunications

Outcomes:

R.3-1: Increased knowledge and know-how on the Radio Regulations, Rules of Procedures, regional agreements, recommendations and best practices on spectrum use

R.3-2: Increased participation in ITU-R activities (including through remote participation), in particular by developing countries

Progress achieved



¹⁷ Art. 11A of the CV, Res. ITU-R 52; WSIS Action Line C2; SDG Target 9.c

Outputs

R.3-1 ITU-R publications

The new edition of the Radio Regulations was released in November 2016, incorporating all changes decided by WRC-15. The associated Rules of Procedure, updated by the RRB, were released in 2017. In addition, 180 ITU-R Recommendations, 124 ITU-R reports and seven ITU-R Handbooks were published over the period 2015-17. Given the success of the free online access policy, all ITU-R Handbooks have also been made available for download free of charge since January 2017.

During the period 2014-2017, there were over 5 million downloads of ITU-R Recommendations (18 Series), over 1 million downloads of ITU-R reports (13 Series); 41 000 downloads of ITU-R handbooks, the most popular of which was the Spectrum Monitoring Handbook; 35 000 downloads of the Radio Regulations; and 8 000 downloads of the Rules of Procedure. These documents were downloaded from 190 countries around the world.

The Radio Regulations (2012 edition) sold more than 18 000 copies in 37 months, while the Radio Regulations (2008 edition) sold 15 000 copies over 51 months in the absence of the free download policy. This confirms the positive impact of this policy from both financial and outreach perspectives.

R.3-2 Assistance to members, in particular developing countries and LDCs

In close cooperation with BDT and ITU regional offices, assistance continued to be given to the ITU membership, in particular developing countries, on matters relating to radiocommunications, in particular by providing¹⁸:

- Support to national spectrum management activities, long-term frequency management, such as the transition to digital broadcasting and allocation of the digital dividend, including the provision of technical assistance and capacity building.
- Individual or group training at ITU headquarters on radio regulatory procedures at the request of interested administrations.
- Support to meetings of the regional groups, in particular for WRC preparations and associated initiatives such as frequency coordination activities in the UHF band in the Caribbean and Central American Region, in cooperation with CITEL, COMTELCA and CTU, in South-East Europe (SEDDIF), and in the Black Sea and Caspian Sea area.

R.3-3 Liaison/support to development activities¹⁹

Strong cooperation was maintained with international organizations such as the International Maritime Organization (IMO), International Civil Aviation Organization (ICAO), World Meteorological Organization (WMO), UN Office for Outer Space Affairs (UN-COPUOS), and regional and subregional organizations (including APT, ASMG, ATU, CEPT, CITEL, RCC, EBU, ABU, ESOA, IEC, GSMA, GSA, GVF, ICTO, ITSO, UNDAC, CTU, PITA, and CTO).

ITU-R maintained close liaison with standards-making bodies through participation in various forums such as Global Standards Collaboration (GSC), World Standards Collaboration (WSC), and 3rd-Generation Partnership Projects (3GPP), and provided support for the work of ITU-D on topics such as spectrum management, IMT, digital broadcasting and emergency communications. Liaison and

¹⁸ Res. 9, 71; WSIS AL C2; SDG Targets 1.4, 9.c, 17.7, 17.8, 17.9, 17.16

¹⁹ PP Res. 9, 71, 72; WSIS AL C11; SDG Targets 17.7, 17.8, 17.9, 17.16, 17.19

coordination with ITU-T also took place, particularly in the area of power line telecommunications (PLT) and electromagnetic fields (EMF). Specific activities included:

- Contributions to the ITU Global Symposium for Regulators (GSR).
- Support for BDT in gathering ICT sector metric data, expanding on spectrum regulatory aspects through the ITU's ICT-Eye portal for data and statistics, and development of relevant ICT definitions to measure the information society in areas specific to radiocommunications.
- Cooperation with the Telecom World/ICT Indicators Symposium (WTIS).
- Participation in the joint BR/BDT project to develop a spectrum management training programme (SMTP).

R.3-4 Seminars, workshops and other events

With the objective of informing and assisting the ITU membership, in particular developing countries, on radiocommunication-related matters, BR continued to organize spectrum-related workshops, seminars, meetings and capacity-building activities, with the support of the Regional Offices and BDT and in cooperation with the relevant international organizations and national authorities.

As a complement to the traditional biennial world radiocommunication seminars (WRS), BR has implemented, in consultation with RAG, a regional outreach strategy through the organization of yearly cycles of regional radiocommunication seminars (RRS) held in different regions worldwide, fostering human capacity building on the use of the radio-frequency spectrum and satellite orbits, and the application of the ITU Radio Regulations. These seminars are hosted by the entity in charge of spectrum management in the host country, in cooperation with the relevant regional organizations and ITU regional/area offices.

In the 2015-2017 period, 90 partial and 30 full fellowships were granted by BR for RRS participants. A total of 11 seminars gathered more than 1 300 participants from more than 160 countries:

- Four RRSs in 2015: for Eastern Europe and the CIS countries (Kyrgyzstan), Africa (Niger), Asia and the Pacific (Philippines), and the Americas (El Salvador), with a total of 296 participants from 80 countries.
- WRS-16, with 453 participants from 109 countries.
- Two RRSs in 2016: for the Americas (Trinidad and Tobago) and Asia and the Pacific (Samoa), with 104 participants from 21 countries.
- Four RRSs in 2017: for Africa (Senegal), the Americas (Peru), Asia and the Pacific (Cambodia) and the Arab countries (Oman), with 450 participants from 80 countries.

Support was also provided to other ITU seminars related to topics such as spectrum management, space radiocommunication applications, climate change and emergency telecommunications. Other supported events included satellite symposia and an Internet of Things workshop. All workshops and events organized within ITU-R can be found at: www.itu.int/en/ITU-R/seminars/Pages/default.aspx.

In 2016 and 2017, ITU celebrated the **110th anniversary of the Radio Regulations** and the **90th anniversary of the CCIR/ITU-R Study Groups** respectively. These celebrations provided an opportunity to showcase the essential role of ITU-R activities and processes in enabling and shaping the sustainable development of the radiocommunication ecosystem globally. Celebrations included panel discussions with the main spectrum stakeholders. The events were attended respectively by over 540 participants from 106 countries (on 12 December 2016) and by 257 participants from 59 Member States and 47 Sector Members (on 21 November 2017). Current and former officials of the Union, and current and former members of the Radio Regulations Board (RRB), as well as ITU-R and former CCIR study group chairmen, were also present.

4 ITU-T objectives and results achieved (Telecommunication Standardization Sector)

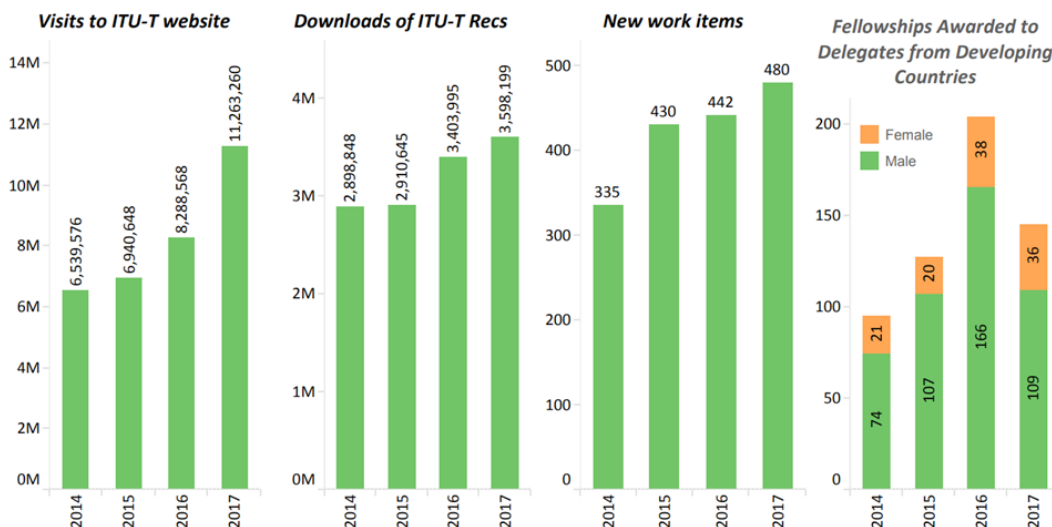
ITU-T Objectives				
T.1 Develop non-discriminatory international standards (ITU-T recommendations), in a timely manner, and foster interoperability and improved performance of equipment, networks, services and applications	T.2 Promote the active participation of the membership, in particular developing countries, in the definition and adoption of non-discriminatory international standards (ITU-T recommendations) with a view to bridging the standardization gap	T.3 Ensure effective allocation and management of international telecommunication numbering, naming, addressing and identification resources in accordance with ITU-T recommendations and procedures	T.4 Foster the acquisition and sharing of knowledge and know-how on the standardization activities of ITU-T	T.5 Extend and facilitate cooperation with international, regional and national standardization bodies

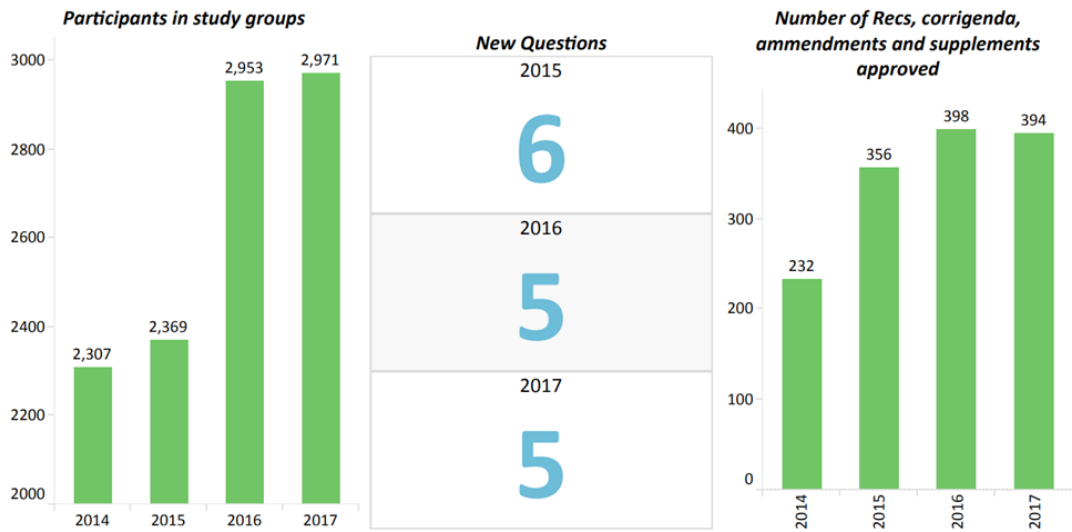
Objective T.1: Develop non-discriminatory international standards (ITU-T recommendations), in a timely manner, and foster interoperability and improved performance of equipment, networks, services and applications

Outcomes:

- T.1-1: Increased utilization of ITU-T recommendations
- T.1-2: Improved conformance to ITU-T recommendations
- T.1-3: Enhanced standards in new technologies and services

Progress achieved





Outputs

T.1-1 Resolutions, recommendations and opinions of the World Telecommunication Standardization Assembly (WTSA)

WTSA-16 was held in Hammamet, Tunisia, from 25 October to 3 November 2016, and produced 16 new resolutions, 31 revised resolutions, and five new standards. WTSA-16 consolidated the progress achieved by ITU-T over the previous four years, and refined ITU-T’s future strategic direction and structure.

ITU membership called for ITU’s standardization arm to expand its study of the wireline networking innovations required to achieve the ambitious performance targets of smart 5G systems. ITU membership reaffirmed the importance of ITU’s standardization work to drive the coordinated development of ultra-high-speed transport networks, the Internet of Things, future video technologies, and smart cities and communities.

ITU membership has also encouraged ITU-T to increase digital financial inclusion,²⁰ promote affordable mobile roaming²¹ tariffs, and strengthen consumer protection²² and ICT service quality. There was also a call for ITU standardization to support the use of cloud computing to record event data²³ from aircraft, vehicles, and other connected machinery. The new WTSA resolutions are numbered 83 to 98. All WTSA resolutions can be found [here](#). Progress in meeting the directives of WTSA is documented in the WTSA-12 and WTSA-16 Action Plans.

T.1-2 WTSA regional consultation sessions²⁴

Twenty-one Regional WTSA-16 Preparatory Meetings were held from March 2015 to September 2016, organized by regional telecommunication organizations in coordination with ITU. Four meetings were held in Asia and the Pacific; two in the CIS region; four in the Arab States; four in the Americas; three in Africa; and five in the CEPT region.

²⁰ WTSA Resolution 89

²¹ WTSA Resolution 88

²² WTSA Resolution 84

²³ WTSA Resolution 94

²⁴ WTSA Res. 43; WSIS Action Lines C3, C11; SDG Targets 10.6, 17.6

T.1-3 Advice and decisions of Telecommunication Standardization Advisory Group (TSAG)

TSAG has created six Rapporteur Groups on standardization strategy, work programme, working methods, strengthening cooperation, strategic and operational plan, and review of WTSA resolutions.

In June 2015, TSAG created the new ITU-T Study Group 20, working on “Internet of Things (IoT) and smart cities and communities (SC&C)”.²⁵ The ITU-T Review Committee (RevCom),²⁶ active from 2013 to 2016, reviewed ITU-T's strategy, structure and working methods to assist related studies in TSAG.

New or revised guidance from TSAG to ITU-T includes:

- **Guidelines for the efficient transfer of focus group deliverables to its parent group** (the new Appendix I to ITU-T A.7 is the result of a proposal made to WTSA-16 by TSAG).
- **Generic procedures for including references to documents of other organizations in ITU-T Recommendations** (revised Recommendation ITU-T A.5).
- **Generic procedures for incorporating text between ITU-T and other organizations** (new Recommendation ITU-T A.25).
- **Guidelines for remote participation** (Supplement 4 to the ITU-T A-series Recommendations).
- **Guidelines for cooperation and exchange of information with other organizations** (Supplement 5 to the ITU-T A-series Recommendations).

TSAG activity reports for 2015, 2016, 2017, and 2018 can be found in R4, R7, R8, R1, and R2.

T.1-4 ITU-T recommendations and related results of ITU-T study groups

ITU-T approved **about 1,000 new or revised ITU standards (ITU-T Recommendations)** from 2015 to 2017.

ITU-T continues to provide leadership in the standardization of **broadband access** and **home networks** and infrastructures for **ultra-high-speed transport**, as well as **future networks including 5G**²⁷ and networking innovations in fields such as **software-defined networking**²⁸ and **cloud computing**.²⁹

New ITU-T Sector Memberships taken up by companies in the automobile and insurance industries reflect the growing importance of **ITU-T support for vertical markets** such as health care, transport, energy and financial services.

The prestige of the collaborative **video coding work** of ITU, ISO and IEC was recognized with a **Primetime Emmy Award** in August 2017 for “High Efficiency Video Coding” (HEVC, published as ITU H.265 | ISO/IEC 23008-2), the video compression standard that has emerged as the primary coding format for Ultra-High-Definition TV. This is the second Primetime Emmy Award to recognize this video coding collaboration, following the 2008 award for HEVC’s predecessor, ITU-T H.264 | MPEG-4 AVC.³⁰

ITU standards supporting the **Internet of Things**³¹ (IoT) are assisting developed and developing countries in transforming city infrastructure, benefiting from the efficiencies of intelligent buildings and transportation systems, smart energy and water networks, and innovation in the field of e-health.³²

²⁵ WTSA Resolution 98

²⁶ WTSA-12 Resolution 82

²⁷ WTSA Resolution 92, 93

²⁸ WTSA Resolution 77

²⁹ WTSA Resolution 2; WSIS Action Line C2; SDG Targets 8.2, 9.1, 9.C

³⁰ WTSA Resolution 2; WSIS Action Line C2; SDG Targets 9.1, 9.C

³¹ WTSA Resolution 98

³² WTSA Resolutions 2, 98; WSIS Action Lines C1, C2, C7 e-health; SDG Targets 3.4, 3.8, 6.4, 6.5, 7.b, 9.1, 9.4, 11.2

ITU standards providing interoperability design guidelines for **personal health systems** are supporting the development of medical-grade e-health devices (such as blood pressure cuffs, glucose monitors, weight scales and a wide range of activity trackers).³³

ITU's work to build **confidence and security in the use of ICTs** aims to facilitate more secure network infrastructure, services and applications, and engage ITU membership in a new standardization effort to describe the fundamentals of a trusted ICT environment.³⁴

An emerging standardization project will contribute to the **environmental sustainability** of 5G systems by building on ITU-T expertise in the measurement of energy efficiency, resistibility, electromagnetic compatibility and the responsible management of electromagnetic fields.³⁵

ITU standards to assist in the responsible **management of electromagnetic fields** include measuring techniques, procedures and numerical models for evaluating the electromagnetic fields emanating from telecommunication systems and radio terminals.³⁶

ITU has published several standards **to tackle e-waste and achieve a circular economy**, including a number of Recommendations: ITU-T L.1002 on "External universal power adapter solutions for portable information and communication technology devices"; ITU-T L.1020 on "Circular Economy: Guide for Operators and Suppliers on approaches to migrate towards circular ICT goods and networks"; and ITU-T L.1021 on "Extended Producer Responsibility (EPR) Guidelines for Sustainable E-waste Management". ITU-T SG5 has developed ITU-T L. Suppl. 27 on success stories on e-waste management, and ITU-T L. Suppl. 28 on "Circular economy in information and communication technology; definition of approaches, concepts and metrics".

ITU standardization continues to tackle **disaster relief, network resilience and recovery**, recognizing that the 21st century is marked by an increasing prevalence of extreme weather events.³⁷

The international community is looking to ITU-T for a neutral platform to strengthen the ties between technical innovation, business needs and **economic and policy requirements**.³⁸

ITU standardization work on **performance, quality of service (QoS) and quality of experience (QoE)** is highly relevant to operators in offering services of the quality necessary to attract and retain customers. Strong momentum is building in ITU's new work to provide technical guidance to regulators interested in promoting high QoS/QoE.³⁹

A new ITU-T Focus Group on "Machine learning for future networks including 5G" is establishing a basis for ITU standardization to assist machine learning in bringing more automation and intelligence to ICT network design and management.

This Focus Group is active alongside three other ITU-T Focus Groups studying "Data processing and management to support IoT and smart cities and communities", "Application of distributed ledger technology", and "Digital currency including digital fiat currency", respectively.

T.1-5 ITU-T general assistance and cooperation

ITU continues to provide leadership in building cooperation among the many interests served by ICT standardization.

³³ WTSAs Resolutions 2, 98; WSIS Action Line C7 e-health; SDG Targets 3.4, 3.7, 3.8

³⁴ WTSAs Resolutions 2, 50; WSIS Action Line C5; SDG Targets 9.C, 16.10

³⁵ WTSAs Resolutions 2, 73, 79; WSIS Action Line C7 e-environment; SDG Targets 12.4, 13.b

³⁶ WTSAs Resolutions 2, 72; WSIS Action Line C7 e-environment; SDG Targets 12.4, 13.b

³⁷ WTSAs Resolution 2; WSIS Action Line C7 e-environment; SDG Targets 11.5, 13.1

³⁸ WTSAs Resolutions 2, 88; WSIS Action Line C2; SDG Target 9.C

³⁹ WTSAs Resolutions 2, 95; WSIS Action Line C6; SDG Target 3.6

The World Standards Cooperation (WSC) is a partnership of ITU, ISO and IEC to promote international standards.⁴⁰

ITU is a strong advocate of “Universal Design” and has developed standardization guidelines to produce solutions that are inherently accessible to persons with and without disabilities.⁴¹

ITU’s Bridging the Standardization Gap (BSG) programme improves the capacity of developing countries to participate in the development and implementation of international ICT standards.⁴²

ITU’s conformity and interoperability (C&I) programme is of particular value to developing countries in their efforts to improve conformance with ITU standards.⁴³

Chief Technology Officer meetings: [CTO and CxO meetings](#) bring together industry executives to highlight their business priorities and support standardization strategies.⁴⁴

The AI for Good Global Summit identifies practical applications of AI with the potential to accelerate progress towards achieving the United Nations SDGs. The summit encourages inclusive global dialogue with a view to formulating strategies to ensure trusted, safe and inclusive development of AI technologies and equitable access to their benefits.

e-Health: ITU-T continues its long-standing collaboration with bodies active in the healthcare field, supporting the development of medical-grade e-health devices. Participating organizations include UN bodies, standards bodies, academic and research institutes, and industry associations.

Safe listening of music players: ITU-T collaboration with WHO continues on the development of technical standards for the safe listening of music players. An [ITU workshop](#) on the topic was organized in June 2016.

Aviation applications of cloud computing for flight-data monitoring: The participation of the aviation and avionics sectors was crucial to ITU-T’s study of aviation applications of cloud computing for flight data monitoring.⁴⁵

Intelligent transport systems (ITS): The [Collaboration on ITS Communication Standards](#) is a body responsible for the coordination of technical standardization work to encourage interoperable ITS products.⁴⁶

Green Standards Week: The annual ITU [Green Standards Week](#) acts as a global platform for discussion and knowledge-sharing in order to raise awareness of the importance of and opportunities for using ICTs to protect the environment, unlock the potential of the circular economy and expedite the transition to smart sustainable cities. The GSW is co-organized with other UN organizations and regional organizations.

Smart Sustainable Cities: The [United for Smart Sustainable Cities \(U4SSC\) initiative](#) is being coordinated by ITU and UNECE and is supported by 14 UN bodies. It advocates for public policy to ensure that ICTs and ICT standards play a definitive role in the transition to smart sustainable cities.⁴⁷

ITU/WMO/UNESCO-IOC Joint Task Force on SMART Cable Systems: The task force is leading an ambitious new project to equip submarine communications cables with climate and hazard-monitoring sensors.

⁴⁰ WTS Resolution 7; WSIS Action Line C3; SDG Targets 9.1, 9.4, 9.8

⁴¹ WTS Resolutions 2, 70; WSIS Action Line C3; SDG Target 10.2

⁴² WTS Resolution 44; WSIS Action Line C4; SDG Targets 9.5, 10.6, 17.6, 17.9

⁴³ WTS Resolution 76; WSIS Action Line C2; SDG Targets 9.C, 17.6

⁴⁴ WTS Resolution 68; WSIS Action Lines C1, C2, C11; SDG Targets 9.C, 17.6

⁴⁵ WTS Resolution 94; WSIS Action Line C11; SDG Target 17.6

⁴⁶ WSIS Action Line C11; SDG Target 17.6

⁴⁷ WTS Resolutions 2, 73, 98; WSIS Action Lines C7 e-environment, C11; SDG Targets: 6.3, 6.4, 7.b, 9.1, 9.a, 11.2, 11.3, 11.6, 11.7, 11.b, 11.c, 12.4, 13.b, 17.7, 17.14, 17.15, 17.16, 17.19

Pilot project implementing the U4SSC Key Performance Indicators for Smart Sustainable Cities: The project includes over 50 cities such as Wuxi, Foshan, Manizales, Dubai, Singapore, Pully, Montevideo, Maldonado, Kairouan, and Rimini. ITU has published case studies evaluating the progress made by Dubai and Singapore in meeting their smart sustainable city objectives, using the U4SSC Key Performance Indicators.

ICT, environment and climate change: ITU-T maintains cooperation with bodies active in environmental sustainability, including UN bodies, standards bodies, regional organizations, academic and research institutes, and industry associations.⁴⁸

Symposia on ICT, environment and climate change: The Symposia raise awareness of the potential of ICTs to address environmental challenges and encourage stakeholders to integrate existing and emerging ICT-based solutions into their activities for an overall “smarter” and more holistically “sustainable” future for mankind.

T.1-6 Conformity database

The “[ICT Product Conformity Database](#)” enables industry to publicize the conformance of ICT products and services to ITU-T Recommendations, assisting users in their efforts to select standards-compliant products. Five categories of products and services have been submitted to the database:

e-Health solutions complying with the specifications of Recommendation ITU-T H.810 “Interoperability design guidelines for personal health systems”, a transposition of the Continua Design Guidelines. The testing procedures are specified in the ITU-T H.820-H.850 sub-series of Recommendations.⁴⁹

Mobile phones compatible with Bluetooth-enabled vehicle hands-free terminals. This compatibility is determined in accordance with the “Chapter 12 tests” (“Verification of the transmission performance of short-range wireless (SRW) transmission enabled phones”) of ITU-T P.1100 and ITU-T P.1110.⁵⁰

Ethernet products complying with ITU-T G.8011/Y.1307 “Ethernet Services Characteristics”. This standard and the corresponding tests are based on the work of MEF (formerly called the Metro Ethernet Forum).⁵¹

IPTV system compatible with Recommendations ITU-T H.721 “IPTV terminal devices: Basic model” and ITU-T H.702 “Accessibility profiles for IPTV systems” tested at the ITU test event in May 2017. The testing procedures are specified in the ITU-T Technical papers HSTP-CONF-H721 and HSTP-CONF-H702 respectively.⁵²

MNP system compatible with ITU-T Q.Supplement 4 “Number portability – Capability set 1 requirements for service provider portability (All call query and Onward routing)”. The testing procedures are specified in the Recommendation ITU-T Q.3905.⁵³

T.1-7 Interoperability test centres and events

An ITU series of IPTV testing events offers a continuous platform to test products based on both existing and developing ITU-T IPTV standards. Recent events have focused on new IPTV products and services built on ITU-T H.702 and ITU-T H.721. More information on IPTV testing events is available [here](#).⁵⁴

⁴⁸ WTSAs Resolutions 2, 73, 79; WSIS Action Lines C7 e-environment, C11; SDG Targets 1.5, 2.4, 6.4, 7.3, 7.a, 7.b, 9.4, 9.a, 9.c, 11b, 13.1, 13.2, 13.3, 13.b, 17.7, 17.14

⁴⁹ WTSAs Resolutions 2, 76, 78; WSIS Action Lines C7 e-health, C11; SDG Target 3.8

⁵⁰ WTSAs Resolutions 2, 76; WSIS Action Lines C2, C6; SDG Targets 9.1, 9.C

⁵¹ WTSAs Resolutions 2, 76; WSIS Action Lines C2, C6; SDG Targets 9.1, 9.C

⁵² WTSAs Resolutions 2, 76;

⁵³ WTSAs Resolutions 2, 76;

⁵⁴ WTSAs Resolutions 2, 76; WSIS Action Lines C2, C6; SDG Targets 9.1

Compatibility of mobile phones with Bluetooth-enabled vehicle hands-free terminals is tested as part of dedicated ITU test events, in addition to a programme of on-demand testing. This compatibility is determined in accordance with the Chapter 12 tests (“Verification of the transmission performance of short-range wireless (SRW) transmission enabled phones”) of ITU-T P.1100 and ITU-T P.1110. More information about mobile phone testing is available [here](#).⁵⁵

ITU-T CASC (Conformity Assessment Steering Committee) was established by ITU-T SG11 in 2015 to elaborate the recognition procedure of Testing Laboratories (TLs) which have competence for testing against ITU-T Recommendations. Two new ITU-T Guidelines “Testing Laboratories Recognition Procedure” and “ITU-T CASC procedure to appoint ITU-T technical experts” were approved in 2015 and 2017 respectively.⁵⁶

ITU-T CASC continues collaboration with existing Conformity Assessment Systems and Schemes such as IEC and ILAC. The Certification Management Committee (CMC) of IEC set up a [IECEE Task Force “ITU requirements”](#) which finalized draft Operational Document (OD) “ICT Laboratory Recognition Procedure on ITU-T Recommendations” which will become a dedicated testing laboratory recognition procedure, established by IECEE.⁵⁷

ITU-T CASC established a [List](#) of ITU-T Recommendations which may become subject of joint ITU/IEC certification schemes. According to the inputs received from ITU-T SGs and ITU members. Among them are Recommendations ITU-T P.1140, ITU-T P.1100, ITU-T P.1110 and ITU-T K.116.⁵⁸

T.1-8 Development of test suites

e-Health: The ITU-T H.820-H.850 series presents a suite of conformance-testing specifications for ITU-T H.810 comprising over 1,000 test cases (ITU-T H.820-H.850 series).⁵⁹ ITU-T H.810 contains the Continua Design Guidelines, which provide “Interoperability design guidelines for personal health systems”, supporting medical-grade personal e-health devices.

