Telecommunication Development Sector

Implementation report
January – June 2017

Implementation of the:

Strategic plan

Operational plan

Financial plan

ITU-D Mission

To foster international cooperation and solidarity in the delivery of technical assistance and in the creation, development and improvement of telecommunication/ information and communication technology (ICT) equipment and networks in developing countries. ITU-D is required to discharge the Union's dual responsibility as a United Nations specialized agency and executing agency for implementing projects under the United Nations development system or other funding arrangements, so as to facilitate and enhance telecommunication/ ICT development by offering, organizing and coordinating technical cooperation and assistance activities.

Goal

The strategic goal of the ITU Telecommunication Development Sector (ITU-D) is threefold, and includes:
- To promote the availability of infrastructure and foster an enabling environment for telecommunication/ICT infrastructure development and its use in a safe and secure manner
- To provide assistance to developing countries in bridging the digital divide by achieving broader telecommunication/ICT-enabled socio-economic development
- To expand the benefits of the information society to the membership in cooperation with public and private stakeholders, and to promote the integration of the use of telecommunications/ICTs into the broader economy and society as drivers of development, innovation, well-being, growth and productivity globally.

Objectives

Objectives 1:
Foster international cooperation on telecommunication/ICT development issues

Objective 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

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

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

Objective 5:
Enhance environmental protection, climate change mitigation and adaptation, and disaster management efforts through telecommunication/ICTs

Outputs

1.1 WTDC

1.2 Regional Preparatory Meetings (RPMs)

1.3 Telecommunication Development Advisory Group (TDAG)

1.4 Study Groups

2.1 Policy and regulatory frameworks

2.2 Telecommunications/ICT networks, including conformance and interoperability and BSG

2.3 Innovation and Partnership

3.1 Building confidence and security in the use of ICTs

3.2 ICT applications and services

4.1 Capacity building

4.2 Telecommunication/ICT statistics

4.3 Digital inclusion of people with specific needs

4.4 Concentrated assistance to LDCs, SIDSs and LLDCs

5.1 ICTs and Climate change adaptation and Mitigation

5.2 Emergency telecommunications

Activities

Creation of tools and guidelines

Handling of special needs

Project management and coordination

Financial, operational and strategic planning, control and reporting

Database and web site management

Documentation (preparation, writing and editing)

Assisting members and related tasks

Research and analysis

Sharing information and related tasks

Preparation and delivery of training

Overview of ITU-D Strategic and Operational Plan Implementation

The following is a summary of results achieved, for the period January to June 2017, on the overall implementation of the five objectives of the ITU-D Strategic and Operational Plan.

Five ITU-D Objectives

Objective 1

"Foster international cooperation on telecommunication/ICT development issues"

The results achieved during the period of January to June 2017 are as follows:

1.1- World Telecommunication Development Conference (WTDC)

The next World Telecommunication Development Conference (WTDC) will take place in Buenos Aires, Argentina, from 9 to 20 October 2017. The proposed theme of WTDC-17 is "ICT for Sustainable Development Goals" (or "ICT4SDGs") and is intended to send a message to the outside world about ITU's alignment to the 2030 Sustainable Development Agenda.

The preparations for WTDC-17, including the review and finalization of key documents, were well under way. The 22nd meeting of the Telecommunication Development Advisory Group (TDAG), the six regional preparatory meeting (RPMs) for WTDC-17 and related meetings have extensively reviewed, discussed, and made inputs to the finalization of key documents and preparations for the organization of WTDC-17.

The following preliminary draft documents have been reviewed for WTDC-17:

- Report on the implementation of the Dubai Action Plan;
- Report on the Telecommunication Development Advisory Group activities;
- Report on the regional preparatory meetings for WTDC-17;
- Draft ITU-D Contribution to the ITU Strategic Plan for 2020-2023;
- Draft ITU-D Action Plan for 2018-2021;
- Draft WTDC-17 Declaration;
- Rules of Procedure of ITU-D (WTDC Resolution 1);
- Report on streamlining WTDC Resolutions;
- Reports by the Study Group Chairmen;
- Report on ITU-D Contributions to WSIS Action Lines.

> " ITU's duties and responsibilities in the Telecommunication development sphere are consolidated in the Telecommunication Development Sector (ITU-D) "

The preparations for WTDC also include the High-Level Segment, which provides a unique platform for high-ranking officials from Member States to express their views on emerging trends and on matters of strategic importance to the development of the telecommunication and information and communication technology sector. In addition, a number of side events have been planned around the WTDC-17 theme of ICT4SDGs.