IMS benchmarking: A [work plan](#) to standardize the benchmarking of IMS platforms has been finalized. New ITU-T standards (ITU-T Q.3930; Q.3931.1/2/3/4; Q.3932.1/2/3/4; and Q.3933) detail the benchmark testing for PSTN/ISDN emulation, IMS/NGN/PES and VoLTE, as well as the reference benchmarking for VoIP and Fax over IP in fixed networks.⁶⁰

SIP-IMS on fixed networks: Fixed network operators have initiated a Session Initiation Protocol – IMS (SIP-IMS) standardization plan in ITU-T ([webpage](#)). The plan is guiding ITU-T’s development of a set of international standards and related test specifications to provide a unified international reference for the implementation of SIP-IMS on fixed networks (see the SIP-IMS standardization [work plan](#)).⁶¹

VoLTE/ViLTE interconnection: two new ITU-T Recommendations Q.3640 and ITU-T.3953 define framework of VoLTE/ViLTE interconnection and relevant test specifications. This work launched in 2016 seeks to broker the international agreement of a framework for the interconnection of Voice and Video over LTE (VoLTE/ViLTE)-based networks (see relevant [press release](#)). The span of ITU-T work on VoLTE/ViLTE includes the deployment of signalling protocols for VoLTE interconnection, relevant numbering issues, including signalling architecture of distributed ENUM networking for IMS, and emergency calls via VoLTE-based networks.⁶²

⁵⁵ WTSAs Resolutions 2, 76; WSIS Action Lines C2, C6; SDG Targets 3.6, 9.1

⁵⁶ WTSAs Resolutions 2, 76;

⁵⁷ WTSAs Resolutions 2, 76;

⁵⁸ WTSAs Resolutions 2, 76;

⁵⁹ WTSAs Resolutions 2, 76, 78; WSIS Action Line C7 e-health; SDG Target 3.8

⁶⁰ WTSAs Resolutions 2, 76; WSIS Action Line C2; SDG Targets 9.1, 9.C

⁶¹ WTSAs Resolutions 2, 76; WSIS Action Line C2; SDG Targets 9.1, 9.C

⁶² WTSAs Resolutions 2, 76, 93; WSIS Action Line C2; SDG Target 9.1

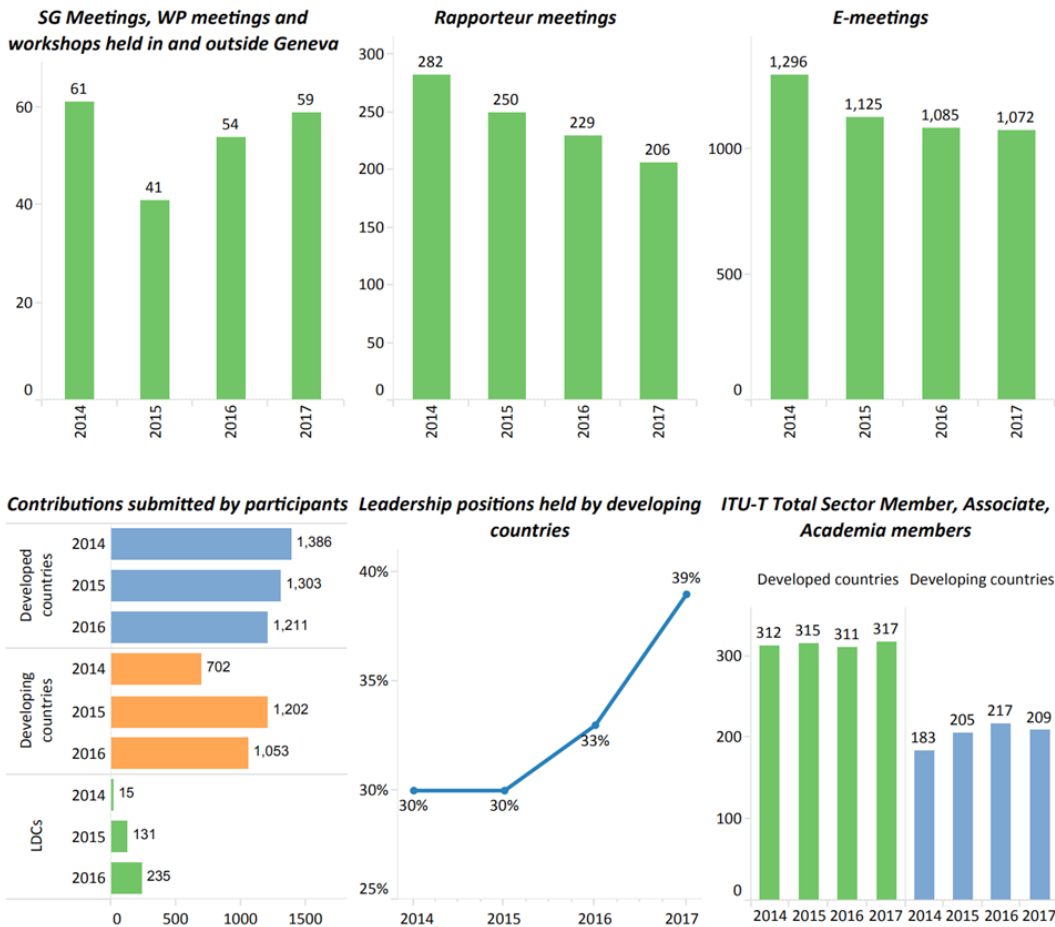
Objective T.2: Promote the active participation of the membership, in particular developing countries in the definition and adoption of non-discriminatory international standards (ITU-T recommendations) with a view to bridging the standardization gap

Outcomes:

T.2-1: Increased participation in the ITU-T standardization process, including attendance of meetings, submission of contributions, taking leadership positions and hosting of meetings/workshops, especially from developing countries

T.2-2: Increase of the ITU-T membership, including Sector Members, Associates and Academia

Progress achieved



In 2017, ITU-T recorded nine new Sector memberships and 21 new Associate memberships, resulting in a net increase of 14 new memberships. Members from industry sectors, such as the automotive industry, insurance industry and financial services industry, are joining ITU-T.

Outputs

T.2-1 Bridging the standardization gap (e.g. remote participation, fellowships, establishment of regional groups)

ITU's Bridging the Standardization Gap (BSG) programme⁶³ improves the capacity of developing countries to participate in the development and implementation of international ICT standards.

Leadership positions: delegates from developing countries hold 39% of ITU-T chairmanships, 50% of co-chairmanships, and 67% of the total number of co-chairmanships and vice-chairmanships.

Regional Groups within ITU-T Study Groups have proven effective mechanisms in bridging the standardization gap by stimulating effective participation in ITU-T Study Groups and increasing the number and quality of Contributions from the various regions.⁶⁴ In 2018, ITU will celebrate 50 years of the existence of ITU-T Regional Groups. ITU-T has, as of January 2018, 23 regional groups.

National Standardization Secretariat (NSS): TSB is leading efforts to improve the capacity of developing countries to participate in the development and implementation of ICT standards. The guidelines on the establishment of NSS developed in 2013 are currently under review. After Zambia in 2015, TSB will support, in 2018, the implementation of NSS in Malaysia, India, and Mongolia.

Fellowships continue to be awarded to delegates from certain eligible countries. A total of 571 fellowships were awarded to developing and low-income countries from 2014 to 2017.⁶⁵

TSB continues to improve electronic meeting facilities.⁶⁶

T.2-2 Workshops and seminars, including offline and online training activities, complementing the capacity-building work on bridging the standardization gap undertaken in ITU-D

In 2016, ITU-T introduced the BSG Hands-On Study Group effectiveness sessions under Resolution 44 (W TSA-16). The training focuses on the development of practical skills to maximize the effectiveness of developing countries' participation in the ITU-T standardization process. Since 2016, the BSG team conducted over twenty hands-on sessions for over 400 delegates representing some 75 countries and 90 organizations.⁶⁷

T.2-3 Outreach and promotion

Regional standardization forums (RSF) are open events at which government, academic and private sector experts share their knowledge and expectations on emerging trends in standardization including themes such as human exposure to EMF, QoS, smart water management, international mobile roaming, mobile financial services, digital identity, big data, and security and trust.⁶⁸ 13 RSF were held since March 2015, including three in Africa, two in the Americas, four in Asia, three in the Arab region and one in the CIS. The First Interregional Standardization Forum (ISF) was held for Arab and African regions in November 2017.

Regional economic and financial Forums are held back-to-back with ITU-T SG3 Regional Groups. Every year, four such forums are held in Africa, Asia and Oceania, the Arab States, and Latin America and the Caribbean.

⁶³ W TSA Resolution 44

⁶⁴ W TSA Resolution 44, W TSA Resolution 54; WSIS Action Lines C3, C4, C11; SDG Targets 9.5, 10.6, 17.6

⁶⁵ W TSA Resolution 44; WSIS Action Line C4; SDG Targets 4.B, 9.5, 10.6, 17.6

⁶⁶ W TSA Resolution 32; WSIS Action Line C4; SDG Targets 10.6, 17.6

⁶⁷ W TSA Resolutions 18, 44; WSIS Action Line C4; SDG Targets 9.5, 10.6, 17.6

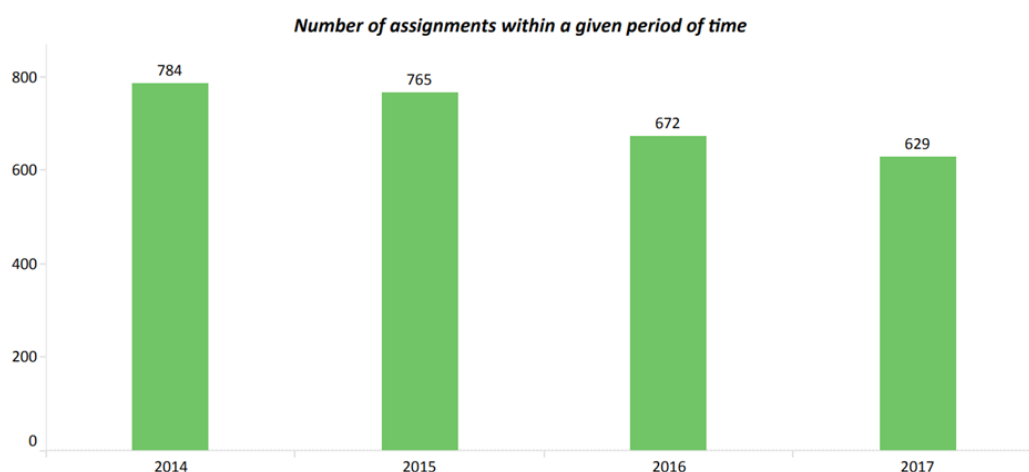
⁶⁸ W TSA Resolutions 18, 44; WSIS Action Lines C4, C11; SDG Targets 9.5, 10.6, 17.6

Objective T.3: Ensure effective allocation and management of international telecommunication numbering, naming, addressing and identification resources in accordance with ITU-T recommendations and procedures

Outcomes:

T.3-1: Timely and accurate allocation of international telecommunication numbering, naming, addressing and identification resources, as specified in the relevant recommendations

Progress achieved



NOTE: These figures are composed of: Number of assigned UIN, SANC, shared E.164 CC and IC, shared E.212 MCC and MNC.

Outputs

T.3-1 Relevant TSB databases

The INR database has undergone a major revamp, including the presentation of a more intuitive user interface. The database includes numbers and codes allocated in accordance with:

- ITU-T E.164 “The international public telecommunication numbering plan”
- ITU-T E.118 “The international telecommunication charge card”
- ITU-T E.212 “The international identification plan for public networks and subscriptions”
- ITU-T E.218 “Management of the allocation of terrestrial trunk radio Mobile Country Codes”
- ITU-T Q.708 “Assignment procedures for international signaling point codes”

ITU membership called on TSB to “streamline” the process for reporting misuse of INRs and make the process as automatic as possible. The reporting mechanism has been redesigned to allow for a more user-friendly interface (available [here](#)).⁶⁹

WTSA Resolution 91 (Hammamet, 2016), “Enhancing access to electronic repository of information on numbering plans published by ITU-T”, calls for ITU-T to enhance the electronic repository of numbering plans, recognizing that this function of ITU-T is essential to the reliability of ICT networks and services.⁷⁰

⁶⁹ WTSA Resolution 61; WSIS Action Line C2; SDG Targets 9.1, 9.C

⁷⁰ WTSA Resolution 91; WSIS Action Line C2; SDG Targets 9.1, 9.C

T.3-2 Allocation and management of international telecommunication numbering, naming, addressing and identification resources in accordance with ITU-T recommendations and procedures

Notifications of national numbering/identification plan updates and assignment or reclamation of national numbering/identification resources are published in the *ITU Operational Bulletin*, issued twice a month in the six official languages of the Union.⁷¹

WTSA Resolution 85 (Hammamet, 2016), “Strengthening and diversifying the resources of the ITU Telecommunication Standardization Sector”, calls for ITU-T to investigate the potential for revenue generation from international numbering resources and conformance and interoperability testing.⁷²

Objective T.4: Foster the acquisition and sharing of knowledge and know-how on the standardization activities of ITU-T

Outcomes:

T.4-1: Increased knowledge on ITU-T standards and on best practices in their implementation of ITU-T standards.

T.4-2: Increased participation in ITU-T's standardization activities and increased awareness of the relevance of ITU-T standards.

T.4-3: Increased Sector visibility.

Progress achieved

See the relevant indicators under Objectives T.1 and T.2.

Outputs

T.4-1 ITU-T publications

Over 10 000 pages of ITU-T Recommendations and Supplements are published each year, as well as Technical Papers, Technical Reports, Operational Bulletins and Focus Group deliverables. The year 2016 saw the production of the highest number of ITU-T standards during the period 2000 to 2016. The figure below illustrates the number of texts produced from 2014 to 15 December 2017.

T.4-2 Database publications

There are numerous databases serving ITU-T delegates and secretariat staff, including the following:

- ITU-T Recommendations
- International Numbering Resources
- ITU Product Conformity Database
- ITU-T Patents and Software Copyrights
- ITU-T Formal descriptions and Object identifiers
- ITU-T Test Signals
- ITU-T Work Programme
- ITU-T Liaison Statements

⁷¹ WTSA Resolution 20; WSIS Action Lines C3, C11; SDG Target 17.6

⁷² WTSA Resolutions 20, 76, 85; WSIS Action Line C3; SDG Target 17.6

- **ITU-T Terms and Definitions**

Unique and persistent identifiers based on the Digital Object Architecture (DOA) are now available for items registered in the following ITU-T databases: ITU-T Recommendations; ITU-T Conformity Statements; ITU-T Patents and Software Copyrights; ITU-T Formal Descriptions and Object identifiers; ITU-T Test Signals; and ITU-T Liaison Statements. These persistent identifiers will enable new features such as digital signature-based data integrity checks, role-based information management, and data privacy.⁷³ Updates on new services and enhancements to existing tools are reported at <http://tsbtech.itu.int/>.

T.4-3 Outreach and promotion

Communications on ITU standardization feature among the most popular ITU content each year. Video accounts for a progressively larger share of ITU-T communications. An animated video offering an introduction to ITU-T's work was released in May 2016, sponsored by NTT and KT (see <http://www.itu.int/en/ITU-T/wtsa16>).

ITU-T standardization topics receiving the highest levels of worldwide coverage include:

- The ITU-T H.265 "HEVC" video compression standard and associated Primetime Emmy Award.
- G.fast broadband access, the implementation of which is the subject of sustained media attention.
- The work of the ITU-T Focus Group on network aspects of IMT-2020 (5G) and of the ITU-T Focus Group on Digital Financial Services.
- 40G Fibre to the Home (NG-PON2: 40-Gigabit-capable passive optical networks).
- 10G Symmetric Fibre to the Home (XGS-PON: 10-Gigabit-capable symmetric passive optical networks).
- OTN Beyond 100G, the 5th edition of Recommendation ITU-T G.709/Y.1331 "Interfaces for the Optical Transport Network".

The **60th Anniversary of CCITT/ITU-T** provided an opportunity to celebrate the many experts who contribute their time and expertise to the development of ITU standards.⁷⁴ In celebration of the 60th anniversary, a series of talks were held during WTSa-16 on **Digital Financial Services** and **Artificial Intelligence**.

T.4-4 ITU Operational Bulletin

See section T.3-2.

⁷³ WTSa Resolution 32; WSIS Action Line C5; SDG Targets 9.1, 17.6

⁷⁴ WSIS Action Line C11; SDG Target 17.7

Objective T.5: Extend and facilitate cooperation with international, regional and national standardization bodies

Outcomes:

T.5-1: Increased communications with other standards organizations

T.5-2: Decreased number of conflicting standards

T.5-3: Increased number of memoranda of understanding / collaboration agreements with other organizations

T.5-4: Increased number of ITU-T A.4, A.5 and A.6 qualified organizations

T.5-5: Increased number of workshops/events organized jointly with other organizations

Progress achieved



Outputs

T.5-1 Memoranda of understanding (MoUs) and collaboration agreements

IEC, ISO and ITU cooperate on standardization to the extent that 10% of all ITU standards are common or aligned with the ISO/IEC Joint Technical Committee 1 on Information Technology (ISO/IEC JTC1).⁷⁵

Global Standards Collaboration (GSC) assists regional and international SDOs in coordinating their contributions in fields of mutual interest. Topics discussed at GSC meetings from 2015 to 2017 include

⁷⁵ WTS Resolution 7; WSIS Action Lines C2, C11; SDG Targets 9.1, 17.16, 17.17

IoT, 5G, critical communications and public safety, security and privacy, SMEs, AI and smart cities. ITU hosts the [repository](#) of GSC-documents from past meetings. See [GSC website](#).⁷⁶

ITU and ETSI reaffirmed their MoU in 2016. ETSI and ITU enjoy successful collaboration in areas including ICT energy efficiency and methodologies to assess the environmental impacts of ICTs and standardization for C&I testing.⁷⁷

ITU and the NGMN Alliance cooperate in support of the development of next-generation mobile broadband technologies.

Financial Inclusion Global Initiative (FIGI) is a three-year programme of collective action led by ITU, the World Bank Group and the Committee on Payments and Market Infrastructures, with support from the Bill & Melinda Gates Foundation, to advance research in digital finance and accelerate digital financial inclusion in developing countries.

ITU and CEN-CENELEC cooperate within a high-level, non-exclusive framework in areas including IoT and smart sustainable cities, trust, privacy by design, cybersecurity, mobility, and ITS communications.

The United for Smart Sustainable Cities (U4SSC) initiative, supported by 16 UN bodies, advocates for public policy to ensure that ICTs and ICT standards play a definitive role in the transition to smart cities.⁷⁸ U4SSC has published several reports as part of its commitment and work to shape smarter and more sustainable cities. See [U4SSC website](#).

Collaboration on ITS Communication Standards is a globally recognized forum for the creation of an internationally accepted, globally harmonized set of ITS communication standards.

ITU and the Association for Information Systems (AIS)- a non-profit professional association of individuals and organizations-cooperate on technical challenges to bring greater certainty, confidence and predictability to interactions within the Information Society.⁷⁹

ITU and the Georgia Tech Applied Research Corporation (GTARC) – a non-profit supporting organization of the Georgia Tech Research Institute – cooperate in raising awareness of the importance of IoT standardization. See relevant [press release](#).⁸⁰

ITU and MEF cooperate on standards for emerging connectivity services – designed to be agile, assured, and orchestrated – in addition to standardized CE 2.0 (Carrier Ethernet) services. Read the press release [here](#).⁸¹

The [2nd edition of the AI for Good Global Summit](#) was organized by ITU in Geneva on 15-17 May 2018, in partnership with XPRIZE Foundation, the Association for Computing Machinery (ACM) and 32 sister United Nations agencies and bodies.

Recognizing that all stakeholders should consider how AI will affect our future, the 2017 summit sparked an inclusive global dialogue on AI. The action-oriented 2018 edition highlighted AI strategies and supporting projects to accelerate progress towards the United Nations Sustainable Development Goals.

⁷⁶ WSIS Action Lines C2, C5, C11; SDG Targets 9.5, 9.C, 17.16, 17.17

⁷⁷ WSIS Action Lines C7 e-environment, C11; SDG Targets 7.B, 13.B, 17.16, 17.17

⁷⁸ WTSA Resolutions 2, 73, 98; WSIS Action Lines C7 e-environment, C11; SDG Targets: 6.3, 6.4, 7.b, 9.1, 9.a, 11.2, 11.3, 11.6, 11.7, 11.b, 11.c, 12.4, 13.b, 17.7, 17.14, 17.15, 17.16, 17.19

⁷⁹ WSIS Action Lines C3, C11; SDG Targets 9.C, 17.16, 17.17

⁸⁰ WSIS Action Lines C3, C11; SDG Targets 9.C, 17.16, 17.17

⁸¹ WSIS Action Lines C2, C5, C11; SDG Targets 9.1, 9.5, 17.16

The event attracted more than 700 attendees from more than 60 countries (36% women participants). It had 148 speakers from more than 30 countries with 35% women speakers. Read an ITU blog piece [here](#).⁸²

The summit was designed to connect AI innovators with public and private-sector decision-makers. The matchmaking exercise introduced problem owners to solution owners, building collaboration to take promising strategies forward.

Around 35 projects were pitched to the summit around the broad themes of aiming to build trust in AI, advancing global health and food security, meeting urban-development challenges with smart cities and communities, and the potential of AI to map poverty and aid with natural disasters using satellite imagery.

ITU also launched a [global Artificial Intelligence](#) repository to identify AI related projects, research initiatives, think-tanks and organizations and map them to the relevant sustainable development goals. The repository is based on the WSIS repository platform and has already collected over 70 AI projects.

T.5-2 ITU-T A.4/A.5/A.6 qualifications

ITU-T's external cooperation is guided by three ITU-T Recommendations:

- ITU-T A.4- Procedures for communicating with forums and consortia.
- ITU-T A.5- Making reference to documents from other organizations.
- ITU-T A.6- Cooperation and exchange of information with national and regional SDOs.

The list of A.4/A.5/A.6-qualified organizations, including organizations under evaluation, can be found at: <http://www.itu.int/en/ITU-T/extcoop/Pages/sdo.aspx>.⁸³

T.5-3 Jointly organized workshops/events

ITU-T organized over 100 workshops from 2015 to 2017; 25 of these events focused on bridging the standardization gap, and 24 events were organized with other organizations, summarized below.

- **Academia and standardization:** IEC and ISO
- **IoT, smart cities and the SDGs:** IEC, ISO, UNECE, UN-Habitat, UNESCO, IoT Forum, University of Applied Sciences and Arts Western Switzerland, Mandat International, ASIET, Tecnoborsa and the Chamber of Commerce of Rome, Italy
- **Intelligent transport systems:** UNECE, CITS, TIA, TTC, CCSA, RIOH and IMDA
- **SMART cables for climate monitoring:** WMO, UNESCO-IOC, EPOS and Deutsches GeoForschungsZentrum (GFZ)
- **Conformity and interoperability:** APT
- **Emergency communications:** WMO and OASIS
- **ICT, environment and climate change:** UN-Habitat, CRBAS, ECLAC, COMTELCA, CITEL
- **e-Waste:** WIPO, UNU, UNIDO, ECLAC, BCRC-Caribbean, CRBAS, UNESCO, UN Environment, Secretariat of the Basel Convention, and WHO
- **IPTV accessibility:** IPC and IPTV Accessibility Consortium
- **Intellectual property rights:** ETSI, GSM Association, University College London and George Washington University

⁸² WSIS Action Lines C2, C3, C11; SDG Targets 9.1, 9.5, 17.6, 17.8, 17.16

⁸³ WSIS Action Line C11; SDG Targets 17.6, 17.16

- **Open source and standards for 5G:** NGMN Alliance, ETSI
- **Cybersecurity:** UNECE and ATU.

5 ITU-D objectives and results achieved (Telecommunication Development Sector)

Objective D.1: Foster international cooperation on telecommunication/ICT development issues

Outcomes:

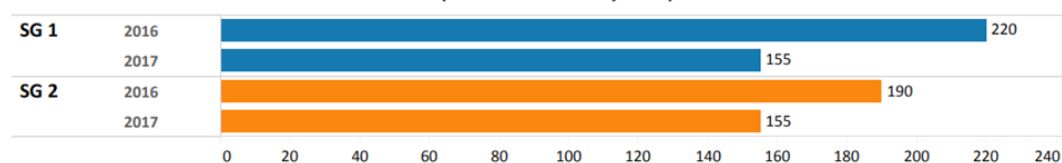
- D.1-1: Draft strategic plan for ITU-D
- D.1-2: WTDC Declaration
- D.1-3: WTDC Action Plan
- D.1-4: Resolutions and recommendations
- D.1-5: New and revised Questions for study groups
- D.1-6: Increased level of agreement on priority areas
- D.1-7: Assessment of the implementation of the Action Plan and of the WSIS Plan of Action
- D.1-8: Identification of regional initiatives
- D.1-9: Increased number of contributions and proposals for the Action Plan
- D.1-10: Enhanced review of priorities, programmes, operations, financial matters and strategies
- D.1-11: Work programme
- D.1-12: Comprehensive preparation of progress report to the Director of BDT on the implementation of the work programme
- D.1-13 Enhanced knowledge-sharing and dialogue among Member States and Sector Members (including Associates and Academia) on emerging telecommunication/ICT issues for sustainable growth.
- D.1-14 Strengthened capacity of members to develop and implement ICT strategies and policies as well as to identify methods and approaches for the development and deployment of infrastructure and applications

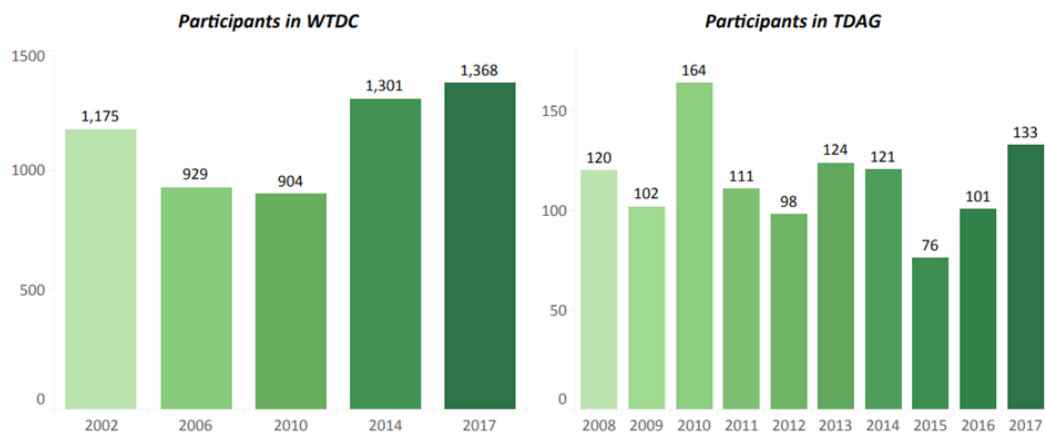
Progress achieved

Regional Preparatory Meetings 2016 & 2017

	Participants	Member States or Sector Members from the region represented	Member States or Sector Members from other regions
AFR	168	30	11
AMS	166	26	6
ARB	195	29	1
ASP	225	40	11
CIS	104	9	2
EUR	70	23	10

Participants to ITU-D Study Groups





Outputs

D.1-1 World Telecommunication Development Conference (WTDC)⁸⁴

WTDCs are convened to consider topics, projects and programmes relevant to telecommunication development. WTDCs set the strategies and objectives for the development of telecommunication and ICTs, providing direction and guidance to the ITU-D.

WTDC-17 was held from 9 to 20 October 2017 in Buenos Aires, Argentina, under the theme of “ICT for Sustainable Development Goals” (ICT⁴SDGs). WTDC-17 adopted: the Buenos Aires Declaration; an ITU-D Contribution to the ITU Strategic Plan for 2020-2023; and the Buenos Aires Action Plan (BaAP) comprising five regional initiatives for each of the six development regions, 42 revised resolutions and four new resolutions (abrogating six resolutions, five of which were merged) to support the fulfilment of the Sector’s objectives, and new and revised Questions to be studied by ITU-D study groups.

In adopting the Buenos Aires Declaration, the delegates of WTDC-17 have declared their commitment to accelerate the expansion and use of telecommunication/ICT infrastructure, applications and services for building and further developing the information society and bridging the digital divide, the timely implementation of WSIS Action Lines and attainment of the Sustainable Development Goals and targets. The ITU-D contribution to the ITU Strategic Plan 2020-2023 contains four objectives, 16 related outcomes, and 17 related outputs and their contributions to the achievement of SDGs and WSIS Action Lines.

A High-Level Segment was organized during the first three days of WTDC-17, providing a special platform for high-ranking officials from ITU’s membership to express their views on emerging trends and on matters of strategic importance to the development of the telecommunication and ICT sector worldwide. In addition, two ministerial roundtables and a gala event were organized to celebrate ITU-D’s 25th Anniversary. All former Directors of the Telecommunication Development Bureau (BDT) participated in the celebrations and received special awards in recognition for their contribution.

D.1-2 Regional preparatory meetings (RPMs)⁸⁵

In accordance with WTDC Resolution 31 (Rev. Hyderabad, 2010), BDT organized six RPMs and regional development forums served to secure the timely engagement of the ITU membership in the WTDC-17 process through consideration, at the regional level, of appropriate ICT development strategies.

⁸⁴ WTDC Res. 1, 2, 5, 30, 33, 37, 50, 53, 59, 81, 82; PP Dec. 5, 13; PP Res. 25, 71, 72, 77, 111, 131, 133, 135, 139, 140, 151, 154, 165, 167; Council R 1372; WSIS Action Lines C1, C11; SDG Targets: 1, 3, 5, 10, 16, 17.

⁸⁵ WTDC Res. 5, 17, 25, 30, 31, 33, 37, 48, 50, 59, 61, 81; PP Dec. 5, 13; PP Res. 25, 71, 111, 135, 140, 165, 167; WSIS Action Lines C1, C11; SDG Targets 1, 3, 5, 10, 16, 17.

All six RPMs discussed regional initiatives and developed draft proposals to WTDC-17. The texts of all the agreed regional initiatives formed an integral part of the regional common proposals to WTDC-17. The following documents were reviewed by all six RPMs:

- Preliminary Draft ITU-D Contribution to the ITU Strategic Plan for 2020-2023
- Preliminary Draft ITU-D Action Plan
- Preliminary Draft WTDC-17 Declaration
- Rules of Procedure of ITU-D (WTDC Resolution 1)
- Report on streamlining WTDC Resolutions.

D.1-3 Telecommunication Development Advisory Group (TDAG)⁸⁶

TDAG met annually between 2014 and 2017 to advise the BDT Director on the implementation of the WTDC-14 Action Plan and the preparations for WTDC-17. The 19th meeting of TDAG (29 September -1 October 2014) established correspondence groups for key areas and reviewed outcome indicators and KPIs for the ITU-D Operational Plan for 2015-2018. The 20th meeting of TDAG (28-30 April 2015) reviewed the Plenipotentiary Conference (Busan, 2014) outcomes and resolutions and their implications for the work of ITU-D; reviewed the implementation of the ITU-D strategic plan and operational plan for 2014, including WTDC-14 resolutions and regional initiatives; considered the draft operational plan for 2016-2019; and convened first meetings of correspondence groups. The 21st meeting of TDAG (16-18 March 2016) reviewed topics including WTDC-17 preparations, the implementation of the ITU-D strategic plan and operational plan, and the ITU-D four-year rolling operational plan 2017-2020. The 22nd meeting of TDAG (9-12 May 2017) reviewed WTDC-17 preparations, RPM outcomes, the work of the three correspondence groups and the outcomes of the Inter-Sectoral Coordination Team on Issues of Mutual Interest. The new composition of the TDAG Bureau for the 2018-2021 cycle and the TDAG chairman and vice-chairmen were approved by WTDC-17. The 23rd meeting of TDAG (9-11 April 2018) reviewed the outcomes of WTDC-17, collaboration with the other Sectors, financial implications of regional initiatives, the implementation of the ITU-D Strategic and Operational Plan 2017, ITU-D four-year rolling Operational Plan 2019-2022, implementation of the WSIS outcomes and 2030 Agenda, ITU-D Study Group-related matters, etc.

D.1-4 Study groups⁸⁷

The ITU-D study groups followed the process set out in Resolution 1 (Rev. Dubai, 2014) and worked in accordance with the work plans adopted by WTDC-14. Study Group 1 examined issues relating to an enabling environment for the development of telecommunications/ICTs. Study Group 2 examined matters relating to ICT applications, cybersecurity, emergency telecommunications and climate-change adaptation. WTDC-14 appointed 23 chairmen and vice-chairmen to lead the work. Eighteen final reports of the ITU-D study Questions and new SG management including 2 chairmen and 23 vice-chairmen for the 2018-2021 cycle were approved by WTDC-17.

⁸⁶ WTDC Res. 1, 5, 17, 24, 30, 33, 50, 59, 61, 81; PP Dec. 5, 13; PP Res. 25, 71, 111, 135, 140, 151, 154, 165, 166, 167; Council R 1372; WSIS Action Lines C1, C11; SDG Targets 1, 3, 5, 10, 16, 17.

⁸⁷ WTDC Res. 1, 2, 5, 9, 17, 21, 30, 33, 50, 59, 61, 80, 81; ITU-D Recommendations 15, 16, 17, 19, 20, 21, 22; PP Dec. 5, 13; PP Res. 25, 71, 133, 135, 140, 154, 165, 166, 167; Council R1372; WSIS Action Lines C11, C11; SDG Targets 1, 3, 5, 10, 16, 17.

Objective D.2: Foster an enabling environment for ICT development and foster the development of telecommunication/ICT networks as well as relevant applications and services, including bridging the standardization gap

Outcomes:

D.2-1: Enhanced dialogue and cooperation among national regulators, policy-makers and other telecommunication/ICT stakeholders on topical policy, legal and regulatory issues to help countries achieve their goals of creating a more inclusive information society

D.2-2: Improved decision-making on policy and regulatory issues and conducive policy, legal and regulatory environment for the ICT sector

D.2-3: Enhanced awareness and capability of countries to enable planning, deployment, operation and maintenance of sustainable, accessible and resilient ICT networks and services, including broadband infrastructure, and improved knowledge of available broadband transmission infrastructure worldwide

D.2-4: Enhanced awareness and capability of countries to participate in and contribute to the development and deployment of ITU Recommendations and put in place sustainable and appropriate conformance and interoperability programmes, on the basis of ITU Recommendations, at national, regional and sub regional levels by promoting the establishment of mutual recognition agreement (MRA) regimes and/or building testing labs, as appropriate

D.2-5: Enhanced awareness and capability of countries in the fields of frequency planning and assignment, spectrum management and radio monitoring, in efficient utilization of tools for managing the spectrum and in measurement and regulation related to human exposure to electromagnetic fields (EMF).

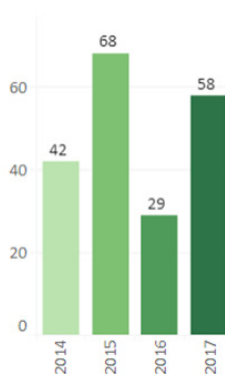
D.2-6: Enhanced awareness and capability of countries in the transition from analogue to digital broadcasting and in post-transition activities, and effectiveness of implementation of the guidelines prepared

D.2-7: Strengthened members' capacity to integrate telecommunication/ICT innovation in national development agendas

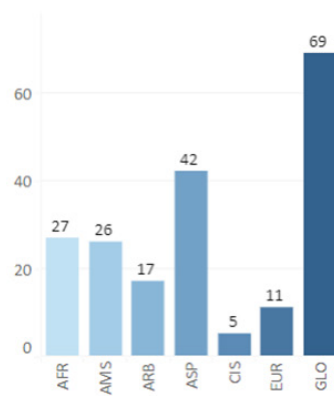
D.2-8: Enhanced public-private partnership to foster the development of telecommunications/ICTs

Progress achieved

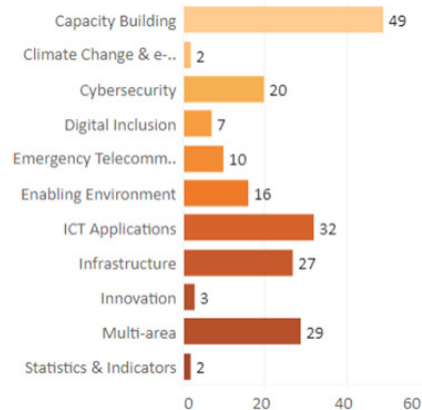
New partnership agreements signed between (2014-2017)

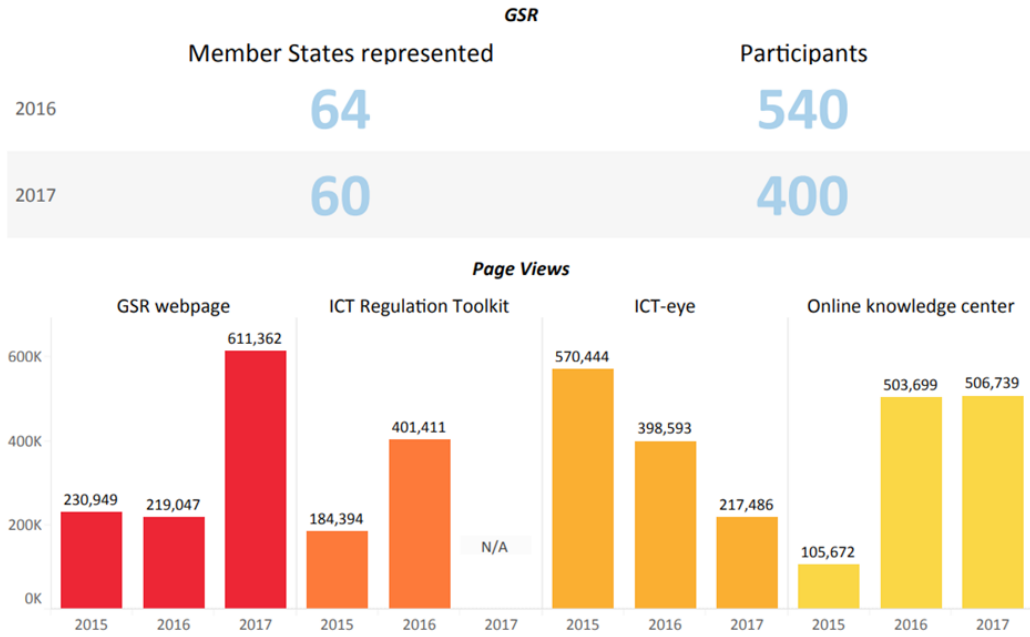


Beneficiary Regions of signed agreements (2014-17)



Areas of action of new signed Agreements (2014-17)





Outputs

D.2-1 Policy and regulatory frameworks⁸⁸

ITU-D convened global and regional forums to discuss global regulatory trends for Sector Members and other national and international stakeholders to promote strategic dialogue on policy, legal and regulatory issues, as well as on economic and financial issues and market developments. The Global Symposium for Regulators (GSR) is the annual event where ICT regulators share their views and experiences.

GSR-18 was held under the theme “New Regulatory Frontiers”. The symposium focused on a wide range of issues, including: emerging technologies for digital transformation, artificial intelligence for development, new regulatory frontiers, digital identity across different platforms, the protection of personal data in a smart data-driven economy, and new sustainable investment models. A key output of GSR was the best practice guidelines on new regulatory frontiers to achieve digital transformation. A thematic “Global Dialogue on Artificial Intelligence, Internet of Things and Cybersecurity” was held, noting that the positive impact of these emerging technologies needs to be harnessed to empower individuals and communities for the attainment of sustainable development. The dialogue also called for the prioritization of the detection and prevention of cyber threats. During GSR-18, a meeting of the Private Sector Chief Regulatory Officers was held in conjunction with the first meeting of the Industry Advisory Group for Development Issues. GSR-18 also hosted a meeting of regulatory associations.

ITU-D continued to provide high-quality data, research and analysis, as well as tools (such as reports, discussion papers, publications, portals and databases) to support the ITU membership in defining, implementing and reviewing coherent strategies and policy, legal and regulatory frameworks. Reports in the *Trends in Telecommunication Reform* series included *Regulatory incentives to achieve digital opportunities* (2016); *Getting ready for the digital economy* (2015); and *Fourth-generation regulation: Driving digital communications ahead* (2014). Various portals and publications were made available, including the Digital Ecosystem Portal, the International Mobile roaming Portal, the Regulatory Challenges and Opportunities for the new ICT Ecosystem Report, the APP Economy in Africa, etc.

⁸⁸ WTDC Res. 1, 9, 17, 21, 23, 30, 32, 43, 48, 62; PP Dec. 5, 13; PP Res. 25, 71, 102, 135, 138, 154, 165; WCIT Res. 3; WSIS Action Lines C6, §§ 112-119 of the Tunis Agenda; SDG Targets 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 13, 16, 17.

In 2017, ITU-D launched the 2017 *Global Regulatory Outlook Report*, the first in a new series tracking market and regulatory trends in the ICT sector and their implications across the economy. ITU-D's ICT Regulatory Tracker covers 186 countries for a period of nine years, showcasing national, regional and global regulatory progress. Since 2015, direct assistance has been provided for over 20 countries and regions to help them achieve a more inclusive information society and raise national and regional awareness of the importance of an environment that enables digital inclusion.

D.2-2 Telecommunication/ICT networks, including conformance and interoperability and bridging the standardization gap⁸⁹

ITU-D worked closely with ITU-R and ITU-T in all regions to develop infrastructure and services. ITU assisted several countries in preparing wireless broadband master plans, spectrum management master plans and national broadband policies for their transition from public-switched telecommunication networks (PSTN) to next-generation networks (NGN).

ITU-D continued to implement and update the ITU interactive terrestrial transmission maps (for broadband backbone optical fibre, microwave links and satellite earth stations, IXPs, as well as submarine cables) for all regions. A report on the implementation of evolving telecommunication/ICT infrastructure for developing countries was revised. In accordance with WTDC Resolution 47 (Rev. Buenos Aires, 2017), regional forums and training courses on conformity and interoperability (C&I) were held in collaboration with ITU-T and ITU-R, focusing on conformity assessment procedures, type approval testing for mobile terminals and different C&I testing domains for the Africa, Americas, Arab States, Asia-Pacific and CIS regions. In 2015, new guidelines on establishing conformity and interoperability regimes were published online and shared with the membership.

The Spectrum Management System for Developing Countries (SMS4DC) is now in use in over 40 countries in the Africa, Americas, Arab States, Asia-Pacific, and Europe regions. Spectrum management master plans have been drafted for six Asia-Pacific countries and three countries in the Caribbean. Guidelines have been prepared to assist countries in developing their national table of frequency allocations and national spectrum management assessments, for tendering for their national spectrum monitoring system and for developing spectrum fee regimes.

D.2-3 Innovation and partnership⁹⁰

To contribute to bridging the innovation divide, ITU hosted several innovation dialogues, which built knowledge and capacity for ICT-centric innovation at the national, regional and global levels. An innovation framework was developed identifying key pillars for monitoring, developing and impacting ICT-centric innovation ecosystems, including strategies, policies, and programs. Several initiatives were taken to scale knowledge and build capacity, including global dialogues held with over 300 experts, training and certification of over 30 national experts from over 25 countries, technical assistance to 8 countries using the innovation framework, 10 national workshops with multi-stakeholders participation from over 500 participants, etc.

ITU hosted a series of private-sector chief regulatory officer (CRO) meetings that brought together senior industry executives to share experiences and exchange ideas on how to strengthen private-sector involvement and engagement and identify mechanisms for better fostering an enabling regulatory environment for the future ICT development. From 2014 to 2017, some 150 representatives from

⁸⁹ WTDC Res. 1, 9, 10, 11, 13, 17, 18, 20, 21, 22, 23, 25, 30, 32, 35, 37, 39, 43, 47, 48, 50, 51, 52, 57, 62, 63, 77; Recommendations 17, 19, 22; PP Dec. 5, 13; PP Res. 25, 71, 101, 123, 176, 177, 178, 203; WRC Res. 12, 55, 212, 223, 224, 238, 908, Rec. 207; WTSAs Res. 17, 20, 29, 44, 64, 72; WCIT Res. 5; WSIS Action Lines C2, C3, C7, C9, and section "Financial mechanism for meeting the challenges of ICT for development" of the Tunis Agenda; SDG Targets 1, 6, 8, 9, 11, 17.

⁹⁰ WTDC Res 1, 5, 30, 33, 50, 59, 71, 157 ; PP Dec. 5, 13 ; PP Res. 25, 71, 72 ; WSIS Action Lines 3, 4, 5, 6, 7, and "Financial mechanism for meeting the challenges of ICT for development" of the Tunis Agenda; SDG Targets 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 16, 17.

over 50 entities and associations, ranging from operators to service providers and manufacturers, participated in CRO meetings.

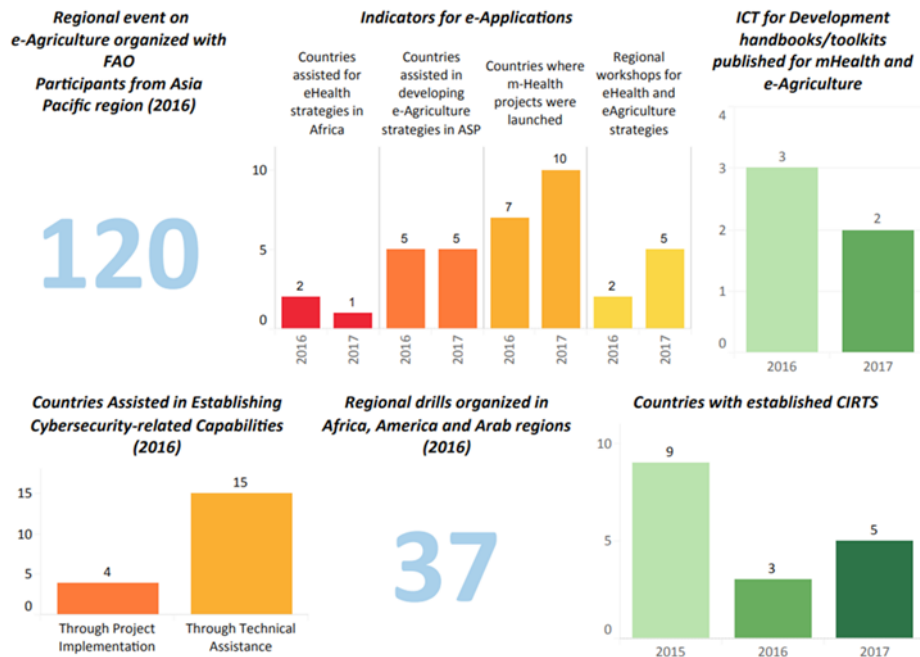
To support resource mobilization efforts and to identify potential partners for ITU-D projects, BDT has created various products and tools, including databases on partners, partnership agreements and websites for sponsorship opportunities. For example, 42 new partnership agreements were signed in 2014, 68 in 2015, 29 in 2016, and 58 in 2017. From 2014 to July 2017, 40 new Sector Members, five Associates and over 90 Academia members joined the ITU-D Sector. By July 2017, the ITU-D Sector comprised 321 Sector Members, 11 Associates and 144 Academia members.

Objective D.3: Enhance confidence and security in the use of telecommunications/ICTs, and roll-out of relevant applications and services

Outcomes:

- D.3-1: Strengthened capacity of Member States to incorporate and implement cybersecurity policies and strategies into nationwide ICT plans, as well as appropriate legislation
- D.3-2: Enhanced ability of Member States to respond to cyberthreats in a timely manner
- D.3-3: Enhanced cooperation, information exchange and know-how transfer among Member States and with relevant players
- D.3-4: Improved capacity of countries for the planning of national sectoral e-strategies to foster the enabling environment for upscaling ICT applications
- D.3-5: Improved capacity of countries to leverage ICT/mobile applications to improve the delivery of value-added services in high-priority areas (e.g. health, governance, education, payments, etc.) in order to provide effective solutions for various challenges in sustainable development through public-private collaboration
- D.3-6: Enhanced innovation, knowledge and skills of national institutions to use ICT and broadband for development

Progress achieved



***e-Health High-level events conducted with WHO and UNESCO
(2016)***



Outputs

D.3-1 Building confidence and security in the use of ICTs⁹¹

According to the 2014 Global Cybersecurity Index (GCI) and other sources, in 2014, there were 103 countries with a national computer incident response team (CIRT) and 72 countries with a national cybersecurity strategy helping to reduce the cybersecurity divide. The second iteration of the GCI was completed in 2016, with 134 responses from Member States (a 25% increase over 2014), showing an increase of the number of national CIRTs and National Strategies. The work on the GCI 2014 and 2016 has served to help countries identify areas for improvement, motivate actions to improve cybersecurity, raise the level of cybersecurity worldwide, contribute to identifying and promoting best practices, and foster a global culture of cybersecurity.

The 2018 edition of the GCI will be released in September and as of June 2018, 153 countries provided responses.

ITU's cybersecurity activities have helped to strengthen Member States' capacity to incorporate and implement cybersecurity policies and strategies into national plans, and have also resulted in enhanced organizational capacity, including:

- CIRT assessments entailing in-country missions for information gathering and resulting in capacity-building and, in nine countries, establishment of a national CIRT.
- Fourteen regional cyberdrills conducted with 1 900 participants from 160 countries.
- 15 technical workshops, which enhanced the capacity of the 170 participants.
- The dissemination to Member States of three ITU publications, together with 20 other publications from partners, to improve understanding of cybersecurity challenges.
- Six WSIS workshops and four pre-study group workshops were held to enable some 350 participants to exchange expertise and build their capacity.

A National Cybersecurity Strategy Guide is being drafted by a 15-member partnership, to be used by ITU and other national cybersecurity strategy partners to assist Member States in pursuing a more coherent and harmonized approach. The guide will be released in September 2018.

D.3-2 ICT applications and services⁹²

ICT applications and services are an important demand-side driver that can encourage the adoption of broadband services. BDT's efforts were aimed at facilitating the development and use of ICT applications and services that supported sustainable development, including in the fields of public

⁹¹ WTDC Res. 1, 5, 9, 15, 30, 33, 37, 45, 50, 59, 64, 67, 69, 78, 79 ; PP Dec. 5, 13 ; PP Res. 25, 71, 72, 130, 179, 181 ; WTSA Res. 50, 52, 58 ; WSIS Action Lines C5 ; SDG Targets 1, 3, 4, 5, 7, 8, 9, 10, 11, 16, 17.

⁹² WTDC Res. 1, 5, 30, 54 ; PP Dec. 5, 13 ; PP Res. 25, 71, 72, 139, 140, 183, 202 ; WSIS Action Line C7 ; SDG Targets 2, 3, 4, 6, 7, 8, 11.

administration, business, education and training, health, employment, environment, agriculture and science.

Several high-level events were organized in order to facilitate ITU Member States to develop national e-strategies to foster an enabling environment for upscaling ICT applications. These events include a high-level joint ITU-WHO digital health policy dialogue in May 2016 (e-health), a joint FAO-ITU E-agriculture Strategy Guide published in 2016 (e-agriculture) and a joint ITU-UNESCO (United Nations Educational, Scientific and Cultural Organization) policy forum on mobile learning in March 2016, March 2017, and March 2018 (e-learning), just to name a few.

“Be He@lthy, Be Mobile” is a global joint initiative between ITU and WHO to work with governments on identifying and scaling up evidence-based interventions to use m-Health to address non-communicable diseases and their associated risk factors. It currently provides technical and financial support to programmes in India, Norway, the Philippines, Senegal, Tunisia, Egypt, the United Kingdom, and Zambia. It covers a range of income groups and disease areas, including mSmokingCessation, mDiabetes, mCervicalCancer and mCOPD (COPD: chronic obstructive pulmonary disease). It includes “ITU-WHO mHealth Innovation and Knowledge Hub in EU” project, with a total funding of 3 million Euros granted by the European Commission to support countries in implementing mHealth in health-care services.

A joint effort was launched with WHO African Region to scale up Digital Health services in Africa. The partnership will focus on building a capable workforce to use ICTs effectively for health, as well as consolidating existing efforts and resources towards making available ICT platforms for digital health services via multi-stakeholder partnerships. A project on Digital Identity for Development was launched.

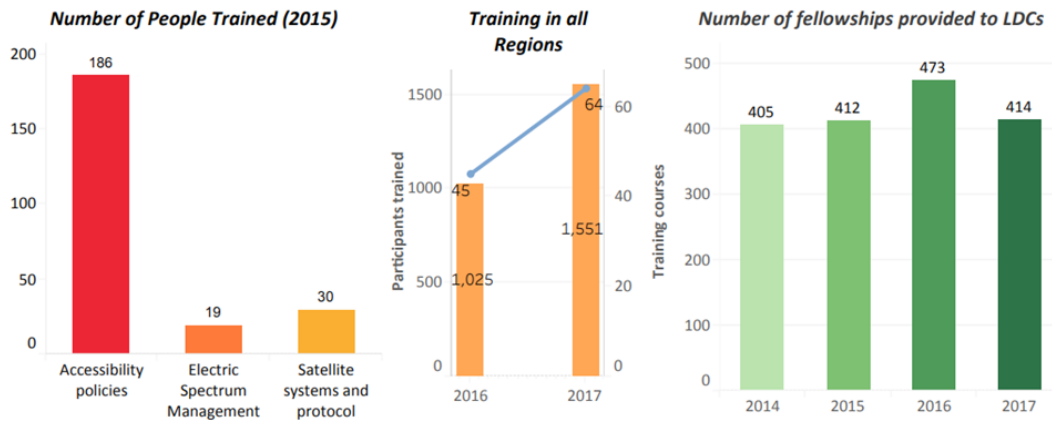
In 2018, a #HackAgainstHunger Hackathon was organized in partnership with FAO. A special Track within the AI for Good Summit (2018) on using Artificial Intelligence applications focused on quick-wins areas and AI applications for health. A collaborative arrangement was signed with FAO to reinforce the work on e-agriculture issues and expand the scope and depth of activities.

Objective D.4: Build human and institutional capacity, provide data and statistics, promote digital inclusion and provide concentrated assistance to countries in special need

Outcomes:

- D.4-1: Enhanced capacity building of membership in international Internet governance
- D.4-2: Improved knowledge and skills of ITU membership in the use of telecommunications/ICTs
- D.4-3: Enhanced awareness of the role of human and institutional capacity building for telecommunications/ICTs and development for the ITU membership
- D.4-4: Enhanced information and knowledge of policy-makers and other stakeholders on current telecommunication/ICT trends and developments based on high-quality, internationally comparable telecommunication/ICT statistics and data analysis
- D.4-5: Enhanced dialogue between telecommunication/ICT data producers and users and increased capacity and skills of producers of telecommunication/ICT statistics to carry out data collections at the national level based on international standards and methodologies
- D.4-6: Strengthened capacity of Member States to develop and implement digital inclusion policies, strategies and guidelines to ensure telecommunication/ICT accessibility for people with specific needs and the use of telecommunications/ICTs for the social and economic empowerment of people with specific needs
- D.4-7: Improved capacity of members to provide people with specific needs with digital literacy training and training on the use of telecommunications/ICTs for social and economic development
- D.4-8: Improved capacity of members in using telecommunications/ICTs for the social and economic development of people with specific needs, including telecommunication/ICT programmes to promote youth employment and entrepreneurship
- D.4-9: Improved access to and use of telecommunications/ICTs in LDCs, SIDS, LLDCs and countries with economies in transition
- D.4-10: Enhanced capacity of LDCs, SIDS and LLDCs on telecommunication/ICT development

Progress achieved



Outputs

D.4-1 Capacity building⁹³

ITU-D contributed to strengthening the capacities of ITU Member States by implementing a new ITU Centre of Excellence (CoE) Strategy in line with WTDC Resolution 73 (Rev. Dubai, 2014). CoEs strengthened capacities in Member States by conducting training programmes in policy and regulation, broadband access, cybersecurity, C&I, spectrum management, digital broadcasting, ICT applications and services, emergency telecommunications, Internet governance, e-waste and climate change mitigation and adaptation. Twenty-five training activities, across all the regions, were conducted through the CoE network in 2015, with a total of 820 participants. In 2016, 51 training activities were implemented, with a total of 1 167 participants.

ITU continued to create platforms for information and knowledge sharing by the Membership through the organization and holding of two Capacity Building Symposia. CBS-2016 was held under the theme “Embracing capacity building opportunities in the digital era”. The theme for CBS-2018 was “Developing Skills for the Digital Economy and Society”.

ITU continued to strengthen capacities in Member States by developing standardized training materials, which were made available through CoEs and other cooperating partners from Academia. Training materials were developed on spectrum management in 2015 and on QoS in 2016. Training materials relating to ICTs and climate change, and to IoT, are currently being developed. Training activities on international Internet governance started in 2017, with the first of a series of regional workshops held in Brazil in July 2017.

Activities under Output 4.1 contributed to greater cooperation between ITU and relevant partners in the field of capacity building. ITU signed cooperation agreements with: the Czech Technical University, on a Spectrum Management Training Programme (SMTP); the United Kingdom Telecommunications Academy, for the delivery of a joint online Master of Communications Management (eMCM) training programme; with the African Advanced-Level Telecommunications Institute (AFRALTI), for the delivery of training in spectrum management; and with the Association of Communications and Telecommunications Regulators of the Community of Portuguese Speaking Countries, with joint activities in capacity building and education.

⁹³ WTDC Res. 1, 5, 9, 15, 20, 21, 22, 30, 32, 33, 36, 40, 50, 59, 73, 77; PP Dec. 5, 13; PP Res. 25, 71, 72, 137, 139, 140, 176, 188, 189, 197, 199, 202; Council R1143; WTS Res. 54, 59, 72; WSIS Action Lines C4 and §§ 8, 22, 23a, 26g, 49, 51, 65, 72h, 86, 87, 90c, d, f, 95, 114b of the Tunis Agenda; SDG Targets 1, 2, 3, 4, 5, 6, 9, 12, 13, 14, 16, 17.

D.4-2 Telecommunication/ICT statistics⁹⁴

ITU hosts the world's most comprehensive and up-to-date collection of ICT data and statistics relating to ICT infrastructure, access and usage, policy and regulation, and cost and tariff policy issues. The work of ITU has resulted in the enhanced availability and dissemination of internationally comparable ICT statistical databases.

From 2014-2017, a number of statistical products were released in a move to enhance the information and knowledge available to policy-makers and other stakeholders on ICT trends and developments. The ITU flagship publication, the *Measuring the Information Society Report*, supports policy-makers, investors, and business people in terms of current ICT market trends, and enables them to make evidence-based decisions by providing an accurate analysis of ICT development at the national, regional and global levels.

By organizing the annual World Telecommunication/ICT Indicators Symposium (WTIS), the main global forum for discussing ICT statistics, ITU has enhanced both the dialogue between ICT data producers and users and the awareness and capacity needed by countries in order to produce ICT statistics. To guide countries and ITU in future work on ICT measurement, WTIS adopted a number of recommendations.

D.4-3 Digital inclusion of people with specific needs⁹⁵

ITU and ILO launched a joint Digital Skills for Decent Jobs for Youth Campaign in June 2017 with the goal of mobilizing the political will and resources to equip five million young men and women with job-ready digital skills by 2030 in support of SDGs. ITU-D shared innovative strategies with all ITU members on building their national digital skills development strategies in the ITU Digital Skills Toolkit published in March 2018 and shared at major events, such as the 2018 WSIS High Level Dialogue on Digital Skills and Mobile Learning Week.

Since WTDC-14, the awareness of almost 5 000 stakeholders, including ITU members, was raised around the world on ICT accessibility policies and regulatory measures for persons with disabilities. This was achieved through key regional and global meetings, including events of the relevant regional initiatives, ITU-D Study Groups, and UN events. ITU-D has developed numerous training resources on ICT accessibility, including online training materials on how to develop and maintain accessible websites; training materials and video tutorials on accessible digital content; self-paced training courses; and online courses on public procurement of accessible ICT products and services which were delivered through the ITU Academy. In addition, ITU-D has built the capacity of 1,000 ITU members and other stakeholders on ICT accessibility. The Model ICT Accessibility Policy Report, launched in November 2014, was also promoted in all ITU regional and global events.

Since 2011, when the first International Girls in ICT Day was celebrated, over 11,200 events have been held in 171 countries, empowering more than 362 000 girls and young women from around the world. ITU headquarters and all ITU regional offices have organized Girls in ICT Day events. More than 66 600 girls and young women from 133 countries took part in the 1 800 events held to celebrate International Girls in ICT Day 2015. In 2016, more than 66 000 girls from 138 countries participated in over 1 900 events. In 2017, some 70 000 girls from 134 countries participated in over 2 100 events; this includes events held in 30 countries in the Africa region, 33 in the Americas region, 12 in the Arab States, 20 in the Asia and the Pacific region, six in the Commonwealth of Independent States and 33 in the Europe Region. In 2018, more than 62,000 girls participated in over 2,200 events in 127 countries.

⁹⁴ WTDC Res. 1, 5, 8, 30, 33, 37, 43, 50, 51, 52, 57, 59, 60; PP Dec. 5, 13; PP Res. 25, 71, 72, 137, 139, 140, 176, 188, 189, 197, 199, 200, 202; ICT statistics are relevant to monitoring the implementation of all WSIS Action Lines of the Geneva Plan of Action and are referred to in §§ 112-119 of the Tunis Agenda; SDG Targets 4, 5, 9, 17.

⁹⁵ WTDC Res. 1, 5, 9, 11, 15, 20, 21, 22, 23, 30, 32, 55, 58, 68, 76, 77; PP Dec. 5, 13; PP Res. 25, 30, 32, 33, 34, 36, 37, 64, 70, 71, 131, 139, 140, 175, 184, 198, 202; WTS Res. 55, 69; WSIS Action Lines C2, C4, C7, C8, and § 90 of Tunis Agenda; SDG Targets 1, 4, 5, 8, 9, 10, 11, 16, 17.

ITU trained, in collaboration with Fondo Indigena, over 1 000 Indigenous leaders from Latin America from November 2014 to November 2018. ITU developed and delivered three online training courses every year on topics of Indigenous communities' interest including development of Indigenous Radio/ Networks, in line with WTDC-17 Resolution 46.

ITU-D shared innovative digital inclusion programmes and practices with ITU Membership on the Digital Inclusion Newslog, including on digital literacy, coding training, initiatives to encourage more girls and women to take up ICT studies and careers and latest ICT accessible products and services for persons with disabilities.

D.4-4 Concentrated assistance to least developed countries (LDCs), small island developing states (SIDS) and landlocked developing countries (LLDCs)⁹⁶

ITU has raised awareness of the importance of ICTs for sustainable development and provided concentrated assistance as well as enhanced capacity to LDCs, LLDCs and SIDS in regard to ICT-related activities, initiatives, programmes and projects, including: market regulatory reforms, emergency telecommunications, disaster response, gender equality, ICT infrastructure, spectrum management and climate change adaptation. This push for greater awareness has served to mitigate adverse impacts and enhance human capacity. At the same time, ITU has improved ICT access and use in LDCs, and provided concentrated assistance to 40 LDCs between 2014 and 2017.

ITU has led the way in harmonizing telecommunication/ICT policies in the Pacific region, resulting in the adoption of a number of national strategies, policies and regulations on, among other things, ICTs, cybersecurity and universal access and service. On 1 October 2014, an agreement to launch the Pacific Connectivity Project was signed by ITU and 11 Pacific Islands and with industry partners, on the Development of Satellite Communications Capacity and Emergency Communications Solutions for the Pacific, with the aim of making broadband accessible and affordable to all citizens in the Pacific Islands. As part of information dissemination and sharing, ITU published the report "ICTs, LDCs, and the SDGs: Achieving universal and affordable Internet in the least developed countries".