The year 2017 is particularly important for ITU-D as it marks the Sector's 25th Anniversary. Several activities have been planned to celebrate this anniversary during WTDC-17.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 72, 77, 131, 135, 139, 140, 151, 154, 165, 167
WTDC Resolutions: 1, 2, 5, 30, 53, 81, 82

1.2- Regional preparatory meetings (RPMs)

In line with WTDC Resolution 31, the Telecommunication Development Bureau (BDT) has organized one regional preparatory meeting (RPMs) per region for WTDC-17, each preceded by a one-day meeting of the regional development forum (RDF). The RPMs were organized in the Kyrgyz Republic for the Commonwealth of Independent States (CIS), in Rwanda for Africa, in Sudan for the Arab States, in Paraguay for the Americas, in Indonesia for Asia and the Pacific, and in Lithuania for Europe.

All six RPMs were held with the objective to identify priorities at the regional level for the development of telecommunications and information and communication technologies (ICTs). They gave careful consideration to the results of the implementation of the Dubai Action Plan since 2014 and mainly focused their discussions on the priority issues, topics and questions, and regional initiatives to be included in the Buenos Aires Action Plan (BaAP). All RPMs recognized that ITU-D regional initiatives constitute an effective mechanism for fostering implementation of the WSIS outcomes and 2030 Agenda for Sustainable Development, including achievement of the Sustainable Development Goals.

In addition, all RPMs arrived at a set of proposals on priority issues for their respective regions that will serve as a basis for the formulation of contributions to WTDC-17, which will consider the ITU-D activities to be carried out over the next four-year period (2018-2021).

The following key documents were submitted to and 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.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 135, 140, 165, 167
WTDC Resolutions: 1, 5, 17, 25, 30, 31, 61, 81

1.3- Telecommunication Development Advisory Group (TDAG)

The 22nd meeting of the Telecommunication Development Advisory Group (TDAG) took place from 9 to 12 May 2017 at ITU headquarters in Geneva. It was the last meeting before WTDC-17, which will take place in Buenos Aires, Argentina. The meeting of TDAG has addressed the following broad range of subjects:

- Preparations for the upcoming WTDC-17, including (i) an update on the preparations for WTDC-17, (ii) the report of the Regional Preparatory Meetings Coordination Meeting, (iii) the structure of WTDC-17, (iv) the ITU-D Contribution to the Draft ITU Strategic Plan, (v) the Draft ITU-D Action Plan, and (vi) the Draft WTDC-17 Declaration;

- Outcomes of WTSA-16 related to the work of ITU-D;

- Implementation of the ITU-D Strategic Plan and Operational Plan 2016, including regional initiatives;

- ITU-D four-year rolling Operational Plan 2018-2021, including a progress report by the TDAG Correspondence Group on the Strategic Plan, Operational Plan and Declaration;

- ITU-D contribution to the implementation of the WSIS Plan of Action, including the United Nations General Assembly Overall Review and the Sustainable Development Goals;

- Working methods and Rules of Procedure of ITU-D (WTDC Resolution 1), including a report by the TDAG Correspondence on Rules of Procedure of ITU-D;

- Streamlining WTDC Resolutions;

- ITU-D 25th Anniversary celebrations;

- Collaboration with the other Sectors, including a progress report on the Inter-Sector Coordination Team on Issues of Mutual Interest;

- ITU-D Study Group-related matters;

- Membership, partnership and innovation-related matters.

The following additional meetings took place during the TDAG week:

- Correspondence Group on Rules of Procedure of the ITU Telecommunication Development Sector ITU-D (WTDC Resolution 1);

- Correspondence Group on the Strategic Plan, Operational Plan and Declaration;

- Correspondence Group on Streamlining WTDC Resolutions;

- Inter-Sector Coordination Team on Issues of Mutual Interest.

Some of the main outcomes of TDAG were as follows:

- In relation to the ITU-D Contribution to the Draft ITU Strategic Plan, TDAG drew attention to documents TDAG17-22/7, TDAG17-22/8 and TDAG17-22/9, which contain the compilation of outcomes by RPMs and contributions to TDAG17 and invited members to use these documents in their preparation for WTDC-17.

- In relation to the Working methods and Rules of Procedure of ITU-D (WTDC Resolution 1), TDAG advised members to use the compilation document TDAG17-22/10 in the preparation for WTDC.

- In relation to streamlining WTDC Resolutions, TDAG supported the report of CG-SR and appreciated the proposal to reduce the number of study Questions and efforts to avoid duplications.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 135, 140, 151, 154, 165, 167
WTDC Resolutions: 1, 5, 17, 30, 61, 81

1.4- Study Groups

- The ITU-D Study Groups held their third set of Rapporteur Group meetings for the 2014-2017 study period in January 2017. The SG1 Rapporteur Groups, including the Joint ITU-D/ITU-R Group for WTDC Resolution 9, met in Geneva from 9 to 18 January 2017, followed by the SG2 Rapporteur Group meetings from 18 to 27 January 2017. The Rapporteur Group meetings were an important milestone towards the completion of the expected deliverables for all study Questions for the study period. Significant progress was made on the expected deliverables, and the groups also brainstormed on possible future directions and related activities of their specific study Questions. These thoughts on the possible future of the study Questions are useful as members debate and formulate proposals on these matters at regional preparatory meetings (RPMs) and at WTDC-17.

- In conjunction with the Rapporteur Group meeting for Question 3/2 (cybersecurity), an open workshop was held on the topic of "Cybersecurity and risk assessments in practice" on 26 January 2017. Experts gathered to share their knowledge and experiences on the practical assessment of cyber risks at the national level, in large organizations, and in critical infrastructure sectors. Supply chain risks and the role of standards for managing cyber risks in organizations were also debated.

- The final ITU-D Study Group 1 and 2 meetings for the study cycle took place in Geneva from 27 to 31 March 2017 and from 3 to 7 April 2017, respectively. The SG1 and SG2 meetings agreed to the Final Reports containing the deliverables called for by WTDC-14 for all SG1 and SG2 Questions. The groups also continued discussing the future of the existing study Questions, which in turn serve to inform Member States as they prepare for WTDC-17.

- The SG1 and SG2 meeting dates for the next study period (2018-2021) were also considered.

- Sponsorship opportunities were made available for activities, such as exhibits, side and social events, around all ITU-D SG1 and SG2 meetings, including Rapporteur Group meetings in 2017.

- The call to Member States to nominate candidates for the positions of chairmen and vice-chairmen of ITU-D study groups for the next study period (2018-2021) was launched in May 2017.

- A total of 18 publications, available in the six languages, have been finalized for WTDC-17 to display the outputs gathering the results of the studies and surveys conducted, and reflecting the inputs received during the 2014-2017 study period.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 135, 140, 154, 165, 167
WTDC Resolutions: 1, 2, 5, 9, 17, 21, 30, 61, 80, 81

Objective 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"

The results achieved during the period of January to June 2017 are as follows:

2.1- Policy and regulatory frameworks

- ITU-D continues to share data, research, and analysis and publications on cutting-edge policy, regulatory, and economic issues. The 2017 Global Regulatory Outlook was launched (executive summary available at http://www.itu.int/en/ITU-D/Regulatory-Market/Pages/Outlook/2017.aspx) - a first report in a new annual series tracking market and regulatory trends in the ICT sector and their implications across the economy. A new report on Maximizing availability of international connectivity in developing countries: Strategies to ensure global digital inclusion as well as a discussion paper on the social and economic impact of digital transformation on the economy were released. Reports and White Papers analyzing new business models in a digital economy have been published, with more reports under preparation.

- Enhancing Knowledge-exchange tools and platforms (ICTEye, ICT Regulation Toolkit, the ICT regulatory knowledge centre);

- Gathering and publishing key regulatory and tariff data to facilitate evidence-based decision making: ITU-D has developed the ICT Regulatory Tracker, a unique data-based tool that covers over 186 countries for a period of nine years, showcasing national, regional, and global regulatory progress. The 2015 edition of the Tracker was updated, and access is facilitated through its release on a new online micro-site, available here: (https://www.itu.int/net4/itu-d/irt/#/tracker-by-country/regulatory-tracker/2015) . The 2017 edition of the annual ITU-D questionnaire on regulatory and policy issues was sent out to Membership to help track the evolution of ICT policies and regulation.