Objective D.5: Enhance environmental protection, climate-change adaptation and mitigation, and disaster-management efforts through telecommunications/ICTs

Outcomes:

D.5-1: Improved availability of information and solutions for Member States, regarding climate-change adaptation and mitigation

D.5-2: Enhanced capacity of Member States in relation to climate-change mitigation and adaptation policy and regulatory frameworks

D.5-3: Development of e-waste policy

D.5-4: Developed standards-based monitoring and early-warning systems linked to national and regional networks

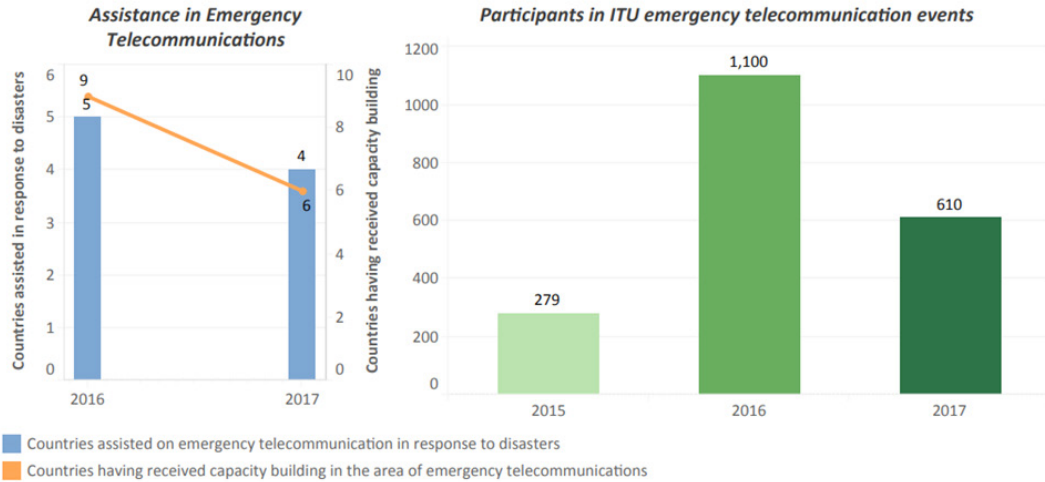
D.5-5: Collaboration to facilitate emergency disaster response

D.5-6: Established partnerships among relevant organizations dealing with the use of telecommunication/ ICT systems for the purpose of disaster preparedness, prediction, detection and mitigation

D.5-7: Increased awareness of regional and international cooperation for easy access to, and sharing of, information related to the use of telecommunications/ICTs for emergency situations

⁹⁶ WTDC Res. 16, 17, 18, 21, 25, 26, 30, 33, 36, 37, 50, 51, 52, 53, 57, 60; PP Dec. 5, 13; PP Res. 25, 30, 32, 33, 34, 36, 70, 71, 123, 124, 125, 126, 127, 135, 159, 160, 161, 193, 202; WRC Res. 12; WCIT Res. 1; WSIS Action Lines C4, C7, and § 9, 23, 26, 49, 59, 87 and 95 of the Tunis Agenda; SDG Targets 1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17.

Progress achieved



2nd Global Forum on Emergency Telecommunications (GET-2016); SAVING LIVES

Countries represented

70

Participants

500

Emergency Telecommunications (2016)

Countries assisted in response to disasters

5

Countries having received capacity building

9

Global ICT Human Capacity Building Symposium (2016)

Countries represented

46

Participants

440

Indigenous People Trained (2016)

162

Outputs

D.5-1 ICTs and climate-change adaptation and mitigation⁹⁷

ITU contributed to climate change mitigation and adaptation through the development of satellite communication capacity for use with clean power-generation systems and by providing emergency communications solutions with the implementation of the Climate Change Adaptation Component of the Satellite Communications, Capacity, and Emergency Communications Solutions Project for the Small Island Developing States of the Pacific. A project has also helped set up solar power-based systems to supply some 20 computer centres, minimizing GHG emissions.

ITU enhanced understanding among Member States of the ways in which telecommunications/ICTs can be used for climate change adaptation, and stressed the importance of green ICT strategies

⁹⁷ WTDC Res. 17, 21, 30, 32, 37, 50, 52, 53, 66; PP Dec. 5, 13; PP Res. 25, 71, 182; WTSA Res. 73; WSIS Action Lines C7; SDG Targets 3, 5, 9, 11, 13, 14, 15.

through workshops held in the 20 countries that received ICT equipment and training in the aftermath of disasters. ITU also contributed to the development of an environmentally friendly early-warning system by setting up solar-powered sirens and control centres in eastern Uganda.

ITU made an important step in improving the quality and availability of e-waste statistics. ITU, in collaboration with the United Nations University (UNU) and the International Solid Waste Association (ISWA), set up the Global E-waste Statistics Partnership, the main objectives of which are to provide countries with the capacity they need to produce reliable and comparable e-waste statistics, collect country data and build a global e-waste database to track developments over time and provide policy-makers and industry with the information thus gathered. In December 2017, ITU published the Global E-waste Monitor 2017, produced together with UNU and ISWA.

D.5-2 Emergency telecommunications⁹⁸

ITU has facilitated emergency disaster response, strengthened capacity and improved communications for disaster relief, and has helped more than 20 Member States affected by disasters to re-establish their communication networks by delivering direct assistance and infrastructure damage assessments and by helping in the reconstruction and rehabilitation of infrastructure. During these deployments, over 400 users attended 20 capacity-building workshops and received training in the use of satellite telecommunication equipment. ITU also contributed to saving lives by designing and deploying early warning systems for floods and mudslides.

ITU's Second Global Forum on Emergency Telecommunications (GET-2016): Saving lives, was held in Kuwait from 26 to 28 January 2016. It increased the awareness and capacity of countries to take advantage of ICTs for emergency telecommunications and enhanced the dialogue between disaster-management experts. The forum was attended by more than 500 participants from ITU Member States, industry, UN agencies, NGOs, academics and humanitarian organizations. The event highlighted the important role of telecommunications/ICTs in the implementation of the Sendai Framework, and made recommendations on how to use ICTs to support countries in attaining the SDGs.

6 Inter-Sectoral objectives and results achieved

Inter-Sectoral Objectives				
I.1 Enhance international dialogue among stakeholders	I.2 Enhance partnerships and cooperation within the telecommunication/ICT environment	I.3 Enhance identification and analysis of emerging trends in the telecommunication/ICT environment	I.4 Enhance/promote recognition of (the importance of) the telecommunication/ICTs as a key enabler of social, economic and environmentally sustainable development	I.5 Enhance access to telecommunications/ICTs for persons with disabilities and specific needs

⁹⁸ WTDC Res. 1, 5, 17, 21, 30, 32, 34, 37, 50, 52, 53, 69; PP Dec. 5, 13; PP Res. 25, 37, 71, 98, 136, 140, 182, 202; WRC Res. 646, 647; WCIT Res. 2; WSIS Action Lines C7; SDG Targets 3, 5, 9, 11, 13, 14, 15.

Linkage of inter-sectoral activities to the ITU results framework:

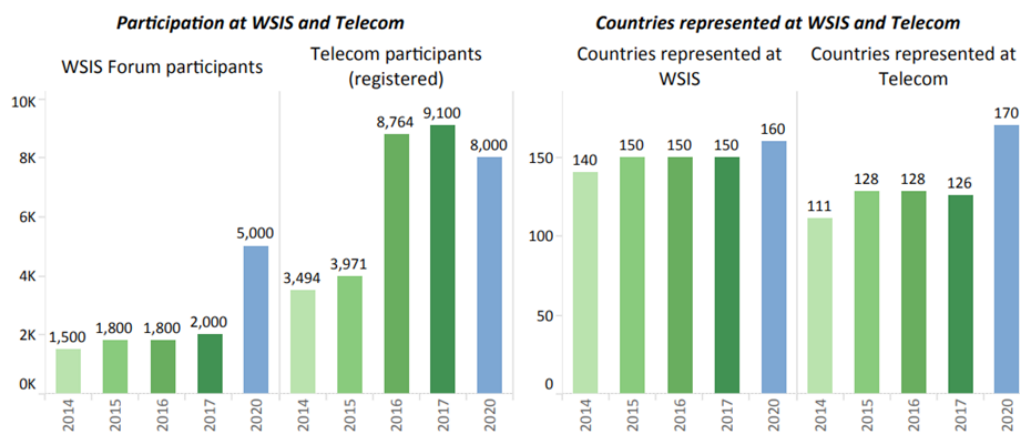
Accessibility	Objective I.5
Broadband Commission for Sustainable Development	Objective I.1
Climate change	Objective I.4
Cybersecurity	Objective I.2
EMERGE initiative	Objective I.2
Emergency telecommunications	Objective I.4
Empowerment of Youth through ICTs	Objective I.4
Gender	Objective I.4
Internet issues	Objective I.2
ITU 150	Objective I.1
ITU and the United Nations	Objective I.4

Objective I.1: Enhance international dialogue among stakeholders

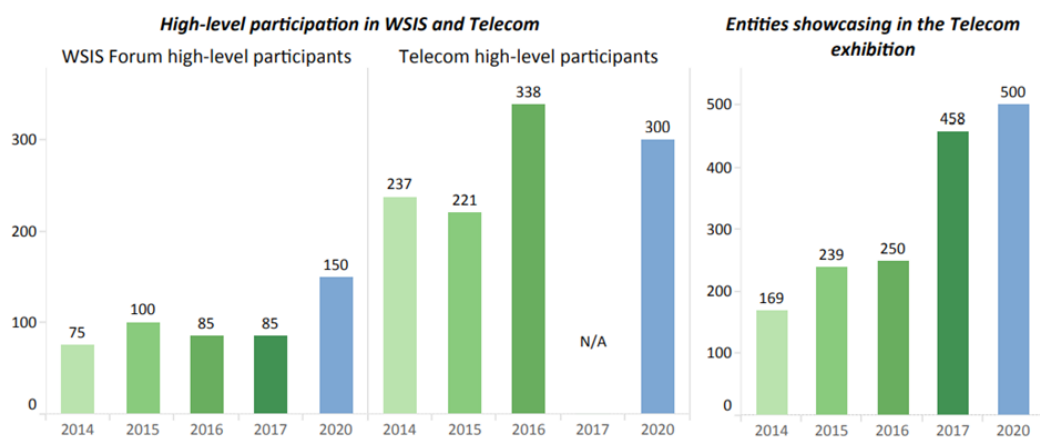
Outcomes:

I.1-1: Increased collaboration among relevant stakeholders, aiming to improve the efficiency of the telecommunication/ICT environment

Progress achieved⁹⁹



⁹⁹ WSIS data includes registered participants.



Outputs

I.1-1 Intersectoral world conferences, fora, events and platforms for high-level debate (such as such as World Conference on International Telecommunications (WCIT), World Telecommunication/ICT Policy Forum (WTPF), World Summit on the Information Society (WSIS), World Telecommunication and Information Society Day (WTISD), ITU Telecom World)150th Anniversary of ITU

ITU celebrated its 150th anniversary throughout 2015, from 1 January to 31 December, with 17 May as the key date, although many ITU events in 2015 also had an anniversary component. On 17 May 2015, ITU celebrated both its 150th Anniversary and WTISD 2015 in Geneva. This historic event in the presence of Ms Doris Leuthard, President of the Swiss Confederation, brought together more than 900 participants from all over the world, representing governments, the private sector, academia, UN agencies, and international organizations. The event was also an opportunity to review ITU's history and put its founding members and its longstanding members from the ICT industry in the spotlight. The ITU 150 Awards recognized individuals from governments, the ICT industry, academia, and civil society who have contributed to improving the lives of the world's citizens through ICT innovations developed, promoted or implemented by ITU. Some 50 nominations were received, and the ITU 150 Award Laureates were Bill Gates, Robert E. Kahn, Thomas Wiegand, Mark I. Krivosheev, Martin Cooper and Ken Sakamura.

The ITU membership responded in high numbers to the call for national celebrations. A special toolkit and visual guidelines were prepared by ITU to support the membership in the organization of events. The mobilization was very successful and more than 140 celebrations were organized around the world. In addition, over 30 Member States issued stamps and philatelic products. ITU membership contributed generously to the Anniversary Fund. A total of 13 ITU members responded to the Resource Mobilization Campaign by becoming a partner, while other also provided support in kind.

The milestone anniversary year was accompanied by a communication campaign to raise awareness about ITU and its role in the advancement of ICTs and innovation. The following collateral material was produced: a visual identity; a calendar of thematic months with stories; a dedicated ITU 150 website; an historical timeline; a social media campaign; the ITU 150 mobile app; a poster competition for children ("Let's draw the future"); Golden Book; a platform for video greetings; various videos; a commemorative publication ("Paris 1865: Birth of the Union"); a special Issue of ITU News; a Press Kit; ITU souvenirs; and ITU 150 branding of ITU buildings. See www.itu150.org and in documents C15/17 and C16/13.

World Telecommunication and Information Society Day (WTISD)

World Telecommunication and Information Society Day (WTISD)¹⁰⁰ has been marked since 2007 to raise awareness of the opportunities of ICTs and ways to bridge the digital divide. WTISD marks the anniversary of the first International Telegraph Convention and the creation of ITU on 17 May 1865. In 2015, the 150th Anniversary of ITU was celebrated with several events around the theme of “Telecommunications and ICTs: Drivers of Innovation”, culminating in an extraordinary day of celebration in Geneva. For 2016, the Secretary-General, under the theme “ICT entrepreneurship for social impact”, issued a call for action to showcase and leverage relevant strategies and initiatives to promote SMEs and foster and discover new ICT solutions to accelerate sustainable development. “Big Data for Big Impact” was the chosen theme for 2017, when ITU hosted an interactive panel discussion during Council-17. The theme chosen by the ITU Council for 2018 is “AI for Good”. WTISD-18 was celebrated during the AI for Social Good Summit. Detailed reports on WTISD may be found in documents C15/17, C16/17, C17/17, and C18/17.

World Summit on the Information Society (WSIS)

The WSIS¹⁰¹ Forum process engages governments, the private sector, civil society, international organizations and the academic/technical community to strengthen collaboration and partnership in the ICT ecosystem, in particular ICTs for advancing the 2030 Agenda for Sustainable Development. In 2015, the WSIS Forum attracted more than 1 800 WSIS stakeholders from over 150 countries, which increased to 2 500 ICT experts and advocates from over 150 countries in 2018. Several high-level representatives of the wider WSIS stakeholder community took part, with a number of high-level participants (including ministers and deputies, ambassadors, CEOs and civil society leaders) contributing passionately to the programme.

The WSIS Forum is hosted by ITU and co-organized by ITU, UNESCO, UNDP and UNCTAD, in close collaboration with all WSIS action line facilitators/co-facilitators (UNDESA, FAO, UNEP, WHO, UN Women, WIPO, WFP, ILO, WMO, ITC, UPU, UNODC, UNICEF, UNIDO, UNITAR, UNHCR and UN Regional Commissions). It has proven an efficient mechanism for the coordination of multi-stakeholder implementation activities, information exchange, creation of knowledge, and sharing of best practices, and continues to provide assistance in developing multi-stakeholder and public-private partnerships to advance the SDGs.

On 15 and 16 December 2015, a high-level plenary meeting of the General Assembly on the overall review of the implementation of the WSIS outcomes was held in New York. ITU contributed substantively to the meeting, which reaffirmed global commitment to the WSIS vision to build a people-centred, inclusive and development-oriented information society. Since 2015, the WSIS Forum has built upon the outcomes of the UN General Assembly Overall Review of the implementation of the WSIS outcomes (UNGA Resolution 70/125), which recognized the necessity of holding the Forum on an annual basis and called for a close alignment between WSIS and the 2030 Agenda for Sustainable Development processes. As we approach 2025, the WSIS Forum will serve as a key forum for discussing the role of ICTs as a means of implementing the SDGs and targets of the 2030 Agenda for Sustainable Development (UNGA Resolution A/70/1). The format, agenda and thematic focus of the Forum are the result of an open consultation process with the involvement of all WSIS stakeholders. All relevant documentation and the agenda can be found at www.wsis.org/forum.

The outcomes of the WSIS Forum are submitted annually to the Commission on Science and Technology for Development (CSTD), the UN General Assembly and ITU Council.

¹⁰⁰ WSIS Action Lines C1, C11; SDG Target 9.

¹⁰¹ PP Res. 140; WSIS Action Lines C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11; SDG Targets 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17.

The WSIS-SDG Matrix developed by UN WSIS action line facilitators serves as the mechanism for mapping and coordinating the implementation of WSIS Action Lines, and ICTs as enablers and accelerators of the SDGs.

All three Sectors and the General Secretariat have carried out important activities and projects that enhance the WSIS outcomes and objectives. Effective coordination of ITU's activities in relation to WSIS has been ensured by a WSIS Task Force, chaired by the Deputy Secretary-General. ITU is chairing the UN Group on the Information Society (UNGIS) in 2017-2018 and is carrying out a series of actions to strengthen the link between WSIS and the 2030 Agenda for Sustainable Development.

More information on ITU's activities related to WSIS may be found in the report on ITU's contribution to the implementation of the WSIS Outcomes at www.itu.int/itu-wsis, and in the reports of the Council Working Group on WSIS (CWG-WSIS) (documents [C15/8](#), [C16/8](#), [C17/8](#), and [C18/8](#)).

ITU TELECOM WORLD EVENTS

ITU Telecom World events provide a neutral platform to accelerate ICT innovation for social and economic development through a global exhibition of digital solutions, high-level forum, diverse networking opportunities and an international Awards programme, recognizing innovative ICT-based solutions with social impact. Taking place annually, events are hosted by governments and convene a highly influential audience, including Heads of State, Ministers, regulators, C-level executives from major ICT players, heads of international organizations, representatives from SMEs, academia, media and more. In 2015, the events were reformed in order to engage more deeply with SMEs, exploring their crucial role within the global ICT ecosystem, and to move towards becoming an international platform connecting ICT SMEs. This engagement and outreach to the global SME community has grown and continued since.

ITU Telecom World events convene stakeholders from across the ICT ecosystem, helping them share knowledge and insights, build meaningful collaboration, explore cutting-edge technologies and award innovation. In so doing, they help improve the efficiency of ICT operating environment, in line with outcomes 1-1 as well as helping enhance international dialogue.

Key numbers: Event growth 2014-2017

Participant numbers saw steady year-on-year growth in numbers, almost tripling from 3500 in 2014, to reach 9100 in 2017. Number of countries represented increased 2014-2015, then remained steady, reaching 126 in 2017. Numbers of entities exhibiting in the exhibition showed very healthy growth in the time period, increasing from 169 in 2014 to reach 458 in 2017. Also of note is the fact that the outreach to global SMEs helped ensure that, by 2017, the exhibition also included 271 cutting-edge SMEs.

ITU Telecom World 2014

ITU Telecom World¹⁰² 2014 took place from 7 to 10 December 2014 in Doha, Qatar, welcoming 3 500 participants from 112 countries and 169 show-floor entities from 46 countries. The event was hosted by the Government of Qatar with the support of leading communications company Ooredoo. It highlighted the innovations, technologies and ideas shaping the future of ICTs and their impact on society, in the exhibition as well as in the forum. Other highlights included showcases of the future of innovation in the Lab, the Young Innovators Competition, the launch of the Global Cybersecurity Index, plus a host of networking opportunities. Further information on ITU Telecom World 2014 can be found in document [C15/19](#).

ITU Telecom World 2015

¹⁰² PP Res. 11; WSIS Action Lines C1, C11; SDG Targets 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17.

ITU Telecom World 2015 took place from 12 to 15 October in Budapest, Hungary, welcoming 4000 participants from 129 countries and 238 Exhibitors from 54 countries. The event was hosted by the Government of Hungary and explored the core themes of accelerating innovation for social impact and the ways in which SMEs are driving this innovation. This focus was a key part of the event reform, and was in evidence throughout. The event featured an exhibition, a leadership summit and forum, targeted networking activities, as well as a first-time awards programme - the ITU Telecom World Awards - recognizing innovative ICT-based solutions with social impact. A full report on ITU Telecom World 2015 is available in document [C16/19](#).

ITU Telecom World 2016

ITU Telecom World 2016 took place from 14 to 17 November in Bangkok, Thailand, welcoming 8,800 participants from 128 countries and 250 exhibitors from 37 countries. The event was hosted by the Kingdom of Thailand and explored the theme of “Collaborating in the Digital Economy.” It featured an exhibition, leadership summit and forum, targeted networking opportunities, plus the ITU Telecom World Award. The event also benefited from a major involvement from all ITU, covering all aspects of the event, from the Forum agenda to organizing a number of key side events spanning ITU’s key work areas and more. The event provided opportunity for ITU to partner with other organizations to organize joint sessions, plus many networking opportunities. Further information on ITU Telecom World 2016 is available in document [C17/19](#).

ITU Telecom World 2017 and 2018

ITU Telecom World 2017 took place from 25 to 28 September in Busan, Republic of Korea, welcoming 9,100 participants from 126 countries and 458 exhibitors from 35 countries, including 271 SMEs. The event was hosted by the Republic of Korea and explored the theme of “Smart digital transformation, global opportunities.” It featured an exhibition, leadership summit and forum, targeted networking opportunities and the ITU Telecom World Awards. The event also offered a series of side events, offering contrasting perspectives from across ITU, its Membership and partners and the SME programme of masterclasses, networking, and debate, helping SMEs connect with buyers and investors. It also included a business matchmaking service, providing B2B and B2G matchmaking opportunities. The Telecom Secretariat itself also provided key services to Bureaux and Secretariat.

ITU Telecom World 2018 takes place from 10 to 13 September in Durban, South Africa, hosted by the Government of South Africa. As in previous events, it will include an exhibition, a forum, multiple networking occasions, and the ITU Telecom World Awards. Other highlights will include an enhanced programme for participating SMEs, business matchmaking programme, continued broad-reaching collaboration with ITU Bureaux and close involvement with the Host Country, including shaping the Forum programme, helping provide a high-level regional perspective on areas spanning financing models, new partnerships, future policies, investment and more.

Further information on ITU Telecom World 2017, 2018, and proposed next steps for Telecom events is available in document [C18/19](#).

ITU/UNESCO Broadband Commission for Sustainable Development

The ITU/UNESCO Broadband Commission for Sustainable Development¹⁰³ was created in 2010 by ITU and UNESCO to advocate the importance of broadband for achieving the SDGs. Its work benefits from the participation of over 60 Commissioners, including top industry executives, heads of UN agencies, academics and policy-makers. It meets twice each year and is entirely self-funding. It has published a number of reports, including its annual State of Broadband report, reports on broadband and education, digital health, the gender digital divide and sustainable development. Each year, Commissioners publish an Open Letter each year to coincide with the UN’s High-Level Political Forum, appealing to

¹⁰³ WSIS Action Lines C1, C2, C3, C4 and C6; SDG Targets 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17.

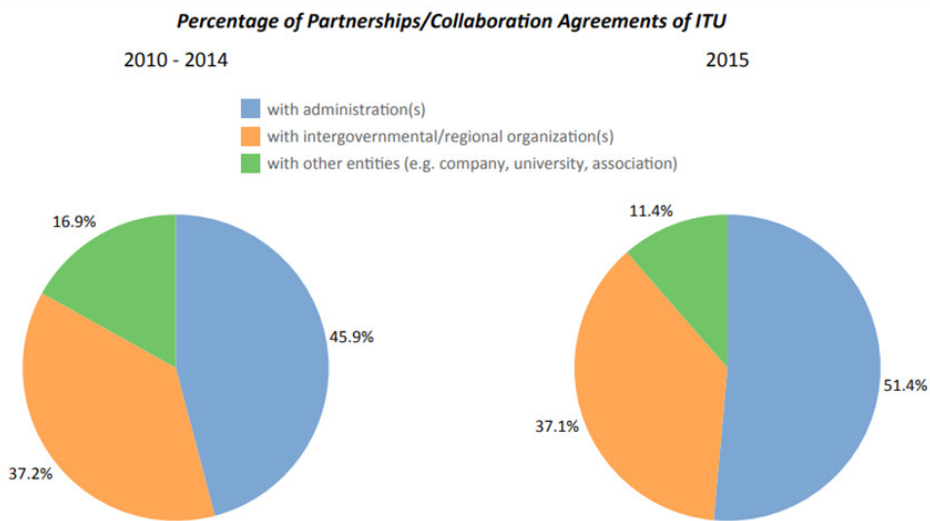
policy-makers to give broadband greater priority for achieving the SDGs. The Broadband Commission’s work has been referenced in several UN GA Resolutions on ICT for Development.

Objective I.2: Enhance partnerships and cooperation within the telecommunication/ ICT environment

Outcomes:

I.2-1: Increased synergies from partnerships on telecommunication/ICTs

Progress achieved



Outputs

I.2-1: Knowledge-sharing, networking and partnerships and I.2-2 Memoranda of understanding (MoUs)

Connect 2020

Adopted at PP-14, the Connect 2020¹⁰⁴ Agenda sets out a shared vision and goals, as well as universal, specific and measurable targets for the development of the ICT sector.

ITU has been working on the implementation of the Connect 2020 Agenda, in particular by measuring the Connect 2020 goals and targets. In 2017, for example, 15 of the 17 targets (88%) were measured. Of the 15, nine (60%) are on track to be achieved by 2020, two (13%) are partially on track and four (27%) are not on track. More information may be found in documents [C15/INF/9](#), [C16/39](#), and [C17/39](#).

Cybersecurity¹⁰⁵

Separate reports to Council (documents [C15/18](#), [C16/18](#), [C17/18](#), [C18/18](#)) summarize ITU’s activities annually since PP-14 in relation to Resolutions 130, 174, and 179, as well as ITU’s role as sole facilitator for WSIS Action Line C5, and other related decisions by the membership.

¹⁰⁴ PP Res. 71, 72, 151, 200; WSIS Action Lines C2, C5, C6; SDG Targets 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17.

¹⁰⁵ PP Res. 130; WSIS Action Line C5; SDG Targets 1.4, 4.1, 4.3, 4.5, 5.b, 7.1, 7.a, 7.b, 8.1, 9.1, 9.c, 11.3, 11.b, 16.2, 17.8.

These reports are organized around the five pillars of the Global Cybersecurity Agenda (GCA). Related activities are listed under five work areas: (a) legal measures; (b) technical and procedural measures; (c) organizational structures; (d) capacity building; and (e) international cooperation. Activities are related inter alia to the work of ITU-R, ITU-T and ITU-D study groups; ITU's National CIRT programme and other capacity-building initiatives; and partnerships with other entities. The reports also include ITU's activities in the area of Child Online Protection (COP).

Activities in support of tech SMEs¹⁰⁶

SMEs play a key role in ensuring sustainable economic growth, and are often the source of innovative ICT-enabled solutions and an important source of new jobs especially for young people. SMEs make up more than 95% of all businesses worldwide and represent a path out of poverty for many developing countries.

ITU has published two reports under the EMERGE initiative to improve understanding of the role that ITU membership can play to support tech SMEs: "A review of Micro, Small and Medium Enterprises in the ICT Sector" and "Trends in tech MSMEs and startup support". Finally, ITU has advanced in the implementation of a pilot project to identify ways of facilitating the participation of SMEs in the work of ITU study groups, in particular from the ITU-T Sector. This new pilot project has begun in ITU-T Study Group 20 and the results will be shared at the end of 2018.

Internet Issues¹⁰⁷

Separate reports to the Council (C15/33; C16/33; C17/33, and C18/33) summarize ITU's activities since PP-14 related to Resolutions 101, 102, 133, and 180. Activities reported include those related to: (a) Internet Protocol (IP) Networks, the development of next-generation networks (NGN) and future Internet, including policy and regulatory challenges; (b) IPv6; (c) Internet-related public policy issues including the management of domain names and addresses; (d) Internationalized Domain Names (IDN); (e) ENUM; (f) International Internet Connectivity (IIC)/Internet Exchange Points (IXPs); and (g) the annual Internet Governance Forum (IGF).

Objective I.3: Enhance identification and analysis of emerging trends in the telecommunication/ICT environment

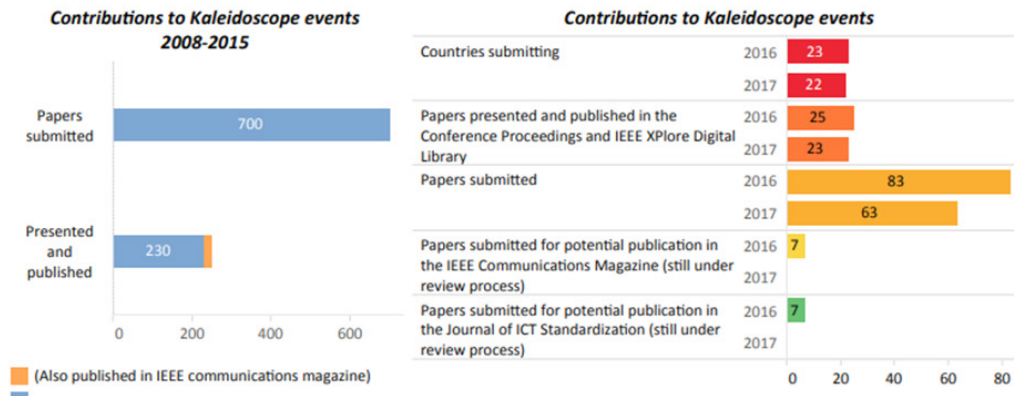
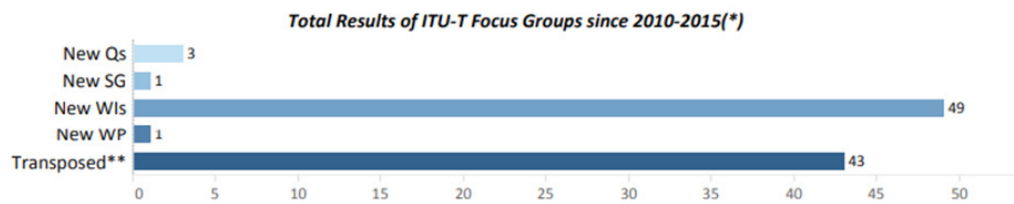
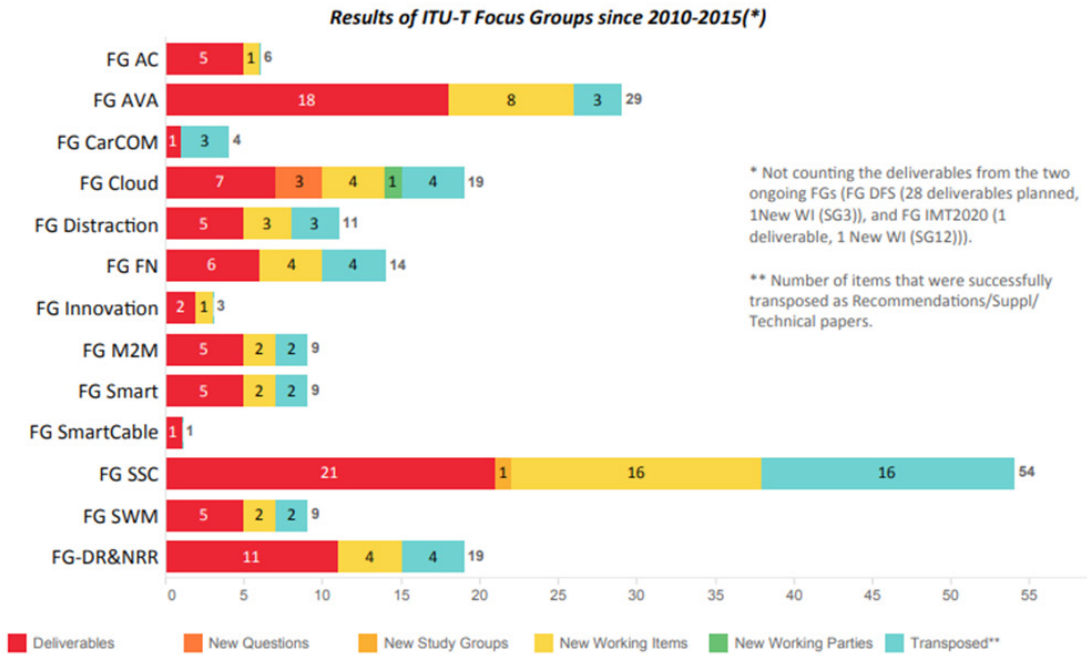
Outputs:

I.3-1 Intersectoral initiatives and reports on emerging telecommunication/ICT trends and other similar initiatives

¹⁰⁶ WSIS Action Line C2; SDG Target 9.