- Fostering key strategic dialogues, including the Global Symposium for Regulators, and delivering best practice guidelines on key regulatory and policy issues and approaches: Key strategic dialogues on International Mobile Roaming were pursued, draft strategic guidelines were shared, and preparations were made for the 17th edition of the Global Symposium for Regulators (GSR) and its pre-events (the Global Dialogue on Digital Financial Inclusion and the Regulatory Associations meeting and Private sector Chief Regulatory Officers meeting) scheduled from 11 to 14 July in Nassau, the Bahamas.

- As the sole facilitator of WSIS Action Line C6, BDT is leading activities related to the enabling environment for investment and growth in the ICT sector and beyond. A facilitation meeting on the Regulatory Wheel of Fire: Collaborative Regulation to Leverage ICTs for SDGs was held during the WSIS Forum 2017.

- The study and report of the Broadband strategy for Burundi have been completed and validated in Yaoundé at the end of January 2017 in the ITU Area Office premises in the presence of 6 delegates from the administration of Burundi.

- BDT Forum on Economics and Finance in ICTs/ Telecommunication for Africa and the TSB-SG3 Regional meeting for Africa were held back-to-back on 30 January to 2 February 2017 at Victoria Falls, Zimbabwe. These meetings were attended by 91 participants from 25

countries and 5 institutions, namely ATU, SADC, ESMT and UPU. The Forum provided a platform at which economical and financial issues affecting the sector in different countries were discussed, and possible solutions were considered.

- International Mobile Roaming (IMR) Cost Model training for the SADC region was held on 29 March 2017 in Durban, South Africa, and it was attended by 10 SADC Member States and over 60 delegates.

- ITU Regional Forum on Consumer Information, Protection and Rights for Africa 2017 was held in Cotonou, Benin, on 14-16 March 2017 with 131 participants from 21 countries, including the ATU, GSMA and ESMT.

- Validation Meeting for the Broadband Universal Access Study and Household Survey for the Kingdom of Lesotho was held on 23 March, 2017 in Maseru, Lesotho. The final report shall provide policy and strategic guidance for broadband development in the Kingdom.

- The review of the National Broadband Policy and Associated Strategic Implementation Plan for Achieving a Digital Economy for the Republic of Namibia was prepared with technical support from the ITU to align it with the new "Guidelines for the structure of a public policy document" released by the Government of Namibia at the end of 2016. The review was finalized and fully accepted by the Government of Namibia.

- Knowledge and best practices on the contribution of ICTs to the UN SDGs 2030 were shared during the ITU/BDT Regional Economic and Financial Forum of Telecommunications/ICTs for Arab States held in Nouakchott-Mauritania on 17-18 May 2017. The Forum was attended by 85 participants from 6 countries.

- Expert Group Meeting on Smart Grids, held on 28 February 2017 within the framework of the ITU Regional Initiative for Europe on Broadband, gathered more than 30 telecom and energy stakeholders and provided foundations for a study on smart grids to be released in Q2/2017.

- ITU Regional Forum for CIS and Europe on Innovation Capabilities and Growth of ICT Startups, raised awareness of ITU activities in the regions, including the implementation of Regional Initiatives. This forum was attended by 54 participants from 12 countries (Europe and CIS).

- ITU-GSMA Asia-Pacific Digital Societies Policy Forum 2017, held in Bangkok, Thailand, on 8-10 May 2017, in welcomed about 160 participants from over 20 countries in the ASP region. The forum addressed emerging digital services towards the age of 5G.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 102, 135, 138, 154, 165
WTDC Resolutions: 1, 9, 17, 21, 23, 30, 32, 43, 48, 62

2.2- Telecommunication/ICT networks, including conformance and interoperability and bridging the standardization gap

- ITU-D continues to implement and update the ITU Interactive Terrestrial Transmission Maps (http://itu.int/go/Maps). The ITU Maps presents critical ICT infrastructure on broadband backbone optical fiber, microwave links, satellite earth stations, and as submarine cables. The Map interface is being renewed to allow new data visualizations and data analytics; a Request for Proposal has been realized and procurement process is ongoing for implementing these new features to the ITU-D GIS system. At the time of this reporting, the Map presents information from 400 operator networks and 18,461 nodes worldwide. The research on the transmission links has reached 10,251,263 km of routes, of which 2,630,172 km have been imported to the Map.

- As the sole facilitator of WSIS Action Line C2, BDT is leading activities on Information and Communication Infrastructure focusing on the achievements of the SDG 9 (infrastructure, industry and innovation). During the WSIS Forum 2017 two major events, the Workshop on mapping infrastructure Gaps and the Action Line C2 Facilitation Meeting, took place with around 40 participants and 6 presentations in each event.

- A revision of the report on the Implementation of Evolving Telecommunication/ICT Infrastructure for Developing Countries: Technical, Economic and Policy Aspects were developed and shared with all participants of the ITU-D Study Groups. This revision added to essential telecommunication/ICT infrastructure and their technologies information on IoT standardization process and concepts, spectrum, and broadcasting. The report makes reference to more than 200 ITU publications (e.g. ITU-D Study Group Reports, ITU Guidelines, and ITU Recommendations from all Sectors).

- Until the beginning of 2017 Spectrum Management Master Plans were provided within the framework of an ITU-Ministry of Science, ICT & Future Planning (MSIP) (Republic of Korea) project for countries in ASP (Brunei, Bangladesh, Pakistan, Thailand, Fiji, and Samoa) and in the Caribbean (Grenada, Jamaica and Saint Vincent and the Grenadines).

- Regional Seminar for Europe and CIS on "Spectrum Management and Broadcasting was held with around 70 participants" in Rome on 29-31 May 2017. In 9 sessions, 45 presentations were delivered on, among others, the Future of digital terrestrial television broadcasting, Digital dividend utilisation, IMT 2020 (5G), Spectrum needs of IoT, etc.

- Assistance on conformity and interoperability has been provided to developing countries. A C&I Assessment Study has been developed for South America region, and regional training events have been organized together with testing laboratory partners for AMS, ASP and AFR.

- Enhanced knowledge in Conformance & Interoperability for Africa with a training held in Tunis in May 2017. 8 participants from 6 countries participated in the training in Regulatory framework and practical EMC tests.

- Assistance to Member states on Future Internet Exchange & IPv6-based broadband: Final Improvements for Future Internet Exchanges Publication and Publication on Future Internet Exchange.

- Assistance to Member States on IPv6-based broadband (Business Model, SWOT Analysis, Policy and Strategy);

- Implementation of Broadband Wireless Networks to connect Schools and Hospitals in rural and remote areas in Burundi, Burkina Faso, Djibouti (operations) and ongoing in Swaziland, Mali.

- Assistance to Member States on the Development of Broadband Access is ongoing for CIS countries: Web-based software for selecting the most feasible solution for broadband deployment in CIS and Georgia based on information about specific location in CIS and Georgia (city, settlement, etc.).

- A digital switch-over database was updated based on information from around 10 countries (see http://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Pages/DSO/Default.aspx).

- Broadband Wireless Network in Africa – DJIBOUTI: Field Installations (final phase) and last shipment completed;

- South-Sudan final document on broadband;

- New Broadband Wireless Connectivity Model taking into consideration the Migration strategy to NGN in Swaziland and discussions with PROC on the way forward for Equipment procurement for Swaziland;

- Broadband Wireless Network in Africa – MALI: Administrative process and Needs Assessment;

- Broadband Wireless Network in Africa - BURKINA FASO: Tender Process for E-Learning;

- The pre-feasibility study to enhance ICT infrastructure for East African Community (EAC) to support the EAC-ITU- China Project was completed for the 3 components: Enhanced Broadband and connectivity infrastructure in East African Community, Regional E- transactions platform for e- government and e-commerce, and Centre of Excellence in ICT research and Innovation. A preliminary report was presented to stakeholders, including the Ministers of Rwanda and Uganda and the ITU SG during the Transform Africa Summit, held in Kigali, Rwanda on 10 May 2017.

- Within the framework of the ITU-Latin-American Development Bank (CAF), 12 roadmaps for the transition from analogue to digital terrestrial television broadcasting were developed, and a summary report on the digital broadcasting roadmaps, which includes all beneficiary countries, has been prepared.

- Diagnosis and updating of National Technical Plans of Radio Broadcasting in the Republic of Colombia are currently under development.

- Diagnosis and audit to the process of assignment of spectrum by objective selection in the Republic of Colombia are currently under development.

- AMS RI 3 on Development of broadband access and adoption of broadband achieved to date the following results: provision of assistance for the development of guidelines for sustainable broadband infrastructure in rural areas; delivery of studies on broadband; capacity building activities; support for the establishment of Community ICT Centers; support to South American countries in terrestrial optical cable systems; and the formulation and development of national broadband policies to implement a broadband technology framework.