¹⁰⁷ PP Res. 101, 102, 133, and 180; WSIS Action Lines C2, C4, C5, C6; C7, C8 and C9; SDG Targets 9.1, 9.c.

Progress achieved



Outputs

I.3-1 Intersectoral initiatives and reports on emerging telecommunication/ICT trends and other similar initiatives¹⁰⁸

The timely identification and study of technology, policy and regulatory, social and economic aspects of emerging telecommunication/ICT trends is under way through several initiatives in all three Sectors and the General Secretariat.

¹⁰⁸ PP Res. 200; WSIS Action Lines C2, C4; SDG Target 9c.

Intersectoral Group on Emerging ICT Trends

Since its creation in November 2013 as the internal ITU-wide mechanism for identifying and evaluating emerging trends, the Intersectoral Group on Emerging ICT Trends has met regularly (four times a year on average) and discussed various topics, including G.fast, big data, digital finance, drones, blockchain, Artificial Intelligence (AI), quantum computing, Li-Fi (“light fidelity”), and ICT forecasts for 2015, 2016 and 2017. It also contributes to identifying potential new industry and Academia members and inviting them to join ITU.

Briefing on Emerging ICT Trends

ITU launched a new series of briefings to permanent missions in Geneva and New York. The first briefing was held at ITU headquarters in November 2016 and provided an overview of the emerging trends, challenges and opportunities relating to 5G, followed by a series of briefings on various emerging technologies, including IoT, AI, and the role of ICTs in accelerating the achievement of SDGs, among other topics.

AI for Good Global Summit

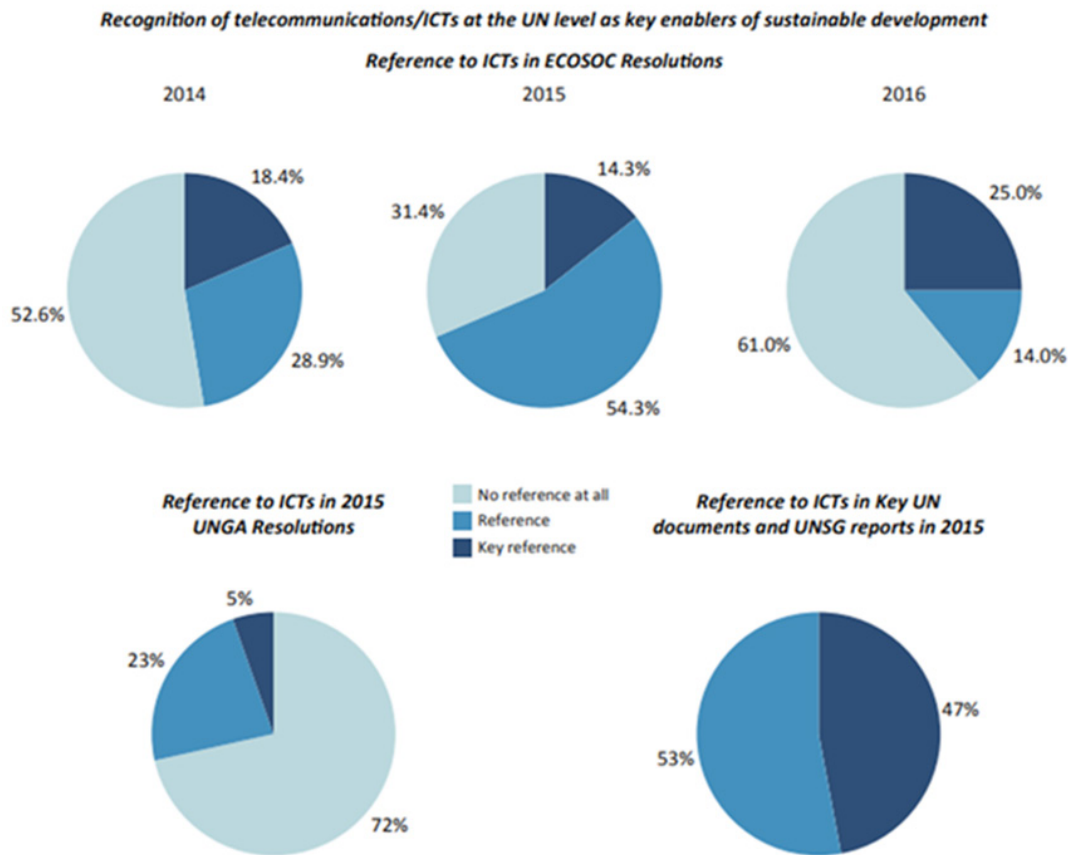
The 2nd edition of the AI for Good Global Summit was organized by ITU in Geneva on 15-17 May 2018, in partnership with XPRIZE Foundation, the Association for Computing Machinery (ACM) and 32 sister United Nations agencies and bodies. See section T.5-1.

Objective I.4: Enhance/promote recognition of (the importance of) the telecommunications/ ICTs as a key enabler of social, economic and environmentally sustainable development

Outcomes:

I.4-1: Increased multilateral and inter-governmental recognition of telecommunications/ICTs as a cross-cutting enabler for all three pillars of sustainable development (economic growth, social inclusion and environmental balance) as defined in the outcome document of the United Nations Rio+20 Sustainable Development Conference, and in support of the UN mission for peace, security and human rights

Progress achieved



Outputs

I.4-1 Reports and other inputs to UN inter-agency, multilateral and inter-governmental processes¹⁰⁹

ITU and the United Nations

The 2030 Agenda for Sustainable Development” comprising 17 SDGs and 169 targets, seeks to eradicate poverty, promote environmental sustainability and build peaceful, inclusive societies for all by 2030, with the commitment to leave no one behind. On 1 January 2017, Mr António Guterres of Portugal succeeded Mr Ban Ki-moon as Secretary-General of the United Nations. The new Secretary-General’s priorities reinforced the need to ensure that the UN is ‘fit for purpose’ to provide Member States with development support, through necessary reforms in management, peace and security architecture focusing on conflict prevention, and repositioning of the UN development system.

Three targets under the SDGs explicitly recognize the role of ICTs (education and scholarships (4.b), gender empowerment (5.b), and universal and affordable access to the Internet in the Least Developed Countries (9.c)). So in broader terms does Goal 17, on strengthening the means of implementation and revitalizing the Global Partnership for Sustainable Development, which calls for efforts to enhance the use of enabling technology, in particular ICTs. ITU, as part of the UN system, is has a critical role to play in supporting Member States and in bringing its stakeholders together in supporting countries in their efforts to achieve the SDGs.

¹⁰⁹ PP Res. 200; WSIS Action Lines C2, C5, C6; SDG Target 9.

Since 2016, ITU has also provided inputs to the global SDG follow-up and review process carried out annually at the High-level Political Forum (HLPF). ITU has also enhanced its outreach with countries presenting their voluntary national review reports annually at the HLPF, to raise the visibility of the critical role of ICTs for sustainable development. It has engaged in collaboration with other stakeholders to promote ICTs for the SDGs, through joint publications and side events. For example, ITU coordinated a publication presented at the 2017 HLPF “Fast-forward progress: Leveraging tech to achieve the global goals” featuring opinion pieces from 25 UN Executive Heads on the role of ICTs to deliver on the SDGs. It has also embarked on strengthening joint collaboration with UN entities through collaboration agreements, for example, in agriculture with FAO, or industry with UNIDO, or mHealth with WHO.

ITU has also continued to follow the work of UN bodies such as the General Assembly and ECOSOC and its subsidiary bodies. In this respect, ITU has ensured that key ITU activities and the important role of ICTs for sustainable development are reflected in relevant reports of the UN Secretary-General and General Assembly, ECOSOC/CSTD resolutions, UNGA resolution on ICTs for development, and ECOSOC/CSTD resolutions on science, technology and innovation for development.

ITU also contributed to other major conferences, summits and high-level meetings, including: the third UN World Conference on Disaster Risk Reduction (2015); the Third International Conference on Financing for Development (2015); the High-level meeting of the General Assembly on the review of the WSIS outcomes WSIS (2015); The World Humanitarian Summit (2016); the High-Level Midterm Review of the Implementation of the Istanbul Programme of Action for the LDCs for the Decade 2011-2020 (2016); Habitat III (2016); the annual United Nations Climate Change Conferences; and the annual Internet Governance Forums, among other UN events.

In terms of inter-agency coordination, ITU increased its visibility and leadership within the Chief Executives Board for Coordination (CEB). The Secretary-General of ITU chaired the ICT-Network Information Security Special Interest Group of the High-Level Committee on Management (HLCM) from 2015 until 2017. ITU also successfully led and won endorsement for the UN-wide Framework on Cybersecurity and Cybercrime, and a UN System Internal Coordination Plan on Cybersecurity and Cybercrime. ITU is contributing to inter-agency efforts to develop a better internal understanding of the impact of AI-related technologies on the work of the entire UN system, especially the opportunities in relation to the achievement of the SDGs.

ITU also advanced in establishing a mechanism for considering UN Joint Inspection Unit (JIU) reports and adopting and implementing relevant recommendations emanating from system-wide reviews, including full adoption and implementation of the review of management and administration in ITU carried out in 2016.

See also ITU Council reports [C11/INF/6](#), [C12/INF/1\(Rev.1\)](#), [C13/INF/10](#), [C14/INF/7](#), [C15/INF/4](#), [C16/57](#), [C17/INF/10](#), and [C18/INF/4](#).

Climate Change¹¹⁰

See sections R.2-2, R.3-4, T.1-5, T.5-3, D.4-1, D.4-4, D.5-1, and I.4-1 (ITU and the United Nations) of this report for details.

e-health¹¹¹

ITU continues to expand and reinforce its collaboration with WHO to scale up the use of ICTs for health while building capacities and foundations at country level. “Be He@lthy, Be Mobile” is a global initiative to use m-health in addressing the problem of non-communicable diseases and their associated risk factors. Several country-level programmes were launched in countries such as India, the Philippines, Senegal, Tunisia, Egypt, Zambia, Norway, and the United Kingdom, targeting a range of income groups

¹¹⁰ PP Res. 25, 71, 172, and 182; WSIS Action Line C7 (e-environment); SDG Targets 1.5, 2.4, 11.6, 12.2, 12.5, 12.6, 12.a.

¹¹¹ PP Res. 183; WSIS Action Line C7 (e-health); SDG Targets 1.3, 1.4, 1.5, 2.1, 2.1, 3.3, 3.8, 5.6, 5.b, 17.8, 17.19.

and disease areas. These included mSmokingCessation, mDiabetes, mCervicalCancer and mCOPD (*COPD: chronic obstructive pulmonary disease*). An mHealth Knowledge and Innovation Hub was also initiated to monitor and enable mHealth adaptation and innovation in selected EU Member States. In addition, a joint effort was launched with WHO Africa Region to scale up digital health services in Africa. See sections T.1-4, T.1-6, T.1-8, and D.3-2 for more details.

Smart Sustainable Cities¹¹²

As part of capacity development efforts, an ITU-Telecom Regulatory Authority of India (TRAI) training on “Leveraging ICTs for Smart Sustainable Cities” in addition to a national symposium on “ICT Regulatory challenges in Indian Smart Cities” was held on 24-26 March 2015, raising awareness among more than 190 participants on the latest trends in smart city developments. See sections T.1-5, T.5-1, and I.4-1 for more details.

E-waste¹¹³

See Target 3.2 and sections T.1-4, T.5-3, D.4-1, D.5-1, and I.4-1 (ITU and the United Nations) for details.

Emergency Telecommunications¹¹⁴

See sections R.3-3, R.3-4, T.1-8, T.5-3, D.4-1, D.4-4, D.5-1, D.5-2, and I.4-1 (ITU and the United Nations) for details.

Gender¹¹⁵

ITU tracks three gender-related indicators from the SDG Indicators Monitoring Framework. ITU’s [Gender Dashboard](#) reports on the digital gender divide, gender representation at ITU meetings, and gender balance in ITU staffing and decision-making.

Various ITU initiatives aim to close the digital gender divide, including the international [Girls in ICT Day](#), [EQUALS](#), the [Global Partnership for Gender Equality in the Digital Age](#), and the [EQUALS in Tech Awards](#). Efforts to balance the representation of women in ITU meetings involve concerted efforts to invite and encourage gender-balanced delegations and nominations of women, particularly in key roles such as chairmen and vice-chairmen. Women in main conferences are supported through the [Network of Women for WRC \(NOW\)](#) and the [Women in Standardization Expert Group \(WISE\)](#).

ITU reports annually under the [UN System-wide action plan for gender equality and mainstreaming \(SWAP\)](#), an accountability framework to measure and drive progress towards gender equality. As from 2017, [planning is aligned with the UN-SWAP performance indicators](#). Full reports on ITU’s activities related to Resolution 70 may be found in documents [C15/6](#), [C16/6](#), [C17/6](#), [C18/6](#), and [C18/13](#).

Empowerment of Youth through ICTs¹¹⁶

ITU has advanced in the implementation of Resolution 198 (Busan, 2014), which establishes ITU’s mandate in the area of empowering youth through telecommunication/ICT. The implementation of Resolution 198 followed the lines of action indicated in the roadmap for 2016-2018 established by ITU Council Resolution 1374.

One of the main deliverables has been the strengthening of ITU’s work with academic institutions. ITU currently has over 150 Academia members and is preparing the new ITU Journal *ICT Discoveries*, as well as the tenth edition of the ITU Kaleidoscope academic conferences (Argentina, 26-28 November 2018). Kaleidoscope 2017, kindly hosted by Nanjing University of Posts and Telecommunications,

¹¹² WSIS Action Line C7 (e-environment); SDG Targets 11.3, 11.6, 11.a, 11.b.

¹¹³ SDG Targets 6.3, 6.B, 11.6, 12.4, 12.5.

¹¹⁴ SDG Targets 1.5, 2.4, 11.5, 11.b.

¹¹⁵ PP Res. 70; SDG Target 5b.

¹¹⁶ PP Res. 179, 198; SDG Target 4, 9.

China, attracted 300 academics from 26 countries. ITUT also organized the Young ICT Policy Leaders (YIPL) Programme in the 2015, 2016 and 2017 sessions of the Council, as well as the Busan Young Policy Leaders Programme, organized in cooperation with the city of Busan in 2015, 2016 and 2017. These programmes strengthened the participation of young professionals in ITU's work. H.E. President Luis Guillermo Solís Rivera of Costa Rica was appointed as the ITU Patron for Youth and ICTs, and International Girls in ICT Day is held annually. ITU and ILO launched their [Digital Skills for Decent Jobs for Youth campaign](#) during the WSIS Forum, with the aim of incentivizing stakeholders around the world to train 5 million young people and provide them with job-ready digital skills.

Further information about ITU's activities for young people is available at www.itu.int/youth, and in documents C15/91, C16/20, and C17/35.

Objective I.5: Enhance access to telecommunications/ICTs for persons with disabilities and specific needs

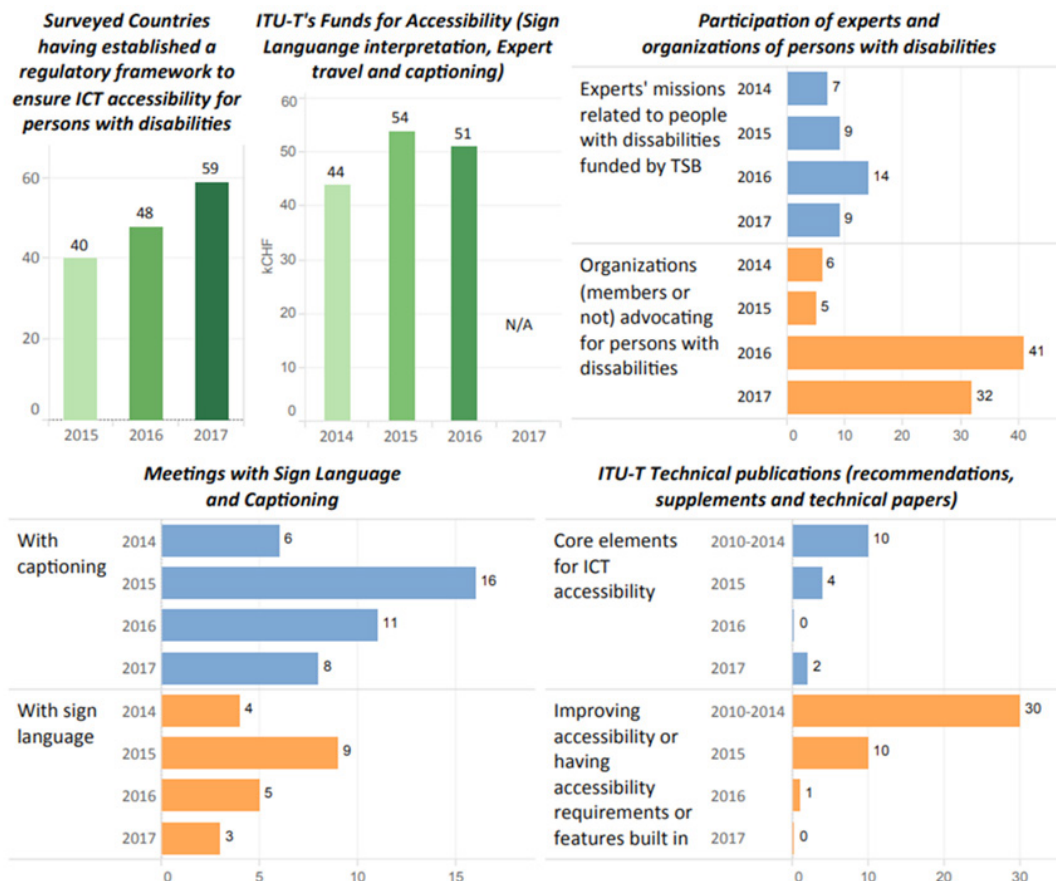
Outcomes:

I.5-1: Increased availability and compliance of telecommunication/ICT equipment, services and applications with universal design principles

I.5-2: Increased engagement of organizations of persons with disabilities and specific needs in the work of the Union

I.5-3: Increased awareness, including multilateral and inter-governmental recognition, of the need to enhance access to telecommunications/ICTs for persons with disabilities and specific needs

Progress achieved



Outputs

I.5-1 Reports, guidelines, and checklists relating to accessibility of telecommunications/ICTs; I.5-2 Mobilization of resources and technical expertise, for example, through promoting greater participation in international and regional meetings by persons with disabilities and specific needs; I.5-3 Further development and implementation of the ITU Accessibility Policy and related plans; I.5-4 Advocacy, both at UN level and at regional and national levels¹¹⁷

ITU has advanced in the implementation of Resolution 175 (Rev. Busan, 2014) focusing on two areas of work: (a) promoting ICT accessibility for persons with disabilities; and (b) making ITU a more accessible organization for persons with disabilities.

In the first area, ITU has continued technical work in ITU-R, ITU-T and ITU-D study groups on telecommunications and ICTs for persons with disabilities. In ITU-T, work on mainstreaming accessibility in the development of international telecommunication/ICT standards is being done with the participation of persons with disabilities, for example, to develop terminology specifications, accessible IPTV systems, indoor audio navigation systems for the blind (*Wayfinder*), and accessible meetings (including remote participation). ITU-D has continued to develop toolkits and resources to help ITU Member States to advance in the establishment of enabling environments ensuring accessible telecommunication/ICT for persons with disabilities by 2020, in line with the Connect 2020 Agenda. Three related key deliverables are: the publication of the Model ICT Accessibility Policy Report, also used to provide regional and country advice to ITU Member States; an online training course on the public procurement of accessible ICTs; and a national capacity-building programme on web accessibility, known as “Internet for @ll”.

In the second area, ITU has continued to implement its ITU Accessibility Policy, endorsed by the ITU Council 2013. ITU has provided services for persons with disabilities in ITU services, for example by providing captioning in a broad selection of ITU events, providing sign language interpretation in ITU-T accessibility meetings upon request, making websites accessible through dedicated software, and improving ITU facilities to make them more accessible. ITU has modified its internal production system to generate accessible publications in the six official languages. Since 2015, a total of 194 new ePublications have been created in assistive technology-friendly formats and are downloadable from ITU eBookshop.

Further information is available at www.itu.int/accessibility.

7 Enablers of the Activities of the Union

This section will report on progress of Enablers and Support Services provided by the General Secretariat.

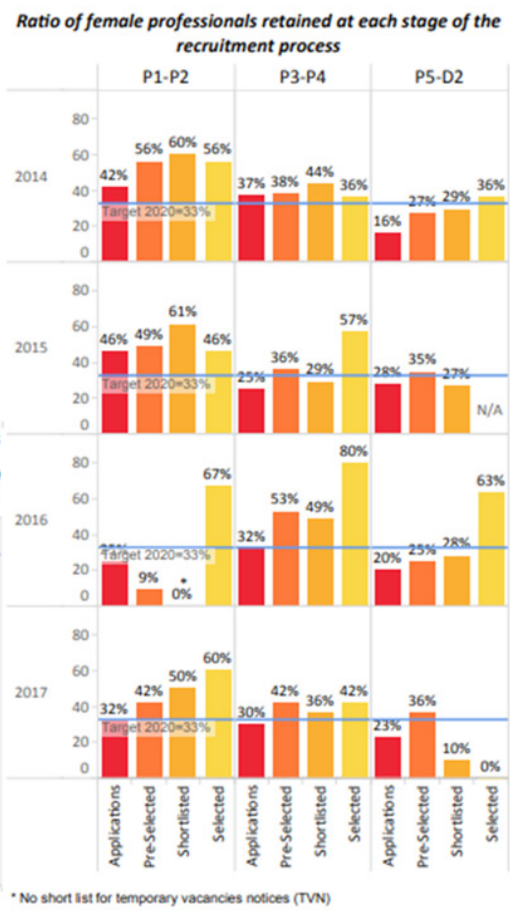
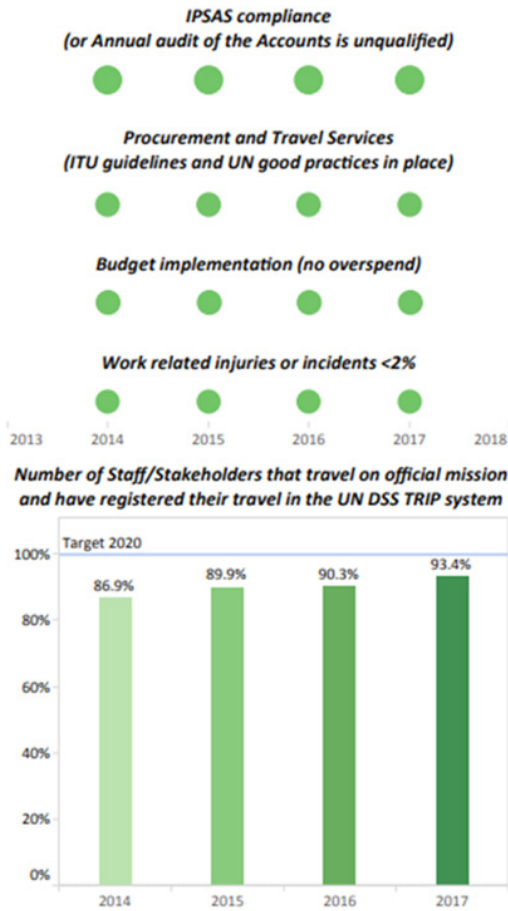
Enabler E.1: Ensure efficient and effective use of human, financial and capital resources, as well as a work-conducive, safe and secure working environment

Outcomes:

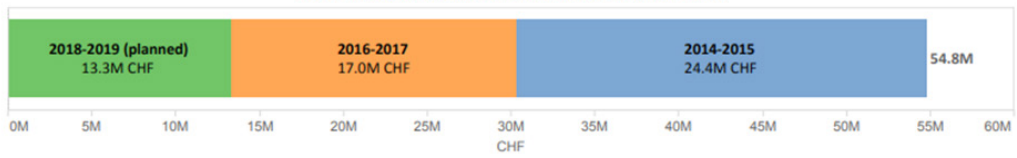
E.1: Efficient and effective use of human, financial and capital resources, as well as a work-conducive, safe and secure working environment

¹¹⁷ PP Res. 175; SDG Targets 4, 8, 9.

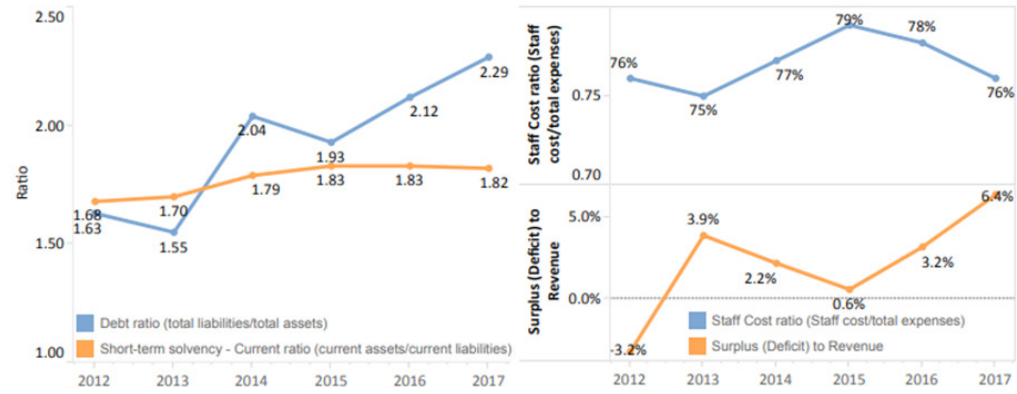
Progress achieved

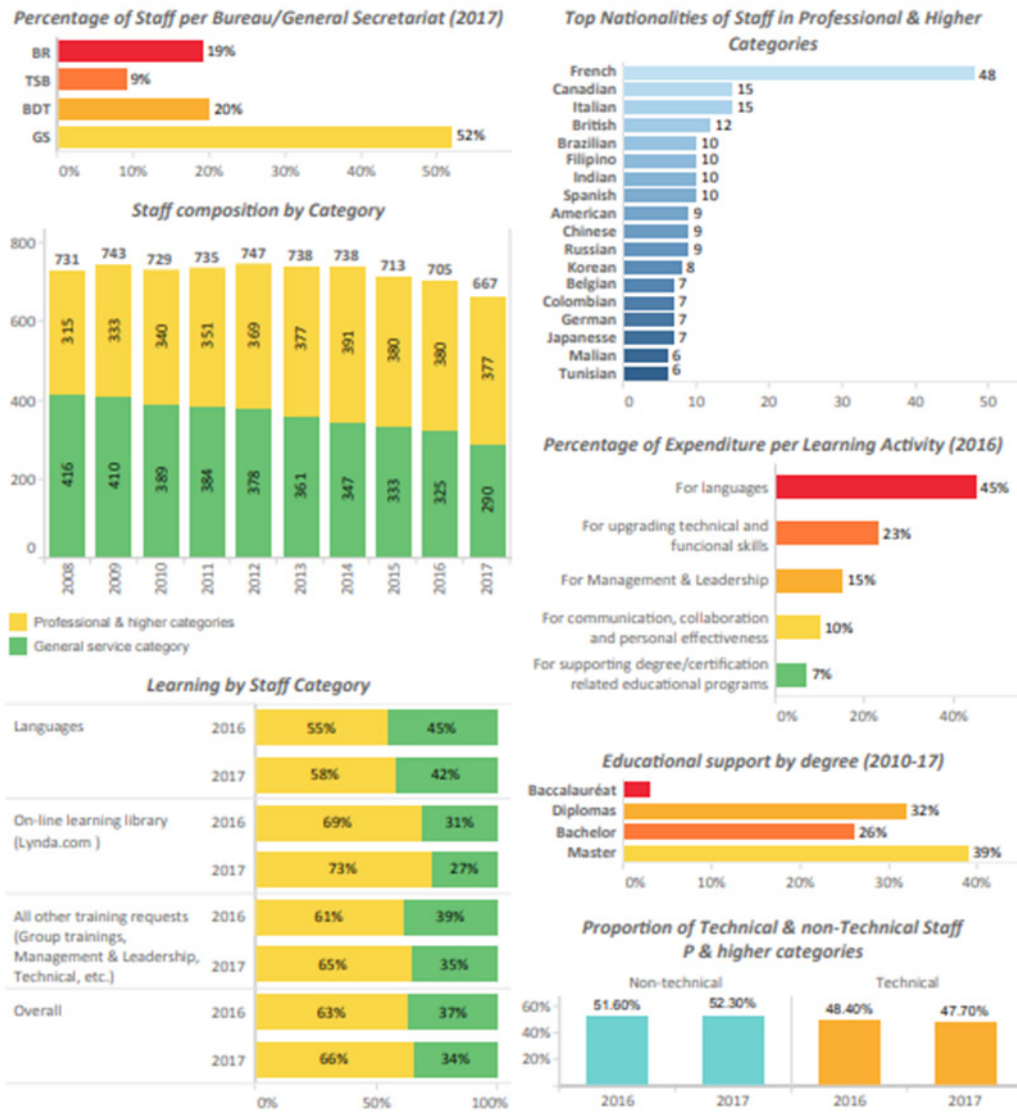


Cost Savings from Efficiency Measures Implemented



Key Financial Indicators



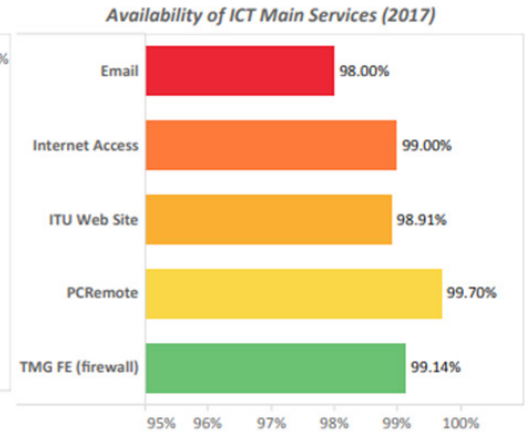
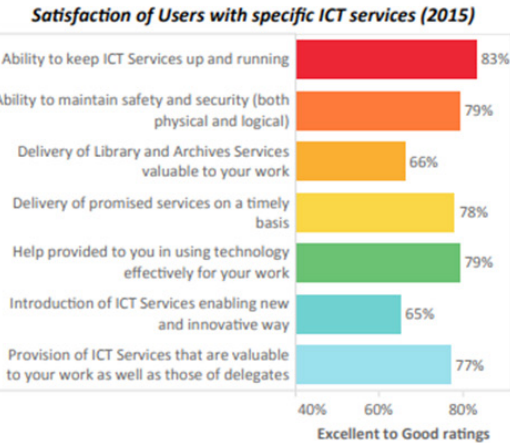
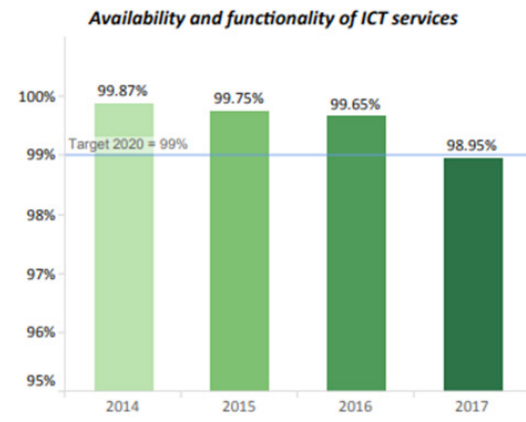
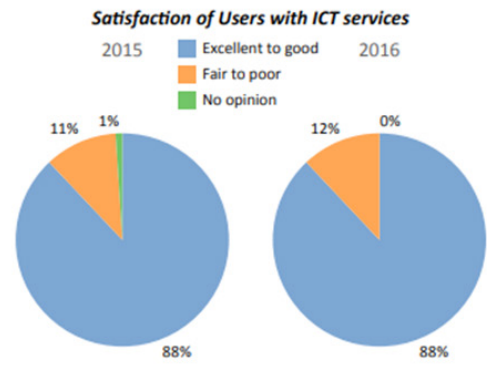
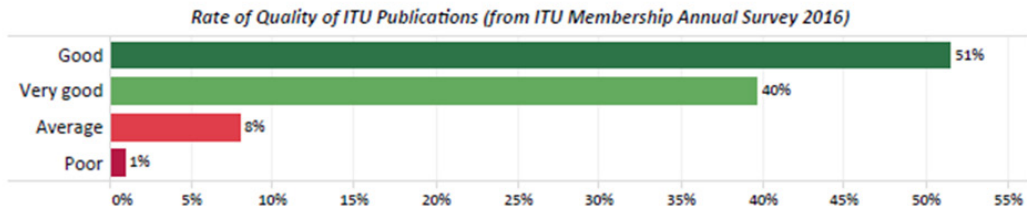
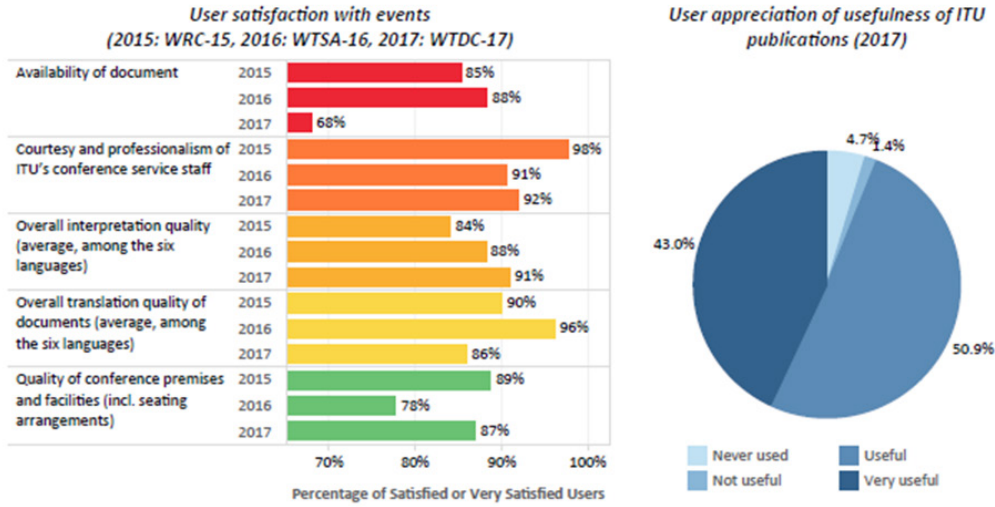


Enabler E.2: Ensure efficient and accessible conferences, meetings, documentation, publications and information infrastructures

Outcomes:

E.2: Efficient and accessible conferences, meetings, documentation, publications and information infrastructures

Progress achieved

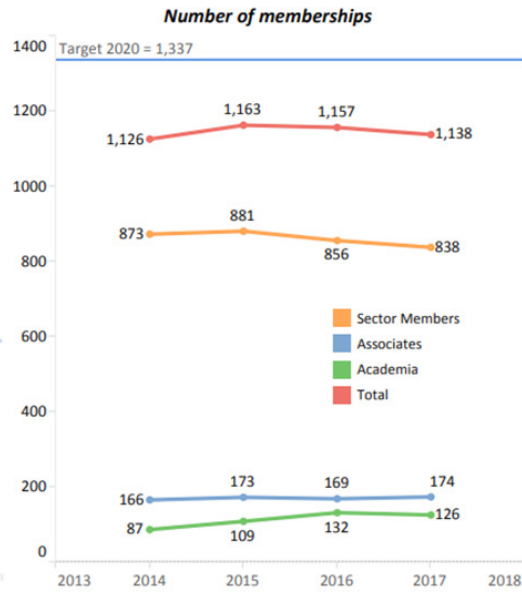
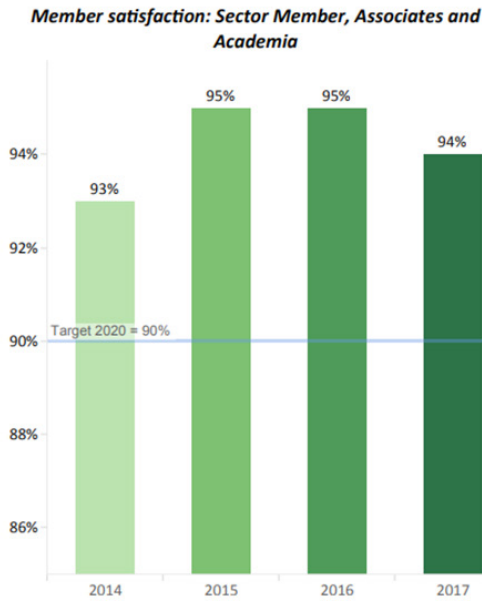


Enabler E.3: Ensure efficient membership-related, protocol, communication and resource mobilization services

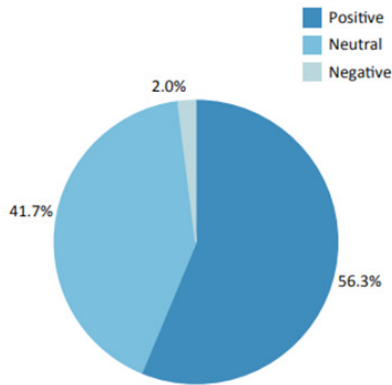
Outcomes:

E.3: Efficient membership-related, protocol, communication and resource mobilization services

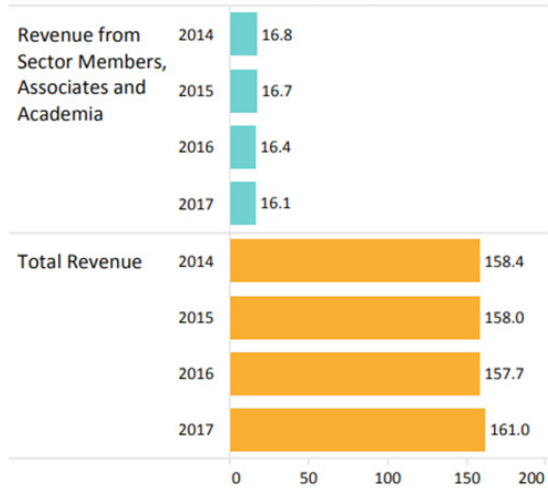
Progress achieved

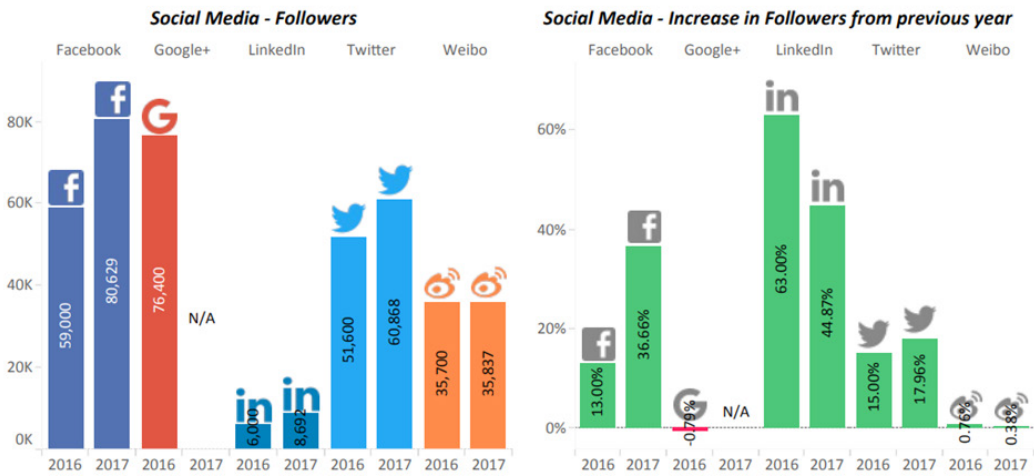
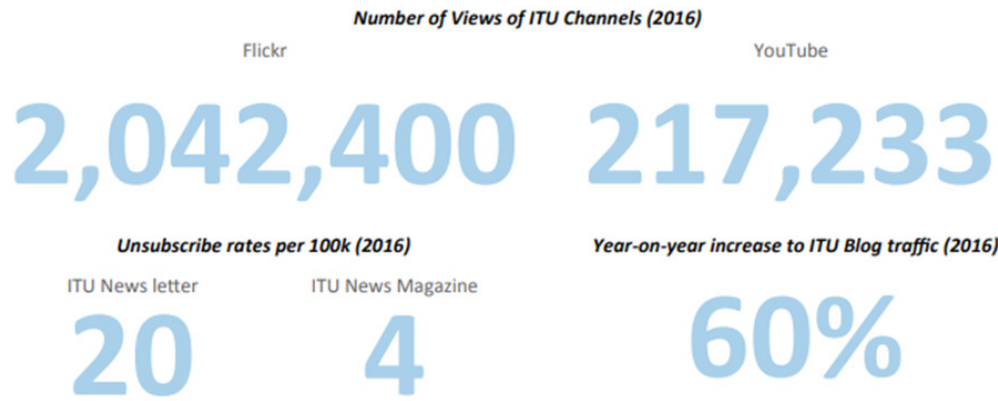


Media coverage referencing ITU (2015)



Total Revenue (MCHF)





In 2017, ITU News launched a mobile-first website that replaced the corporate blog and newslog and has doubled the online traffic thanks to timely, relevant content organized by topic.

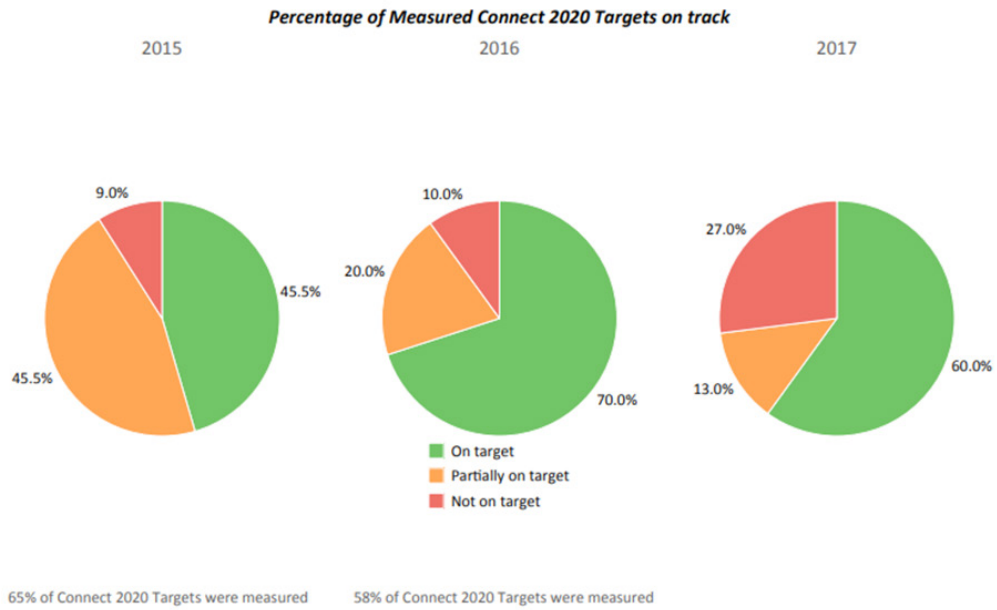
ITU News Weekly email has seen more than 650% year-on-year (YOY) growth in new subscribers – 20% of which are C-Suite or Director level.

Enabler E.4: Ensure efficient planning, coordination and execution of the strategic plan and operational plans of the Union

Outcomes:

E.4: Efficient planning, coordination and execution of the strategic plan and operational plans of the Union

Progress achieved

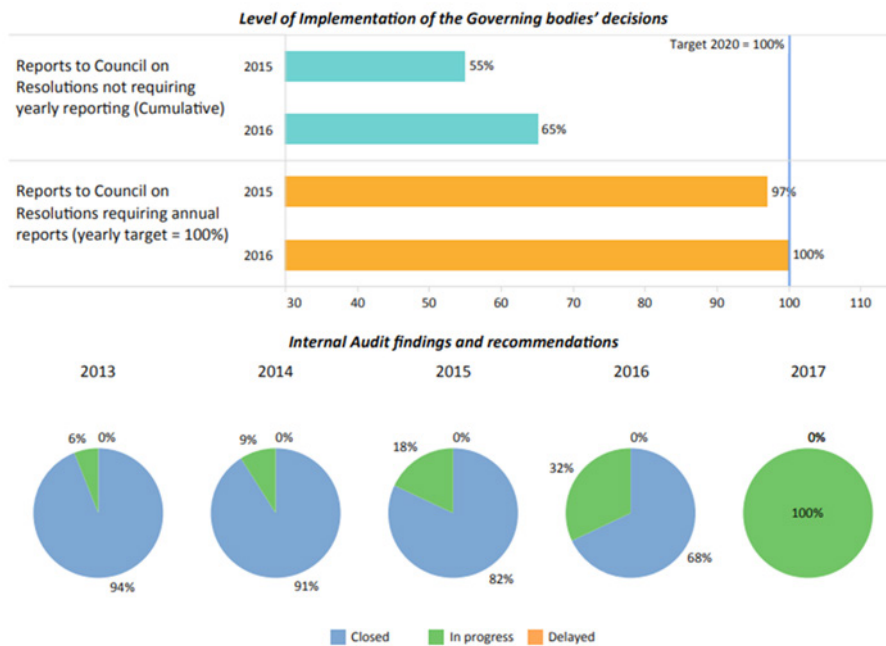


Enabler E.5: Ensure effective and efficient governance of the organization (internal and external)

Outcomes:

E.5: Effective and efficient governance of the organization (internal and external)

Progress achieved



7.1 Support services/processes

S.1 Management of the Union

From 2015-2017, the Coordination Committee and the Management Coordination Group met regularly to discuss strategic issues and to manage ITU's administrative and financial affairs to ensure the most effective use of ITU's resources in the implementation of PP decisions. Following the JIU Review of ITU Management and Administration in 2015, ITU management accepted the 11 Formal and 47 informal recommendations, and presented several documents to the 2017 session of the Council, including an ITU Risk management framework and ITU Accountability framework which were endorsed. ITU management practices were modernized to streamline ITU's business processes and implement results-based budgeting (RBB) and results-based management (RBM). The Strategic Planning and Membership Department (SPM) continued to take key responsibility for cross-sectoral matters during this period and provided overall planning and support services to the Coordination Committee, the Management Coordination Group, and the Inter-Sectoral Task Force (ISC-TF).

A new Ethics Officer entered service on 1 November 2016. The new Ethics Officer has engaged in a series of initiatives aimed at: (a) promoting an environment of ethical awareness across the organization; and (b) enhancing the legal/administrative framework to ensure best practices, mindful of the specific context of ITU. Details of these initiatives and of the other activities of the Ethics Office can be found in [C18/52](#).

S.2 Organization of conferences, assemblies, seminars and workshops (including translation and interpretation)

The Conferences and Publications (C&P) secretariat provided support for all ITU events. From January 2015 to June 2018, support was provided in Geneva for 57 435 participants and a total of 472 events and 1 909 meeting days, with some 148 000 pages of documentation were processed in the six languages. Paperless meetings, e-participation, and accessibility issues have been pursued, reducing reproduction costs, as well as enhancing operations and improving delivery methods and times.

The interpretation service furnished a total of 8 294 interpreter days in the six official languages for all ITU meetings worldwide. Efforts continued to focus on constant enhancement and innovation in order to improve services to delegates and work more cost-effectively.

ITU continued to implement the language policy endorsed by the Council, and detailed reports were submitted to the Council Working Group on Languages (CWG-LANG) on the ongoing implementation of Resolution 154 (Rev. Busan, 2014), as reflected in CWG-LANG's report to the Council (Document [C18/14](#)). High levels of performance and efficiency were achieved, benchmarked against other UN agency standards.

S.3 Publication services

ITU continued to produce high-quality publications while moving to electronic media and innovative materials. There is now free online access to a growing body of ITU publications, including Recommendations, the Radio Regulations, ITU's basic texts, WCIT final acts, Council resolutions and Decisions, and ITU handbooks. Sales and marketing efforts have yielded good results with total sales revenues of CHF 19.8 million in 2014.

More publications have been added to the free online access offer to disseminate information and reach out to a wider general public.

A new Strategic Marketing Plan, aimed at building awareness of ITU publications, was finalized. six new resellers were added to the distribution network, and new partnership discussions were initiated

with OECD, Harper Collins, Amazon, and Barnes & Noble, through the United Nations, New York, to develop additional distribution platforms.

A new E-Bookshop was also launched, aimed at facilitating the online ordering process. Sales income for 2015 was CHF 16.73 million – close to the budgeted 2015 income of CHF 17.0 million – while biannual 2014-15 actual sales of CHF 36.55 million exceeded the budgeted sales income of CHF 34.0 million by over CHF 2.5 million.

Sales income for 2016 was CHF 19.02 million, surpassing the 2016 budgeted income of CHF 18.5 million and 2015 actual sales income of CHF 16.72 million. More information can be found in Documents [C17/21](#) and [C17/INF/4](#).

In 2018, a new integrated publishing platform has been acquired. It integrates mobile, online and print production in an automated workflow to increase speed and efficiency. New fully accessible formats have been added to ITU eLibrary and many publications are now available for smartphones and tablets, in addition to the traditional pdf and paper formats.

Sales income for 2017 was CHF 19.56 million, surpassing the 2017 budgeted income of CHF 18.5 million and 2016 actual sales income of CHF 19.02 million. More information can be found in [C18/21](#) and [C18/INF/2](#).

S.4 ICT services

Information services were successfully provided for all major events since PP14, including Council meetings, ITU Telecom World, WSIS Forum, GSR and WTIS, as well as WRS-14 and 16, RA-15, WRC-15, WTSA-16 and WTDC-17. At ITU headquarters, audio, video and WiFi service improvements have been made in several meeting rooms to improve support for electronic working methods and remote interventions for meetings held at headquarters. Between January 2014 and December 2017, there were around 2 500 meetings with remote participation service. More than 20 000 remote participants were connected to these meetings from 139 countries and 1 134 cities. Connectivity to ITU regional offices has been improved to facilitate better regional support.

The implementation of the Organization's corporate Customer Relationship Management (CRM) project has helped eliminate a number of fragmented systems and now provides ITU with a platform for more efficient and secure methods of managing membership accounts, user accounts, meetings/conferences (including invitations and registration), communication campaigns (approximately 9 million e-mails were sent in 2016 and 2017 through the CRM solution), and support services for Sector Members.

Between January 2014 and December 2017, the Library and Archives Service added almost 520 000 scanned pages of historic documents to the History of ITU Portal (www.itu.int/history), bringing the total number of pages of material available through the Portal to over 1.8 million. The Library and Archives Service provided support for the 150th anniversary in 2015.

S.5 Safety and security services

ITU Safety and Security Services (IS/SSD) continues to provide effective operational services for the main ITU events (15) both within and outside Switzerland.

The other security enhancement projects and processes currently managed by IS/SSD are as follows:

- a) Discussions with the host country authority (FIPOI) on anti-hostile vehicle and anti-hostile pedestrian perimeter barriers for the new ITU headquarters building have been undertaken and appropriate mitigation measures have been incorporated into the design stage.
- b) Installation of shatter-resistant film at ITU headquarters was completed in November 2017.

- c) The need to raise ITU's security profile/posture to align it with neighbouring UN agencies has been addressed. An armed security presence will be introduced and security screening of visitors by uniformed security personnel will be implemented in 2018 on ITU premises.
 - d) In November 2017, work was begun by the ITU administration to develop a duty-of-care foundation, based on planning in accordance with an Organizational Resilience Management System (ORMS) for business continuity and disaster recovery for headquarters and for Regional and Area Offices.
 - e) Facility safety and security audits at the Regional and Area Offices continued during 2017.
- More detailed information can be found in documents [C16/72](#), [C16/70](#), [C17/63](#), and [C17/140](#).

S.6 Human resources management

"Human resources management" comprises both human resources management and maintenance and upgrading of ITU buildings.

S.6.1 Human Resources (HR) management

During 2017, the Human Resources Management Department (HRMD) completed the implementation of the new compensation package approved by UNGA Resolution 70/244, based on recommendations submitted by the International Civil Service Commission (ICSC) and endorsed by Council 2016 in Decision 593.

In view of the endorsement by the Council, in its Decision 594, of the new mandatory age of retirement of 65 years as from 1 January 2018, HRMD completed the implementation of a voluntary separation programme intended to mitigate the financial implications of that decision for the 2018-2019 biennium budget.

The Department also concentrated its efforts on activities that had been endorsed by ITU management and which, in some cases, were supported by the JIU in the formal and informal recommendations. These included the following:

- *Development of a new performance management and development system (PMDS)*, with an identified service provider, Cornerstone on-Demand. This project started at the beginning of 2017 and was launched for all ITU staff in 2018.
- *Establishment of an ITU Learning and Development Policy and Catalogue*. Resolution 48 (Rev. Busan 2014) considers the value of the Union's human resources in terms of achieving its goals as well as the importance of maintaining a well-trained, geographically equitable and gender-balanced workforce, within budget constraints. HRMD helped draft the new ITU Learning and Development Policy and Catalogue, providing ITU staff with a listing and summaries of all programmes on offer in the course of the 2018 performance cycle.

HRMD continued to modernize HR functions with a view to improving the delivery of services in recruitment, organization structure management, job classification, training, HR policies, and legal matters.

In the area of social benefits, the medical insurance scheme (CMIP) administered by Cigna was reviewed, including its premium structure, deductibles scheme and description of benefits, taking into account the demography and needs of the insured population while ensuring the system's short- and long-term financial sustainability.

Further information can be found in document [C15/44](#), [C16/53](#), [C17/53](#), and [C18/24](#) related to the implementation of Resolution 48 (Rev. Busan, 2014).

S.6.2 Maintenance and upgrading of ITU buildings

Between July 2014 and June 2018, the Facilities Management Division (FMD) carried out upgrading and maintenance of all ITU buildings.

In accordance with PP Resolution 194 (Busan, 2014), on the basis of the analysis of the replacement, renovation, rental and relocation options for HQ premises, FMD acted as secretariat for the Council Working Group on headquarters premises (CWG-HQP), which finished its work in a report to Council 2016. This report recommended demolition of the Varembe building and its replacement with a new building. ITU applied to the Host Country and received the first of two interest-free loans, for the period 2017-2019. In 2017, an international, two-round, doubly anonymous architecture competition was launched to all ITU Member States. In November 2017, an international jury selected a winner, for the negotiation and award of a contract to design the new building and (at ITU's option) to manage the demolition/construction process.

ITU remains an exemplary agency in its operational environmental performance, as coordinated by FMD. The annual environmental performance inventory based on 2016 data (the last full year's results available before PP-18) showed an environmental footprint of 3.8 tCO₂e (tonnes CO₂ equivalent) per person under management, 47% better (i.e. lower) than the UN's overall average according to UN data, and reflecting a net annual reduction of emissions per capita since 2010 of 4.6%. In 2015, ITU declared itself climate-neutral in its worldwide operations. ITU adheres to the UN Framework Convention on Climate Change (UNFCCC) and the support of UNEP under a standard UN process to implement this policy, in order to offset unavoidable greenhouse gas emissions from operations and travel and to include participation in the UNFCCC Adaptation Fund.

S.7 Financial resources management

Following the adoption of ITU Council Decision 550 to implement International Public Sector Accounting Standards (IPSAS), IPSAS compliance has been certified since 2011. The closure of the 2014 accounts in 2015 followed the same IPSAS requirements. The Financial Regulations and Financial Rules were revised to reflect a results-based presentation of the budget ("RBB"). In line with Resolution 151 (Rev. Busan, 2014), ITU presented the biennial budget to the Council in an RBB format. The draft ITU budget included resource allocations for each of the Union's Goals and Objectives (Resolution 71 (Rev. Busan, 2014)). The 2016-2017 budget was approved by the Council at its 2015 session (Resolution 1375).

In 2016, the budget was developed with a view to ensuring the most effective and economical use of ITU's resources (see document C16/45). In its Resolution 1375, the Council instructed the Secretary-General to withdraw CHF 1 million from the Reserve Account on 1 January 2016 to set up the After-Service Health Insurance (ASHI) fund as a step towards addressing ITU's unfunded long-term liabilities. Travel costs continued to be optimized through the use of non-flexible air tickets, and early travel requests.

Regarding procurement, ITU introduced an electronic tendering system in 2015. All major tenders in 2017 were published on the United Nations Global Marketplace.

The Financial Resources Management Department (FRMD) monitored the Union's 2017 budget implementation, involving activities such as budget management and control, accounting, cost accounting, assets management, procurement and travel management. The financial activities of FRMD for the fiscal year ending 31 December 2016 were presented to Council 2017 (see document C17/42). For the sixth consecutive year, ITU received an unqualified audit opinion for its IPSAS-compliant Financial Operating Report. The ASHI obligation as well as the health insurance scheme were closely monitored and a full actuarial study on these two topics was produced at the end of 2016 (see document C17/46).

FRMD managed the Union's accounts, produced statutory financial reports and other financial information, and cooperated with oversight and financial control entities such as the external and internal

Auditors, the Independent Management Advisory Committee (IMAC) and the Joint Inspection Unit (JIU).

The 2018-2019 budget was approved by the Council at its 2017 session (Resolution 1387).

ITU has adopted a voluntary separation programme to compensate for the costs of adopting the new mandatory retirement age of 65. Pursuant to the adoption of Resolution 152 (Rev. Busan, 2014), FRMD has devoted significant efforts in the area of debt reduction. This has had a positive impact on the payment of contributions as the collection rate for 2016 was more than 97%, reflecting an improvement compared to previous years and a consequent reduction in the debts of Sector Members and Associates.

The 2017 budget was implemented with a view to ensuring the most efficient use of ITU's resources (see document [C17/45](#)). Cooperation with the Common Procurement Activities Group (CPAG), which is leading efforts to simplify and harmonize procurement practices with a view to greater efficiency and effectiveness, has helped optimize the use of ITU's finances.

The Financial Resources Management Department (FRMD) monitored the Union's 2018 budget implementation closely. The draft financial plan for 2020-2023 was presented to the Council Working Group on Financial and Human Resources (CWG-FHR) at its eighth meeting in January 2018 and will also be presented to the Council at its 2018 session for review and further transmittal to the Plenipotentiary Conference.

The financial activities of FRMD for the fiscal year ending 31 December 2017 will be completed by the end of the first quarter of 2018 and the non-audited financial operating report will be presented to Council 2018 (see document [C18/42](#)). The audited accounts will be presented in Dubai during the last meeting of the 2018 Council session held the day before the Plenipotentiary Conference.

The ASHI obligation as well as the health insurance scheme continue to be closely monitored, with a full actuarial study produced at the end of 2017 (see document [C18/46](#)) to review and improve the plan's long-term sustainability and reduce ITU's long term liability.

Pursuant to the adoption of Resolution 152 (Rev. Busan, 2014), FRMD has put the emphasis on follow-up of debts of Members, Sector Members and Associates. The positive impacts already registered the previous year were confirmed in 2017, with a collection rate for 2017 of more than 97 per cent.

Further information can be found in documents [C18/21](#) and [C18/INF/1](#). FRMD has as before monitored the 2018 budget implementation (see document [C18/45](#)).

S.8 Legal services

The Legal Affairs Unit (JUR) provided general legal support to the three Bureaux and legal advice to WRC-15, WTSA-16 and WTDC-17, as well as the Council and Council Working Groups. JUR also actively participated in the resolution of sensitive political issues. It drafted and negotiated agreements for the hosting of conferences and other important meetings of the Union as well as for ITU's regional and area offices. It continued to act as the secretariat of the TSB Director's Ad Hoc Group on Intellectual Property Rights and remains deeply involved in the new building project.

S.9 Internal audit

Internal Audit carried out extensive follow-up on recommendations made in previous years and reported good progress on this to IMAC at its various meetings.

Several assurance engagement audits were conducted in 2015, 2016 and 2017, and will continue into 2018. The Secretary-General transmits an annual report on internal audit activities to the Council for its consideration. These reports may be found in documents [C15/43](#), [C16/10](#), and [C17/44](#), as well as

in the C18 series of documents. ITU Council 2015 instructed the Secretary-General to facilitate such access, and Member States or their designated representatives can now request access online via the ITU Council website.

S.10 Engagement with the membership and external stakeholders (including UN)

The 2014 Plenipotentiary Conference took important decisions related to Sector Membership in deciding to continue the Academia category of participation and to allow Academia to participate in all three Sectors for a single fee. PP-14 also instructed Council to continue to review Sector Membership, including fees and benefits, as well as the criteria for fee exemption, and participation for non-profit organizations, including NGOs.

The total number of ITU Sector Members, Associates and Academia members was strengthened by an increase in ITU-R, due largely to the high level of interest and participation in the World Radiocommunication Conference (WRC). Major industry players from outside ITU's traditional base, including Facebook, Google, Netflix, Disney and MasterCard, joined as Sector Members in 2015.

In 2016, the total number of ITU Sector Members, Associates, and Academia members remained stable compared to 2015, despite decreases and consolidation among traditional members. The consolidation of memberships from some long-standing industry members (including Alcatel-Lucent, Nokia, Telecom Italia Sparkle, Airbus, Microsoft, Hewlett Packard, Millicom, SFR, and Motorola), the exclusion of 19 Sector Members for non-payment, and the relative shift from Sector membership to lower-fee categories (Associate and Academia), all contributed to a decrease in revenues. The acquisition of new members occurred both from ITU's traditional base (including Monaco Telecom, BICS, VimpelCom Group, Kuwait Telecommunication Company – Viva, Plintron, Videotron, Nagravision/Kudelski) and from widening participation among new members.

In 2017, despite pressures of consolidation among ITU's traditional industry membership base, the total number of ITU Sector Members, Associates and Academia members grew slightly, reaching a total of about 820 members. Some 70 new memberships were confirmed in 2017, driven mainly by growth in ITU-T. ITU's membership continues to diversify beyond its traditional telecom and satellite core to include leading and niche players in IoT/Internet, tower companies (including the two top players in the world, China Tower and American Tower), mobile virtual network operators, finance (e.g. eCurrency), consulting (e.g. Deloitte) and the automotive industry (e.g. Hyundai).

S.11 Communication services (audio/visual services, Press release services, Social media, management of the web, branding, speechwriting)

The major communications priority in 2015 was WRC-15. ITU has launched dedicated social media and branding campaigns. During 2015, there was a 22% increase in Twitter followers and a 26% increase in Facebook followers. In mainstream media, ITU achieved more than 21 000 unique media clips over 2015.

ITU News remains a vital outreach tool in terms of brand, membership communications and provision of expert content and analysis. ITU News launched a multi-year digital transformation to boost key stakeholder engagement on a suite of digital-only platforms and to reduce printing and distribution costs, with more than CHF 200 000 in savings annually.

In 2016, ITU continued to adapt its communications activities to the fast-paced digital media environment. The Management Coordination Group (MCG) approved the Digital Content Strategy to use more timely, relevant content to drive increased stakeholder engagement across ITU digital platforms.

2016 saw the launch of a new #ICT4SDG campaign launched for ITU membership and stakeholders.

New cost-effective audio-visual production procedures were put in place for 2017, with six opinion pieces published in editorial sections of tier one media. ITU was ranked in Top 10 Social Media Index out of 43 international organizations.

With regard to audio-visual coverage, in 2016 a total of 191 videos were uploaded to the [ITU YouTube Channel](#) with almost 150 000 total combined views. There were 1 227 plays on the new [ITU Podcast channel](#).

In 2017, ITU News launched the mobile-first website that replaced the corporate blog and newslog and has more than doubled online traffic thanks to timely, relevant content organized by topic. In addition, the ITU News Weekly email has seen more than 650 per cent year-on-year growth in new subscribers, 20% of whom are C-Suite or Director level. Social media metrics rose across all channels with an increasingly data-driven approach to boost not just “reach” and awareness but more importantly, *engagement* with key influencers and stakeholders, with “click thrus” back to ITU platforms, including ITU News, key reports, and event webpages.

“MyITU”: in partnership with colleagues across ITU, CCD has been helping to advance the “MyITU” project to provide a customized portal that will drive engagement with users based on profile and behaviour, to boost event participation and membership engagement on digital platforms, as well as increasing membership and sponsorship sales.

S.12 Protocol services

In October 2016, a new Protocol and Special Events Division was formed. The Protocol and Special Events Division assumed overall responsibility for protocol services at all major ITU events, receiving Heads of State, ministers and VIP guests around the world as well as at ITU headquarters. In 2015, the ITU Protocol and Special Events Division organized the inauguration of H.E. Mr Luis Guillermo Solís, President of Costa Rica, as ITU Patron for Youth and ICT.

Several ambassadors’ meetings are organized each year to ensure that the diplomatic community in Geneva remains fully apprised of ITU’s future activities.

Some 600 invitations to the Secretary-General to speak and/or participate in events around the world are handled each year by the Division.

S.13 Facilitation of the work of governing bodies (PP, Council, Council working groups)

The Governing Bodies Secretariat (GBS) led, managed and supervised the substantive preparation and organization for the Council session each year, as well as the biannual meetings of the Council Working Groups. It directed, coordinated and oversaw the preparation of the reports to the Council and continued to monitor the implementation of all PP and Council decisions. It also provided expert advice to the Council Chairman.

In addition, GBS and ISD/Library and Archives provided support for the review of the draft ITU Information/document access policy by CWG-FHR and Council-16, and worked together to develop the necessary infrastructure and procedures for implementation of the policy.

S.14 Badging production and distribution

The badging system is currently being integrated with CRM and the Identity Management system.

S.15 Resource-mobilization services

In 2016, a cross-ITU team in the secretariat worked on developing new tools to support improved reporting and coordination of membership outreach and resource mobilization activities.

PP-14 (Resolution 158 and Decision 5) requested the Secretary-General to explore options for generating additional revenues. The proposals of an internal group are included in the annex of a document entitled “Improving the stability and predictability of the financial base of the Union,” presented to the January 2017 meeting of CWG-FHR. Council 2017 approved several of these recommendations, as well as principles for resource mobilization. In these principles, Council confirmed that the top priority for resource mobilization is to ensure stable assessed contributions from ITU’s membership, as this source accounts for almost 70% of the regular budget. Options being considered include: increasing cost-recovery revenues, as well as seeking extra-budgetary resources from partners outside ITU’s membership in order to diversify sources of income.

S.16 Corporate strategic management and planning

Monitoring and reporting: annual reports on the implementation of the strategic plan have been made publicly available via a web portal (2015: www.itu.int/en/annual-report-2015/; 2016: www.itu.int/en/annual-report-2016/).

Intersectoral coordination on corporate management issues: Further implementation of systematic risk management, including the development and maintenance of risk registers, has been carried out. The follow-up to the implementation of the JIU Recommendations from the “JIU Review of ITU management and administration” has also been coordinated since 2016.

Supporting the implementation of the 2030 Agenda for Sustainable Development and Connect 2020 Agenda: The [ITU SDG Mapping Tool](#) was introduced as a concept at the 2016 session of Council to provide a comprehensive visual overview of ITU contributions to the SDGs. Supporting the implementation of the ITU Connect 2020 Agenda, two discussion papers were elaborated.

Development of the draft ITU strategic plan for 2020-2023: The process for the development of the draft ITU strategic plan for 2020-2023 was initiated in 2017 so that the plan can be adopted at PP-18. An internal working group coordinated internal ITU inputs, led by the Director of BR Mr François Rancy. Council 2017 established the Council Working Group for Strategic and Financial Plans (CWG-SFP), with a mandate to submit to Council the draft proposal for review and refer it to PP-18. The secretariat accordingly supported the work of CWG-SFP to develop further the ITU strategic framework and the draft text of the ITU Strategic Plan 2020-2023, and submit that text for public consultation before its endorsement by ITU Member States. Council 2018 reviewed the draft Strategic Plan which was forwarded for adoption at PP-18.

8 Activities of ITU governing bodies

8.1 ITU Council

The final meeting of the 2014 session of the Council was held immediately preceding PP-14 on 18 October 2014 in Busan, Republic of Korea. As this was the last meeting of the 2014 session, the Chairmen and Vice-Chairmen from the May meeting continued in their respective roles: Mr Aboubakar Zourmba (Cameroon), Chairman of the Council; Mr Wonki Min (Republic of Korea), Vice-Chairman of the Council; Ms Caroline Greenway (Australia), Chairman of the Standing Committee on Administration and Management (SC-ADM); Mr Marcin Krasuski (Poland), Vice-Chairman of SC-ADM; and Ms Vernita Harris (United States), Vice-Chairman of SC-ADM. All documents relating to the 2014 Council may be found [here](#).

The extraordinary session of the 2015 Council was held on Friday, 7 November 2014, in Busan. The new councillors elected Mr Min as Chairman of Council 2015; Ms Julie Zoller (United States) as Vice-Chairman; Mr Krasuski as Chairman of SC-ADM; and Ms Harris as Vice-Chairman of SC-ADM. The

other Vice-Chairman of SC-ADM, Mr Abdourhamane Touré (Mali), was identified at the 2015 session of the Council, which was held from 12 to 22 May 2015. All documents relating to the 2015 Council may be found [here](#).

The 2016 session of the Council was held from 25 May to 2 June 2016. Ms Julie Zoller (United States) presided as Chairman and Ms Eva Spina (Italy) was Vice-Chairman. Mr Kirill Oparin (Russian Federation) served as Chairman of SC-ADM, and Ms Harris and Mr Touré continued as Vice-Chairmen of SC-ADM. All documents relating to the 2016 Council may be found [here](#).

The 2017 session of the Council was held from 15 to 25 May 2017. Ms Spina served as Chairman and Mr Rashid Ismailov (Russian Federation) as Vice-Chairman. The Council appointed Ms Harris as Chairman of SC-ADM, and Mr Touré and Mr Dirk-Olivier von der Emden (Switzerland) served as Vice-Chairmen. All documents relating to the 2017 Council may be found [here](#).

The 2018 session of the Council was held from 17-27 April 2018, and led by Mr Rashid Ismailov (Russian Federation) as Chairman and Dr El Sayed El Sayed AZZOUZ (Egypt) as Vice-chairman. Ms Vernita HARRIS (USA) served as Chairman of SC-ADM, and Mr Abdourahmane TOURE (Mali) and Mr Dirk-Olivier VON DER EMDEN (Switzerland) served as Vice-Chairmen of the Committee. The last meeting of the 2018 session will be held on 27 October 2018 in Dubai, UAE. All documents relating to the 2018 Council may be found [here](#).

8.2 Council Working Groups and Expert Groups

Two clusters of Council Working Groups (CWGs) were held between each Council session, one in October and the other in January/February. These groups reviewed tasks mandated to them by the Council; the discussions and summaries can be found in the Chairmen's reports to each subsequent Council session, as well as on the individual CWG pages: <http://www.itu.int/en/council/Pages/groups.aspx>.

8.3 Plenipotentiary Conference

The 2014 ITU Plenipotentiary Conference (PP-14) took place in the city of Busan, Republic of Korea, from 20 October to 7 November 2014. It was the 19th such conference of the Union's top policy-making body, and set the strategic direction of the organization for the period 2016-2019 inclusive, taking account of the changing needs of the ITU membership.

PP-14 saw record attendance, with: 2 505 delegates from 171 countries, with the youngest delegate ever from UAE; close to 2 500 local staff on site; and 240 ITU staff in Busan, supported by many more back in Geneva. The Conference was honoured by the presence of the Presidents of the Republics of Korea and Rwanda, as well as 76 ministers, 36 deputy ministers and 56 ambassadors.

PP-14 dealt with 452 proposals from the membership; created 19 new resolutions and amended 51 existing ones; created two new Decisions and amended three existing ones; and approved the strategic and financial plans for 2016-2019 as well as the Connect 2020 Agenda for global telecommunication/ICT development. For the first time since 1992, the Conference made no amendments to the ITU Constitution and Convention. The Final Acts were signed by 150 countries on site.

The Conference elected a new management team, RRB members for a new term, and the 48 Member States of the ITU Council:

Region A (Americas, nine seats): Argentina, Brazil, Canada, Costa Rica, Cuba, Mexico, Paraguay, United States, Venezuela.

Region B (Western Europe, eight seats): France, Germany, Greece, Italy, Lithuania, Spain, Switzerland, Turkey.

Region C (Eastern Europe and Northern Asia, five seats): Azerbaijan, Bulgaria, Poland, Romania, Russian Federation.

Region D (Africa, 13 seats): Algeria, Burkina Faso, Egypt, Ghana, Kenya, Mali, Morocco, Nigeria, Rwanda, Senegal, Tanzania, Tunisia, Uganda.

Region E (Asia and Australasia, 13 seats): Australia, Bangladesh, China, India, Indonesia, Japan, Korea (Republic of), Kuwait, Pakistan, Philippines, Saudi Arabia, Thailand, United Arab Emirates.

See <https://www.itu.int/en/plenipotentiary/2014/Pages/default.aspx> and document C15/4 for full details.

Annex 1: Implementation of ITU Decisions, Resolutions, and Recommendations

Resolution 2 (Rev. Busan, 2014) – World Telecommunication/information and communication technology policy forum

As outlined in Resolution 2 (Rev. Busan, 2014), the purpose of a World Telecommunication/ICT Policy Forum (WTPF) is to provide a venue for exchanging views and information, in order to create a shared vision among policy-makers worldwide on the issues arising from the emergence of new telecommunication/ICT services and technologies, as well as to consider any other policy issue in telecommunications/ICTs which would benefit from a global exchange of views.

As per Resolution 101 (Rev. Busan, 2014) the Secretary-General is instructed to “submit a report, based on input from Member States and Sector Members, to the Council, for its consideration, on the need to convene the sixth WTPF at an appropriate time pursuant to Resolution 2 (Rev. Busan, 2014)”.

In this regard, through Circular letter [CL-15/40](#), Member States and Sector Members were invited to submit their suggestions on a possible theme and policy issues related to telecommunications/ICTs which could benefit for an exchange of views at a WTPF, together with a timeframe during which it could be held. A report of the result of this consultation is included in document [C16/59](#).

Following the discussions that took place at Council 2016, Member States and Sector Members were invited, through Circular Letter [CL-16/32](#), to further submit their views on the possible theme, dates, and place for the next WTPF. A report of the result of this follow-up consultation is included in document [C17/59](#).

Resolution 11 (Rev. Busan, 2014) – ITU TELECOM events

As described in Resolution 11 (Rev. Busan, 2014), ITU TELECOM events fulfil the mandate to keep Member States and Sector Members informed of, and offer a universal opportunity for the display of, state-of-the-art technology concerning all aspects of telecommunications/ICT and related fields of activity, and provide a forum for the exchange of views between Member States and industry.

Events taking place since 2014 include: Telecom World 2014 in Doha, Qatar from 7 to 10 December 2014; ITU Telecom World 2015 in Budapest, Hungary, from 12 to 15 October 2015; ITU Telecom World 2016 in Bangkok, Thailand from 14 to 17 November 2016; and ITU Telecom World 2017 in Busan, South Korea from 25 to 28 September 2017. More information on all of these events as well as the upcoming 2018 event in Durban, South Africa from 10 to 13 September 2018 may be found in Council documents [C15/19](#), [C16/19](#), [C17/19](#), and [C18/19](#). The most recent document, [C18/19](#), also contains considerations for the future direction of events.

Resolution 25 (Rev. Busan, 2014) – Strengthening the regional presence

Regional and area offices have been instrumental in implementing regional initiatives and executing various programmes, projects and activities carried out in the field. Activities have been implemented in collaboration with other sectors of ITU and relevant national, regional and international organizations and other stakeholders. Detailed information is available in annual performance reports and quarterly reports available at <https://www.itu.int/en/ITU-D/Pages/OperationalPlansPerformanceReports.aspx>. Regional and area offices have been strengthened through, *inter alia*, increased delegation of authority, adequate staffing levels, improved administrative procedures, and IT and systems’ support. A survey was undertaken in 2016 on the levels of satisfaction of Member States, Sector Members and regional telecommunication organizations with ITU’s regional presence. The overall results of the survey were generally satisfactory for all the aspects of the survey (document [C17/INF/12](#)). See annual Council reports in documents [C15/25](#), [C16/25](#), [C17/25](#), and [C18/25](#) for more information.

Resolution 30 (Rev. Busan, 2014) – Special measures for the least developed countries, small island developing states, landlocked developing countries and countries with economies in transition

Since 2014, ITU has continued to provide specific and concentrated assistance to the LDCs, LLDCs and SIDS, in particular through the ITU-D's special programme on "Concentrated Assistance to LDCs, SIDS and LLDCs". A total of 40 countries received concentrated assistance to strengthen their telecommunication/ICT sector, including in the area of policy and regulation, cybersecurity, ICT applications, emergency telecommunications, e-waste, spectrum management and network development. ITU has mainstreamed the needs of LDCs, LLDCs and SDS in all activities, initiatives, programmes and projects to assist LDCs to bridge the digital divide and to achieve broader development goals, including the SDGs. Financial resources for the LDCs, LLDCs and SIDS have been made available from the regular budget, the ICT Development Fund, and through Voluntary Contributions. ITU has continued to review the state of telecommunication/ICT services and uptake in LDCs, SIDS, and LLDCs through country case studies, specific reports focused on these groups of countries, and through the collection and dissemination of ICT statistics and the production of analytical reports. Since 2014, every LDC has benefitted from a fellowship programme to participate in ITU meetings, and a total of 1902 fellowships were awarded to participants from the LDCs over the 2014-2017 period. For more information, see annual activities report to the Council in document [C15/35](#), [C16/35](#), [C17/35](#), and [C18/35](#).

Resolution 41 (Rev. Busan, 2014) – Arrears and special accounts

Every year, the Council authorizes the write-off of interest on arrears and irrecoverable debts in accordance with the guidelines laid down by the Council in 1999, against a corresponding withdrawal from the Reserve for Debtors' Accounts. This authorization includes the write-off of interests on arrears for members who complied with their repayment schedule and settled their contributions as well as the write-off of debts from companies whose debts are to be considered to be irrecoverable based on the correspondence received from the administrations concerned or national authorities responsible for their court-supervised liquidation.

See annual Council reports in documents [C15/11 \(Rev.1\)](#), [C16/11 \(Rev.1\)](#), [C17/11](#), and [C18/11](#).

Resolution 46 (Kyoto, 1994) – Remuneration and representation allowances of elected officials

Resolution 46 provides the methodology for establishing the level of remuneration of Elected Officials, fixed in relation to the maximum salary paid to appointed staff on the basis of the percentage established by the Resolution, as well as the level of the representation allowance to be paid for reimbursing representation expenses. In the course of the discussion, during the 2018 Council session, on the adoption of the proposed amendments to Staff Regulations applicable to Elected Officials required for the implementation of the new UN compensation package, the Council decided to encourage Member States to consider revising that Resolution.

Resolution 70 (Rev. Busan, 2014) – Mainstreaming a gender perspective in ITU and promotion of gender equality and the empowerment of women through ICTs

ITU tracks three gender-related indicators from the SDG Indicators Monitoring Framework. ITU's [Gender Dashboard](#) reports on the digital gender divide, gender representation at ITU meetings, and gender balance in ITU staffing and decision-making.

Various ITU initiatives aim to close the digital gender divide, including the international [Girls in ICT Day](#), [EQUALs](#), the [Global Partnership for Gender Equality in the Digital Age](#), the [EQUALs in Tech Awards](#), and the [Broadband Commission Working Groups including one on the Digital Gender Divide](#). Efforts to balance the representation of women in ITU meetings involve concerted efforts to invite and encourage gender balanced delegations and nominations of women, particularly in key roles such as

Chair and Vice-Chairs. Women in main conferences are supported through the [Network of Women for WRC \(NOW\)](#) and the [Women in Standardization Expert Group \(WISE\)](#).

ITU reports annually to the [United Nations System-wide action plan for gender equality and mainstreaming](#); an accountability framework to measure and drive progress towards gender equality. As from 2017, [planning is aligned to the UN-SWAP performance indicators](#).

See annual Council reports in documents [C15/6](#), [C16/6](#), [C17/6](#), and [C18/6](#).

Resolution 71 (Rev. Busan, 2014) – Strategic plan for the Union for 2016-2019

The secretariat presented annual progress reports on the implementation of the ITU Strategic Plan 2016-2019 to Council – see documents [C16/35](#), and [C17/35](#), and [C18/35](#).

Reports were also available online, as public websites. The latest version of the report is available at: www.itu.int/annual-report-2017.

Resolution 72 (Rev. Busan, 2014) – Linking strategic, financial and operational planning in ITU

The adoption of the revised Resolutions 71, 72, and 151 (Rev. Busan, 2014) enabled the full alignment of the Strategic and Financial Plans of the Union and the Operational Plans of the Sectors and the General Secretariat, as requested by Resolution 72 (Rev. Busan, 2014).

Fulfilling the requirements of this Resolution, Annex 3 to Res. 71 (Rev. Busan, 2014) presented the allocation of resources to objectives and strategic goals, while the new format of the Operational Plans was developed in a coherent and more concise format, following the new ITU-wide results framework, and demonstrating the allocation of resources to Outputs and Support Services, in accordance to the biennial budgets.

Resolution 77 (Rev. Busan, 2014) – Scheduling and duration of conferences, forums, assemblies and Council sessions of the Union (2015-2019)

The following conferences and assemblies were held or are planned for in the 2015-2019 time-frame: RA-15, 26-30 October 2015; WRC-15, 2-27 November 2015; WTSA-16, 25 October – 3 November 2016; WTDC-17, 9-20 December 2017; Council Sessions 2015-2019; PP-18, 29 October – 16 November 2018; RA-19, 21-25 October 2019; and WRC-19, 28 October – 22 November 2019.

As per Resolution 77 (Rev. Busan, 2014), the Council schedules its next three ordinary sessions in June-July and reviews this schedule on a rolling basis.

More information can be found in documents [C15/37](#), [C16/37](#), [C17/37](#), and [C18/37](#).

Resolution 99 (Rev. Busan, 2014) – Status of Palestine in ITU

Resolution 99 (Rev. Busan, 2014) was fully implemented and allowed the observer from the State of Palestine to participate in all conferences, assemblies and meetings organized under the aegis of ITU, in particular treaty-making conference (WRC-15), as well as RA-15, WTSA-16 and WTDC-17, taking advantage of all of the rights enumerated in Resolution 99 (Rev. Busan, 2014). The observer from the State of Palestine attended the sessions of the Council.

Furthermore, three Palestinian Academies have been admitted (An-Najah National University, Palestine Technical University Kadoorie, and Arab American University). For more information, see documents [C15/INF/19](#), [C16/68](#), and [C17/35](#).

Resolution 102 (Rev. Busan, 2014) – ITU’s role with regard to international public policy issues pertaining to the Internet and the management of Internet resources, including domain names and addresses

Resolution 102 (Rev. Busan, 2014) was adopted in 1998 and subsequently amended.

Resolution 102 (Rev. Busan, 2014) instructs the Secretary-General to continue taking a significant role in international discussions and initiatives on the management of Internet domain names, addresses and other resources within the mandate of ITU, and to take the necessary steps for ITU to continue to play a facilitating role in the coordination of international public policy issues pertaining to the Internet (§35 d) of the Tunis Agenda). It instructs the Directors of the Bureaux to support these actions.

ITU activities since PP-14 related to Resolution 102 (Rev. Busan, 2014) are covered in the Council reports [C15/33](#), [C16/33](#), [C17/33](#), and [C18/33](#). The listed Council reports contain the activities carried out under PP-14 Resolutions 101, 102, 133 and 180. The activities under Resolution 102 include the work of the Council Working Group on international Internet-related public policy issues.

Resolution 125 (Rev. Busan, 2014) – Assistance and support to Palestine for rebuilding its telecommunication networks

Various activities have been implemented to assist Palestine including, among others, mobile number portability assistance, studies for restructuring of the ministry, and school connectivity.

The second phase of the “Connect a School, Connect a Community” project was achieved at end 2017 with funding from the ITU–ICT-DF, as well as a contribution from the TRA (UAE), and met the needs for the additional ten schools, bringing the total to fifteen schools. Furthermore, an expert is currently working with Palestine on a study to restructure the Ministry of ICT, and an expert worked with to establish a National Broadband Master plan in 2016.

Assistance was provided to the Ministry on licenses valuation and regulations for Mobile Number Portability. Another study was conducted on market analysis and Significant Market Power determination.

A number of fellowships were provided to delegates from Palestine to attend various ITU activities, including GSR and Study Group meetings.

An assessment for the establishment of CIRT in Palestine was concluded and a project is being formulated to implement a CIRT with the assistance of the Arab regional Cyber Security Centre in Oman. For more information, see documents [C15/INF/19](#), [C16/68](#), and [C17/35](#).

Resolution 131 (Rev. Busan, 2014) – Measuring information and communication technologies to build an integrating and inclusive information society

ITU-D continued its work on the collection, verification, processing and analysis of ICT data and statistics for over 200 economies through four annual questionnaires, in the World Telecommunication/ICT Indicators Database, accessible via CD-ROM, the ITU Statistics website and the ICT Eye online portal. During 2015-2018 ITU-D issued Measuring the Information Society Report (2015, 2016, and 2017), ITU YearBooks of Statistics (2015, 2016, and 2017), The Little Data Book on ICT (2015, 2017, and 2018), ICT Facts and Figures (2015, 2016, and 2017) and semi-annually updated ITU World Telecommunication/ICT Indicators database. The WTIS was held in 2015 (Hiroshima, Japan), 2016 (Gaborone, Botswana) and 2017 (Hammamet, Tunisia). Expert Group of Telecom Indicators (EGTI) and expert Group of Household Indicators (EGH) continued their performance via online forum and face to face meetings in Geneva (2015, 2016, and 2017). Extraordinary meeting of EGTI/EGH held 1-3 March 2017 in Geneva, which reviewed the indicators included in the ICT Development Index. In 2015-2018 ITU-D organized workshops in all regions of the world to enhance capacity on collection of ICT statistics.

Resolution 139 (Rev. Busan, 2014) – Use of telecommunications/information and communication technologies to bridge digital the digital divide and build an inclusive information society

A wide range of technical assistance has been provided to assist developing countries plan, deploy, operate and maintain accessible and resilient ICT networks and services, especially in rural and remote areas. Activities included preparation and implementation of guidelines and roadmaps for transition from analogue to digital broadcasting, provision of support to national spectrum management activities, long-term frequency management for mobile broadband, as well as transition to digital broadcasting and the allocation of the digital dividend.

ITU has also produced case studies and business models for sustainable use of broadband infrastructure in rural and remote areas, regional forums and seminars, training materials in close collaboration with BR and TSB, fostering the implementation of wireless Broadband Networks and NGN, as well as the digital broadcasting transition, conformance and interoperability, and spectrum management issues. TSB has published many technical reports and guidelines on implementation of ITU-T Recommendations for optical fibre cables and systems, deployment of packet-based networks and convergent networks.

ITU has also continued to advocate for the importance of bridging the digital divide in international events, conferences and platforms, including the UNGA, G20 and the OECD, among others. For more information, see documents [C15/35](#), [C16/35](#), [C17/35](#), and [C18/35](#).

Resolution 140 (Rev. Busan, 2014) – ITU's role in implementing the outcomes of the World Summit on the Information Society and in the overall review by United Nations General Assembly of their implementation

Revised Resolution 140 provides strategic guidance on ITU's future role in WSIS implementation and follow-up as well as the UNGA Overall Review. ITU continues to be the sole facilitator of WSIS Action Lines C2, C5 and C6 and as co-facilitator of the other action lines. ITU also continues effectively the coordination of WSIS Forums, the World Telecommunication and Information Society Day, WSIS Project Prizes and the maintenance of the WSIS Stocktaking database. ITU continues to coordinate and be a steering committee member on the Partnership on Measuring the ICT for Development, which is an international, multistakeholder initiative to improve the availability and quality of ICT data and indicators, particularly in developing countries. ITU also is the rotating chair of the United Nations Group on Information Society (UNGIS).

Resolution 140 invited Member States, *inter alia*, to support, through relevant UN processes, the creation of synergies and institutional linkages between WSIS and the Post-2015 Development Agenda to continue strengthening the impact of ICT for sustainable development. Building upon the outcomes of the UNGA overall review, the ITU Council 2016 modified Resolution 1332 and suppressed Resolution 1334 thereby strengthening the ITU's leadership and role in the WSIS Process till 2025. The ITU Council 2016, resolved that ITU should play a leading facilitating role in the WSIS implementation process, along with UNESCO and UNDP, as stated in § 109 of the Tunis Agenda, that ITU should continue to coordinate WSIS Forums, World Telecommunication and Information Society Day (WTISD) and WSIS Project Prizes and maintain the WSIS Stocktaking database, as well as continue to coordinate and support the activities of the Partnership for Measuring ICT for Development. Council also resolved to use the WSIS framework as the foundation through which the ITU helps achieve the 2030 Agenda, within the ITU's mandate and within the allocated resources in the financial plan and biennial budget, noting the WSIS-SDG Matrix developed by UN Agencies, working through the Council Working Group on WSIS. In addition, the Terms of Reference of the WG-WSIS, annex to the Council Resolution 1332, was altered to include the 2030 Agenda for Sustainable Development, in particular monitoring and evaluation on a yearly basis the actions taken by ITU with respect to implementation of WSIS outcomes and the 2030 Agenda for Sustainable Development.

The three Sectors of the Union (Standardization, Radiocommunication and the Development Sector) and the General Secretariat have carried out several important activities and projects that enhance the WSIS outcomes and objectives. Details of all activities since 2014 are also reported in the annual report on ITU's contribution to the implementation of WSIS Outcomes available at: <https://www.itu.int/en/itu-wsis/Pages/Contribution.aspx>.

Within the ITU, the effective coordination of ITU's strategies and activities in relation to WSIS has been ensured by a WSIS Task Force that is chaired by the Deputy Secretary-General. Taking into account the resolutions of Resolution 1332, the terms of reference of the WSIS Task Force have been amended incorporating coordination on the activities of ITU related to SDGs.

ITU activities since PP-14 related to Resolution 140 (Rev. Busan, 2014) are covered in the Council reports C15/8, C16/8, C17/8, C18/53, and C18/8 in detail.

Resolution 146 (Rev. Busan, 2014) – Periodic review and revision of the International Telecommunication Regulations

In accordance with ITU Plenipotentiary Resolution 146 (Rev. Busan, 2014), the ITU Council, at its 2016 Session, adopted Resolution 1379, which resolves that an Expert Group on the International Telecommunication Regulations (EG ITRs), open to all Member States and Sector Members, be created.

The EG-ITRs presented a progress report to Council 2017 and will present a final report to Council 2018 for examination and submission to the 2018 Plenipotentiary Conference with the Council's comments.

More information on the activities of EG-ITRs can be found at: <http://www.itu.int/en/council/eg-itrs/Pages/default.aspx>. More information may be found in documents C16/66, C17/26, and C18/26.

Resolution 150 (Rev. Busan, 2014) – Approval of the accounts of the Union for the years 2010-2013

The approval of ITU's accounts by the Council for the years 2014 to 2016 according to Resolution 150 (Rev. Busan, 2014) is contained in documents C15/50 (Resolution 1376), C16/42 (Resolution 1382), and C17/42 (Resolution 1389).

The ITU's accounts for 2017 will be approved during the last meeting of the 2018 session of the Council in Dubai.

Resolution 151 (Rev. Busan, 2014) – Implementation of results-based management in ITU

Following the adoption of the revised Resolutions 71, 72 and 151 (Rev. Busan, 2014), the secretariat fulfilled the requirements of Resolution 151 by concluding the development of a comprehensive ITU-wide results framework, which included the development of a set of indicators to monitor and report on the Outcomes of the work of the organization, as well as indicators for the Enablers/Support Services provided by the secretariat.

The integrated risk management framework was further improved within the context of RBM, and a Risk Management Policy and a Risk Appetite Statement were endorsed by the 2017 Session of Council.

The secretariat reported on progress and on the performance indicators, within the reports on the implementation of the ITU Strategic Plan 2016-2019 (see Council Documents C16/35 and C17/35). These progress reports are also available online, as public websites. The latest version of the report is available at: www.itu.int/annual-report-2017.

Resolution 154 (Rev. Busan, 2014) – Use of the six official languages of the Union on an equal footing

ITU obtained significant progress with regard to the fundamental objective of ensuring equality of treatment of the six official languages. The secretariat continues to pursue the relevant operational actions for effective demand-side planning and a cost-effective use of interpretation and translation resources with a view to maximizing language use. Over the period, it implemented a roadmap for streamlining language services and document production, with a view to upholding service quality and timeliness, leveraging the use of technology applied to conferences and publications, restructuring processes for greater efficiency and exploring potential savings for increased cost-effectiveness. The secretariat created two internal groups, one on the Multilingual ITU Web and another one on the Study and Evaluation of the Translation and Interpretation Procedures. The Secretariat has also been exploring several alternative translation procedures with the aim of streamlining processes and reducing cost while maintaining the high quality level required by members. There have been several pilots conducted in this area, among them, a remote interpretation pilot conducted on occasion of the ITU Telecom World in Bangkok in 2016, with a second trial foreseen in 2018; a pilot for web translation by Member States. Concrete results can also be underlined: the secretariat completed the change from traditional paper-based referencing to e-referencing; it introduced a new Documents, Conference and Production Management System to generate and store electronic requests for document services, monitor jobs through the linguistic sections, handle electronic requests for services, monitor contractual work and to produce a wide range of statistical reports for all aspects of conference service work; a new Content Management System for translation of webpages was launched, aimed at the simultaneous publication of webpages in the six official languages of the Union, and in equal terms of functionality and navigation; the Arabic terminology project was finalized and the integration of terminology databases into a single centralized database was successfully completed; as for ITU automatic translation system, all language pairs are now available and translators have the possibility to use it in their translation work. The General Secretariat continuously reviews the entire multilingual document production workflow with the aim of reducing the cost and volume of documentation. Further information may be found in the reports of the Chair of CWG-Languages to the Council in documents [C15/12](#), [C16/12](#), [C17/12](#), and [C18/12](#), as well as in document [C18/14](#).

Resolution 162 (Rev. Busan, 2014) – Independent Management Advisory Committee

The Independent Management Advisory Committee (IMAC) continued to serve in an expert advisory capacity, as a subsidiary body of the ITU Council, assisting the Council and the Secretary-General in effectively fulfilling their governance responsibilities, including ensuring the functioning of ITU's internal control systems, risk management and governance processes.

The Committee held nine meetings after the ITU Plenipotentiary Conference in 2014, issuing summary reports after each meeting (made publicly available at the [IMAC website](#)), and Annual Reports to Council (see Documents: [C15/22](#), [C16/22](#), [C17/22](#), and [C18/22](#)). The 2018 Session of the Council approved the latest IMAC report and its recommendation to submit Annex 3 of document [C18/22](#) as an Information Document to the Plenipotentiary Conference encouraging Member States to take into account the recommendation when they are formulating their proposals to PP-18.

Resolution 167 (Rev. Busan, 2014) – Strengthening and developing ITU capabilities for electronic meetings and means to advance the work of the Union

Progress on the EWM action plan, as outlined in Annex 1 to Resolution 167 (Rev. Busan, 2014) has been reported annually to the Council, in document 35. The action plan has been fully implemented insofar as possible without amendments to the rules of procedure to the Council and PP conference with respect to remote participation. The remote intervention services that have been implemented have offered significant benefits to delegates and it is not proposed to change the current practice, which is “remote intervention” rather than “remote participation”, since a remote participant cannot take part in decision-making. The service is provided on request by the event owners. It should be

noted that where the remote intervention service relies on the public internet infrastructure, the quality of service and availability are beyond the control of ITU.

Resolution 170 (Rev. Busan, 2014) – Admission of Sector Members from developing countries to participate in the work of the ITU Telecommunication Standardization Sector and the ITU Radiocommunication Sector

Efforts have been made in ITU-R and T, combined with outreach by the regional/area offices, to increase the number of members from eligible countries. Despite efforts, few have joined under this resolution. There are currently four companies in ITU-R that benefits from this reduced fee and seven companies in ITU-T.

Resolution 174 (Rev. Busan, 2014) – ITU’s role with regard to international public policy issues relating to the risk of illicit use of information and communication technologies

Resolution 174 (Rev. Busan, 2014) resolves to instruct the Secretary-General to take necessary measures to: i) raise the awareness of Member States regarding the adverse impact that may result from the illicit use of information and communication resources; and ii) maintain the role of ITU to cooperate within its mandate with other UN bodies in combating the illicit use of ICTs.

ITU activities since PP-14 related to Resolution 174 (Rev. Busan, 2014) are covered in the Council reports C15/18, C16/18, C17/18, and C18/18.

Resolution 175 (Rev. Busan, 2014) – Telecommunication/ ICT accessibility for persons with disabilities and persons with specific needs

ITU has advanced in the implementation of Resolution 175 (Rev. Busan 2014) focusing in two areas of work: (a) Promoting ICT accessibility for persons with disabilities; and (b) making ITU a more accessible organization for persons with disabilities.

In the first area, ITU has continued conducting technical work in ITU-R, ITU-T and ITU-D study groups, all of which contain relevant questions advancing the use of telecommunications and ICTs for persons with disabilities. In ITU-T, work on mainstreaming of accessibility in the development of international telecommunications/ICT standards is being done with the participation of persons with disabilities for e.g. specifications of terminology, accessible IPTV systems, indoor audio navigation systems for the blind (*Wayfindr*), and accessible meetings (including remote participation). In addition to this work, ITU-D has continued to develop toolkits and resources to support ITU Member States to advance in the establishment of enabling environments ensuring accessible telecommunication/ICT for persons with disabilities by 2020, in line with the Connect 2020 agenda. Three related key deliverables are the publication of the Model ICT Accessibility Policy Report, also used to provide regional and country advice to ITU Member States, an online training course on the public procurement of accessible ICTs, and a national capacity building programme on web accessibility, known as “Internet for @ll”. ITU-D has also advanced the implementation of regional initiatives linked to ICT accessibility in the ARB, EUR and CIS regions, each with a range of projects, trainings and events, as well as support to ITU administrations in almost every region, including the organization of the series of Accessible Americas events from 2014- 2017 in the Americas region, a series of sub-regional forums in Africa in 2016 and 2017, and a side event on ICT accessibility at WTDC-17, which included the participation of persons with disabilities and showcased members’ efforts to ensure ICT accessibility is a reality in their countries.

In the second area ITU has continued to advance in the implementation of its ITU Accessibility Policy, endorsed by ITU Council 2013. In the period covered by this report ITU has continued to provide reasonable accommodation for persons with disabilities in ITU services, such as providing captioning in a broad selection of ITU events and major conferences, providing sign language interpretation in ITU-T accessibility meetings upon request by delegates, making websites accessible through the use of dedicated software that simplifies creating accessible content and improving ITU facilities to make

them more accessible for staff and delegates with disabilities. Registration for all ITU events provides the opportunity to request for access services for participants with disabilities. ITU has modified its internal production system to generate accessible publications in the six official languages. Since 2015, a total of 194 new ePublications have been created in assistive technology-friendly formats and are downloadable from ITU eBookshop. Travel assistance has been granted to persons with disabilities to facilitate their participation in standardization process at ITU-T meetings.

Further information is available at www.itu.int/accessibility.

Resolution 176 (Rev. Busan, 2014) – Human exposure to and measurement of electromagnetic fields

ITU-D Study Group Question 7/2 prepared a Report on international EMF activities and exposure limits, collected case studies and made comparison of exposure limits.

ITU is regularly represented in WHO meetings relating to EMF and vice versa. ITU provided comments on the fact sheets and the WHO monograph.

In 2017 in May, November and December there were several expert meetings on the effect of EMF limits on the implementation of IMT-2020 (5G) networks.

The [ITU-R Handbook on Spectrum Monitoring](#) provides information on non-ionizing radiation (NIR) measurements, including explanations of the NIR limits, instruments for NIR measurements, measurement procedure, and reporting for different radiocommunication services. ITU-R Working Party 1C (WP 1C) is developing the measurement techniques to assess the human exposure from wireless installations of all types (but excluding the compliance of portable wireless devices intended for use close to the head or body) to respond to [Question ITU-R 239/1](#). This information was presented at WHO meetings, ITU expert meetings and regional group meetings dealing with radiocommunication issues. In 2015/16, ITU-R SG 1/WP 1C also reviewed and provided comments on the relevant part of the WHO Monograph. ITU-R SG 1 also exchanged this information with the other ITU-R Study Groups responsible for radio-communication services which expressed the view that exposure limits should be established, based on scientific evidence, and endorsed by the World Health Organization (WHO). They also expressed the view that the establishment of restrictive exposure limits may impact the deployment of wireless networks.

Working Party 1 on “EMC, lightning protection, EMF” within ITU-T SG5 has developed a series of Recommendations including: ITU-T K.100 “Measurement of radio frequency electromagnetic fields to determine compliance with human exposure limits when a base station is put into service”; ITU-T K.113 “Generation of radiofrequency electromagnetic field level maps”; ITU-T K.121 “Guidance on the environmental management for compliance with radio frequency EMF limits for radiocommunication base stations”; ITU-T K.122 “Exposure levels in close proximity of radiocommunication antennas”. ITU-T SG5 has also developed ITU-T K Suppl.4 to Recommendation ITU-T K.91 on Electromagnetic field considerations in smart sustainable cities. Additionally, ITU-T SG5 has developed an EMF Guide and Mobile Application (available in the 6 UN official languages and in Malay). ITU-T K. Suppl.9 on “5G technology and human exposure to RF EMF” has been agreed, and work is ongoing for ITU-T Supplement on “Electromagnetic field (EMF) compliance assessments for 5G wireless networks”.

Various ITU Workshops and Fora on human exposure to electromagnetic fields have been held (March 2014 in Montevideo, Uruguay; September 2014 in Santo Domingo, Dominican Republic; September 2014 in Beijing, China; December 2014 in Kochi, India; April 2016 in Kuala Lumpur, Malaysia; Sophia Antipolis, France; December 2017 in Warsaw, Poland). ITU-T SG5 in collaboration with the Inter-American Telecommunication Commission (CITEL) and the Telecommunications Regional Technical Commission (COMTELCA) developed a Report on “[Monitoring of electromagnetic field levels in Latin America – Implementation of Recommendation ITU-T K.83](#)”.

Resolution 177 (Rev. Busan, 2014) – Conformance and interoperability

ITU made progress on the implementation of ITU Conformance and Interoperability Programme (C&I; ITU C&I Portal) including:

- The ITU [Product Conformity Database](#), which aim is to publicize the conformance of ICT products and services with ITU-T's international standards, was launched in December 2014. Currently, the database contains more than 500 entries (e.g. E-health devices, mobile phones, IPTV and Ethernet services).
- The full list of ITU-T Recommendations suitable for C&I testing is available in the [reference table](#).
- [Pilot projects](#) for conformity to ITU-T Recommendations are carried out by ITU-T study groups.
- ITU-T CASC was established to elaborate the recognition procedure of Testing Laboratories (TLs) which have competence for testing against ITU-T Recommendations. ITU-T CASC established a [List](#) of ITU-T Recommendations which may become subject of joint certification schemes.
- ITU-T organized/facilitated 10 [test events](#).
- On-the-job [Capacity Building](#) activities for AFR, AMS, ARB, ASP, and CIS regions on C&I frameworks and different Testing Domains (EMC, RF, mobile, SAR, NGN, etc.) provided in collaboration with laboratory partners (CERT, CPqD, CAICT, TiLab, ZNIIS).
- Five ITU-D [Guidelines](#) covering C&I Programmes, Mutual Recognition Agreement (MRA), and establishment of testing centers were published.
- [Assessment Studies](#) for 6 sub-regions were done.
- ITU-D Study Group 2 Question 4 – “Assistance to developing countries for implementing conformance and interoperability programmes” [Final Report](#) was approved by WTDC-17.

Updates were presented in Council documents [C13/24\(Rev.1\)](#), [C14/24\(Rev.1\)](#), [C15/24](#), [C16/24\(Rev.1\)](#), and [C17/24](#).

Resolution 179 (Rev. Busan, 2014) – ITU's role in child online protection

Revised Resolution 179 provides strategic guidance on ITU's role on Child Online Protection. ITU continues the COP initiative as a platform to raise awareness and share best practice on child online safety issues. ITU continues providing assistance and support to Member States, especially developing countries, in developing and implementing roadmaps for the COP initiative. ITU continues to coordinate the COP initiative, in cooperation with relevant stakeholders.

The Resolution 179 invited Member States *inter alia* to join and continue participating actively in CWG-COP and in the related ITU activities, for the purposes of a comprehensive discussion and exchange of best-practice information on legal, technical, organizational and procedural issues, as well as capacity building and international cooperation for protecting children online. It also invited Member States to establish mechanisms for collaboration among government offices and institutions working on this issue to gather statistical information on access of students to the Internet.

The resolution instructs the Secretary-General to continue identifying those activities that are carried out by other United Nations organizations in this domain and to coordinate with them appropriately, with the objective of establishing partnerships to maximize and synergize efforts in this important area; to coordinate ITU efforts with other United Nations agencies and entities concerned with this issue, in order to contribute to existing global repositories with useful information, statistics and tools concerning child online protection; to continue the coordination of ITU activities with other similar initiatives being undertaken at the national, regional and international levels, in order to eliminate possible overlaps; to bring this resolution to the attention of other COP members and of the United Nations Secretary-General, with the aim of increasing the engagement of the United Nations system in child online protection; to submit a progress report on the results of implementation of this resolution

to the next plenipotentiary conference; to continue to disseminate the documents and reports of CWG-COP to all international organizations and stakeholders involved in such matters, so that they can collaborate fully; to encourage Member States and Sector Members to submit best practices on issues of child online protection.

Finally, it encourages CWG-COP to conduct one-day online consultations for youth prior to its meetings in order to listen to their views and opinions on different matters related to child online protection.

ITU activities since PP-14 related to Resolution 179 (Rev. Busan, 2014) are covered in the Council reports [C15/15](#), [C16/15](#), [C17/15](#), [C18/15](#), and [C18/62](#) in detail. More information can also be found on the CWG-COP website <https://www.itu.int/en/council/cwg-cop/Pages/default.aspx>.

Resolution 182 (Rev. Busan, 2014) – The role of telecommunications/ICTs in regard to climate change and the protection of the environment

ITU-T SG5 on “Environment, climate change and circular economy” is the lead Study Group on ICTs related to the environment, climate change, energy efficiency and clean energy and circular economy, including e-waste. ITU-T SG5 has developed a series of Recommendations including: ITU-T L.1410 on “Methodology for environmental life cycle assessments of information and communication technology goods, networks and services”; and ITU-T L.1440 on Methodology for environmental impact assessment of information and communication technologies at city level. ITU-T SG5 has also developed the ITU-T L.1500 series of Recommendations and Supplements on using ICTs to help countries and the ICT sector to adapt to the effects of climate change. ITU-T SG5 has also published several standards to tackle e-waste and achieve a circular economy, including for example Recommendations ITU-T L.1002 on “External universal power adapter solutions for portable information and communication technology devices”; ITU-T L.1005 on “Test suites for assessment of the universal charger solution”; ITU-T L.1006 on “Test suites for assessment of the external universal power adapter solutions for stationary information and communication technology devices”; ITU-T L.1007 on “Test suites for assessment of the external universal power adapter solutions for portable information and communication technology devices”; ITU-T L.1020 on “Circular Economy: Guide for Operators and Suppliers on approaches to migrate towards circular ICT goods and networks”; and ITU-T L.1021 on “Extended Producer Responsibility (EPR) Guidelines for Sustainable E-waste Management”. Furthermore, ITU-T SG5 has developed ITU-T L. Suppl.27 on Supplement on success stories on e-waste management; and ITU-T L Suppl.28 on “Circular economy in information and communication technology; definition of approaches, concepts and metrics”.

In collaboration with Deutsche Telekom, UNFCCC and UNESCO, ITU-T developed a Report on “[Resilient pathways: the adaptation of the ICT sector to climate change](#)”. A Report on “[Sustainable management of waste electrical and electronic equipment in Latin America](#)” was published in collaboration with the Basel Convention, CRBAS, ECLAC, UNESCO, UNIDO, UNU-VIE SCYCLE; WIPO and WHO.

A series of Symposia have been held on ICTs, the Environment and Climate Change ([15 December 2014 in Kochi, India](#); [14 December 2015 in Nassau, the Bahamas](#); [21 April 2016 in Kuala Lumpur, Malaysia](#)). The Green Standards Weeks acted as global platform for discussion and knowledge-sharing in order to raise awareness of the importance of and opportunities for using information and communication technologies (ICTs) to protect the environment, unlock the potential of circular economy and expedite the transition to smart sustainable cities ([GSW-2014](#), 22-26 September, Beijing, China; [GSW-2015](#), 14-18 December 2015, Nassau, Bahamas; [GSW-2016](#), 5-9 September 2016, Montevideo, Uruguay; [GSW-2017](#), 3-5 April 2017, Manizales, Colombia). Additionally ITU-T has held more than 20 workshops, trainings and fora on topics on ICTs, environment, climate change and circular economy.

ITU has also continued to contribute to the work of the UN system in the domain of environmental protection, by participating regularly in the major UN processes and conferences on this topic, such as the UN Framework Convention on Climate Change (UNFCCC).

Resolution 185 (Busan, 2014) – Global flight tracking for civil aviation

Following the instructions given by PP-14 in Resolution 185 (Busan, 2014), the issue of Global flight tracking for civil aviation was addressed by WRC-15. After thorough considerations of the relevant ITU-R studies and specific BR Director's Report, WRC-15 allocated the frequency band 1 087.7-1 092.3 MHz to the aeronautical mobile-satellite (R) service, thus enabling satellite reception of tracking signals from aircraft equipped with automatic dependent surveillance-broadcast system (ADS-B). This decision empowered flight tracking of civil aircraft anywhere in the world, including oceanic, polar and other remote areas.

Resolution 186 (Busan, 2014) – Strengthening the role of ITU with regard to transparency and confidence-building measures in outer space activities

In response to this Resolution, the Radiocommunication Bureau organized several events addressing the use and development of satellite networks, with the objectives of bridging the digital divide and enhancing their reliability and availability. Six cooperation agreements on the use of satellite monitoring facilities of Member States (Belarus, China, Germany, Republic of Korea, Pakistan and Viet Nam) have been signed to implement the objectives of this Resolution. Other cooperation agreements are being discussed. The Bureau has also continued developing and revising the requirements for the implementation of a database and corresponding web application for submission and publication of harmful interference reports for space services (SIRRS). The system was available for external testing from 15 February to 20 July 2018.

Resolution 187 (Rev. Busan, 2014) – Review of the current methodologies and development of a future vision for the participation of Sector Members, Associates and Academia in the activities of ITU

PP-14 instructed the Council to review the rights and benefits of Sector Members, Associates and Academia. While there was no consensus on possible changes to membership fee structure, progress was made in two key areas. Council 17 approved revised criteria for exemptions from fees for international and regional organizations improve fairness and reduce the total number of exempted entities. The main changes include a tighter definition of reciprocity and no longer allowing industry associations to benefit from exemption. These revised criteria are being applied to pending and new applications for exemption, and the entire list of existing entities is being reviewed against the new criteria to determine which ones should be recommended to PP-18 for extension.

Council 2017 also approved a new pilot project to engage SMEs in the work of interested ITU-T and ITU-D Study Groups. ITU-T SG 5 and SG 20 have chosen to implement the SME pilot project and consideration is being given to possible implementation in ITU-D Study Groups.

Resolution 191 (Rev. Busan, 2014) – Strategy for the coordination of efforts among the three Sectors the Union

The implementation of this resolution, following a review of the internal task forces, committees and groups, led to the establishment of the Inter-Sector Coordination Task Force (ISC-TF), chaired by the Deputy Secretary-General. ISC-TF aims to facilitate the coordination and collaboration among the three Bureaux and the General Secretariat, with a view to avoid duplication of effort and optimize the use of resources.

From 2015 until June 2018, the ISC-TF held 24 meetings. The areas of inter-sectoral interest coordinated by ISC-TF include the topics of: Climate change, Emergency telecommunications, Accessibility, Communications, Web editorial, Resource mobilization, Gender, Events Coordination, Bridging the Standards Gap, and, as of 2017, SMEs and Youth.

On the membership side, the meetings of the sector advisory groups in 2014 and 2015 discussed and agreed on the establishment of an Inter-Sectoral Coordination Team (ISCT) on Issues of Mutual Interest. The Terms of Reference were agreed among the Sectors and a leadership team was appointed. The team had four meetings in total, within the period of 2015 to June 2018.

Reports on the implementation of this Resolution were presented annually to Council: [C15/38](#), [C16/38](#), [C17/38](#), and [C18/38](#).

Resolution 192 (Rev. Busan, 2014) – ITU participation in memoranda of understanding with financial and/or strategic implications

In accordance with paragraph 2 of “Resolves to instruct the Secretary-General” of Resolution 192, the Secretary-General has submitted annually a report to the Council detailing the relevant MoUs having financial and strategic implications for the Union. More information in this respect may be found in documents [C15/94](#), [C16/78](#), [C17/48](#), and [C18/59](#).

Furthermore, since 2015, in meetings of the Council and the Council Working Group on financial and Human Resources (CWG-FHR), draft criteria and guidelines for ITU’s participation in MoUs that have financial and strategic implications have been discussed, resulting in valuable and collegial exchanges, but the Council did not find a consensus on these criteria and guidelines and considered it more appropriate to report to PP-18 that the issues addressed in Resolution 192 require further consideration. More information may be found in documents [C17/93](#), [C17/104](#), and [C17/120](#).

Resolution 194 (Rev. Busan, 2014) – Options for the Union's headquarters premises over the long term

CWG-HQP was created, completed its work and made a final report to C-16. C-16 agreed in Council Resolution 588 to: replace the Varembe building by a new construction that would also include the offices and facilities of the Tower building, and complement the Montbrillant building which would be retained and refurbished; to establish an Advisory Board of Member States to provide independent and impartial advice on the project to the Council and Secretary-General; to authorize a maximum budget for total project costs before sale of the Tower of CHF 140 million and an additional contingency fund of CHF 7 million to be used, if necessary, for unforeseen cost overruns. The Secretary-General has informed Switzerland, applied for and received a first loan for the design of this building. After an international design competition, a winner has been selected, and the secretariat is proceeding with the work needed to complete a design and apply for a second loan, for the construction of the new building. More information may be found in documents [C15/7](#), [C16/7](#), [C17/7](#), [C18/7](#), and [C18/48](#).

Resolution 197 (Rev. Busan, 2014) – Facilitating the Internet of Things to prepare for a globally connected world

ITU has been active in IoT since 2005. Standardization activities were grouped together in 2015 in ITU-T Study Group 20 on Internet of Things (IoT) and applications including smart cities and communities. ITU and UNECE have launched in 2016 the United for Smart Sustainable Cities (U4SSC), supported by 16 other United Nations Agencies, Programmes, and Regional Commissions. About fifty cities worldwide are involved in a series of pilot projects to implement ITU-standardized KPIs for smart sustainable cities. IoT will also play a crucial role in IMT-2020. Numerous capacity-building workshops have been organized by ITU. More information may be found in documents [C15/32](#), [C16/23](#), and [C17/23](#).

Resolution 198 (Rev. Busan, 2014) – Empowerment of youth through telecommunication/information and communication technology

ITU has advanced in the implementation of Resolution 198 (Busan, 2014), which establishes ITU's mandate in the area of empowering youth through telecommunication/ICT. The implementation of Resolution 198 followed the lines of action indicated in the roadmap for 2016-2018 established by Council Resolution 1374, covering areas such as strengthening work with academia, promoting participation of young professionals in ITU meetings and governing bodies, strengthening ITU's work in the area of young innovators and entrepreneurs and ensuring ITU-wide coordination in the area of youth, as well as ITU-D work in promoting the use of ICT for the economic and social empowerment of youth and collection and reporting on the use of ICT by youth.

One of the main deliverables achieved in the period covered by this report has been the strengthening of ITU's work with academic institutions. Currently ITU has over 150 academia members and is preparing the 1st special issue of the new scholarly, peer-reviewed ITU Journal: *ICT Discoveries*, as well as the 10th edition of the ITU Kaleidoscope academic conferences (Argentina, 26-28 November 2018). Kaleidoscope 2017, kindly hosted by Nanjing University of Posts and Telecommunications, China, attracted 300 academics from 26 countries. Another key deliverable achieved in this period was the organization of the Young Policy Leaders Programme in the 2015, 2016 and 2017 sessions of Council, as well as the support to the Busan Young Policy Leaders Programme, organized in cooperation with the city of Busan in 2015, 2016 and 2017. These programmes strengthened the participation of young professionals in the official work of the Union. Other deliverables include the appointment of President Luis Guillermo Solís Rivera of Costa Rica as the ITU Patron for Youth and ICTs, and the ongoing implementation of International Girls in ICT Day. ITU and ILO launched the [Digital Skills for Decent Jobs for Youth campaign](#) during the WSIS Forum in June, aiming to incentivize stakeholders around the world to train 5 million young people with job-ready digital skills. The campaign has already received initial commitments, and would welcome support from all ITU members. ITU is contributing a Digital Skills Toolkit, developed by BDT, as a knowledge product of the Global Initiative on Decent Jobs for Youth to be published in March 2018.

The Young Innovators programme was further integrated with the official programme of ITU Telecom World, which now includes a new set of services and activities aimed at tech SMEs. This programme allowed entrepreneurs –including young entrepreneurs- to strengthen their contacts, get mentorship and training and access international markets.

Further information about ITU's activities in youth is available in www.itu.int/youth, as well as documents [C15/91](#), [C16/20](#), and [C17/35](#).

Resolution 200 (Rev. Busan, 2014) – Connect 2020 Agenda for global telecommunication/information and communication technology development

The ITU secretariat focused on raising awareness of the Connect 2020 Agenda among all stakeholders of the ICT ecosystem. Connect 2020 was integrated into existing ITU events and platforms, such as the high-level Leadership Summit and Ministerial Meetings at ITU Telecom World events and sessions at the WSIS Forum.

The Connect 2020 goals to 'Connect the Unconnected', and in particular Target 1.2 ("Worldwide, 60% of individuals should be using the Internet by 2020") –translating into an additional 1.5 billion people online by 2020, has been the focus of several events and fora where ITU participated, including, inter alia, the Internet Governance Forum and the Broadband Commission Special Sessions at the World Economic Forum Annual Meeting at Davos, where in January 2016 several stakeholders issued a joint statement pledging a concerted global effort.

Connect 2020 was referenced by several other initiatives promoting expanding global connectivity, including the Global Connect by the US State Department, the WEF Internet for All initiative and the G20 Digital Economy Ministerial Declaration.

In support of the Connect 2020 Agenda, two discussion papers were elaborated: the first one on “Working Together to Connect the World by 2020”: (1) highlighting the largely positive economic impact of the Internet on economic growth, (2) estimating high-level infrastructure investment requirements of USD 450 billion to connect the next 1.5 billion, and (3) providing evidence of a generally positive link between a progressive enabling and regulatory environment and broadband penetration; while the second one on “Working together to achieve Connect 2020 Agenda Targets” provided greater detail on who and where the unconnected are, what the key challenges are to meet the Connect 2020 Agenda Targets, and what possible measures can accelerate the connection of the unconnected to achieve those Targets.

Progress towards the implementation of the Connect 2020 targets was included in the Measuring the Information Society report 2015, the annual progress reports on the implementation of the ITU Strategic Plan 2016-2019 to Council (see documents [C16/35](#), [and C17/35](#), and [C18/35](#)), and the annual reports were presented to the Council (“Progress and roadmap for the implementation of the Connect 2020 Agenda”: [C15/93](#), [C16/39](#), [C17/39](#)).

Decision 5 (Rev. Busan, 2014) – Revenue and expenses for the Union for the period 2016-2019

The secretariat presented annual progress reports on the implementation of Annex 2 to Decision 5 to the Council in documents [C15/45](#), [C16/45](#), [C17/45](#), and [C18/45](#).

Biennial budgets for 2016-2017 and 2018-2019 were also presented respectively to Council 2015 and Council 2017 ([C15/10](#) and [C17/10](#)).

Annex 2: List of ITU Member States and their contributory units

List of ITU Member States and their contributory units