- Members' capacity was built on the latest developments in digital terrestrial television, IPv6, and SMS4DC through workshops, trainings, and direct assistance.

- Assisted Djibouti in the feasibility study for the establishment of a Regional Internet Exchange Point (IXP);

- Enhanced Capacity of over 260 delegates from Arab countries in the fields of spectrum management and frequency planning and coordination through the organization of the 3rd Annual MENA Spectrum Management Conference, held on 24-25 January 2017 in Dubai, in partnership with Forum Global and TRA United Arab Emirates. This event was followed by the ITU workshop on Cross-Border Frequency Management in Arab States on 26 January 2017 in Dubai, UAE.

- BDT and BR have been collaborating towards the support on Cross Border Frequency coordination for AMS countries with borders in the Caribbean Basin plus Central American countries. The first successful meeting took place in Nicaragua on 8-10 March 2017 with the participation of 18 countries and 3 regional telecom organizations. The second meeting was carried out in Guatemala from August 28 to September 1, with at least 8 iterations toward coordination.

- Enhanced the skills of 80 delegates from seven Arab countries in the area of Technical, Regulatory and Policy Aspects related to "Broadband Networks in the Era of App Economy". This was during the ITU Arab Forum on Future Networks, held in partnership with CIFODECOM on 21-22 February 2017 in Tunis, Tunisia. 80 delegates from seven Arab countries attended the Forum, where challenges and opportunities of the new App Economy were presented and discussed.

- Enhancement of knowledge and skills of 85 participants from 6 countries on business models and Costs/Tariffs during Regional Economic and Financial Forum for Arab States, held in Mauritania in May 2017;

- Country Assistances on development of framework for cross border RF interference management was provided to LAO P.D.R and Cambodia. Mongolia is being assisted on the development of Spectrum Management National Master-plan.

- Assistance was provided to Timor-Leste on developing Spectrum Monitoring plan: Detailed report on developing Radio Frequency Monitoring capability delivered. National workshop on technical skill development of ANC (regulator) staff conducted. Skills of 12 technical engineers developed on RF monitoring.

- The "ITU Asia Pacific Centre of Excellence (CoE) online Training on Spectrum Management" was successfully held on 13–26 May 2017. 292 participants from diverse backgrounds, including Administrations, Regulators, Operators and academia (excluding presenters), registered for the course. The participants came from 49 countries, of which 20 were from Asia-Pacific region and 29 were from outside ASP region. Participation during the workshop was very effective, especially in the forums where over 770 posts were made on more than 50 topics in 2 weeks.

- 3 countries for three regions have been selected for assistance within the framework of the ITU-Republic of Korea project on Basic National Spectrum Management system.

- Coordinated the data collection and validation in the process of enhancing the Interactive Terrestrial Transmission Map in Europe, covering infrastructure of more than 90% of European countries;

- Assistance was provided to Nepal on updating National Radio Frequency Management Framework and draft Radio Law.

- 3rd Annual Asia-Pacific Spectrum Management Conference (2 - 3 May 2017) was conducted in partnership with Forum Global (over 200 participants), followed by ITU workshop on Managing spectrum in the age of wireless communication (3-4 May 2017) in Bangkok. The workshop was attended by 83 participants representing administrations, regulators, industry and operators.

- ITU-R SG1 Resolution 9 co-chair participation in WP1B work, modified final report on efficient spectrum management and new broadcasting technologies;

- Relevant ITU activities (for all the three sectors) have been presented during the WHO International Advisory Committee Meeting on the Non-Ionizing Radiation Programme 29-(30 June 2017).

- The "ITU Asia Pacific Centre of Excellence Training on Internet and IPv6 Infrastructure Security Program" (8-12 May 2017 at TOT Academy, Nonthaburi, Thailand) built capacity of 35 participants from across the Asia-Pacific in the area of IPv6 and Internet Infrastructure Security.

The training workshop was organized by the ITU, the Ministry of Digital Economy and Society, Thailand and the APNIC with support from the IEEE Comsoc and the TOT Academy.

- A workshop on IPv6 Deployment and IPv6 Security Workshop was held on 19-21 June at Thimphu, Bhutan, in partnership with Department of Information Technology and Telecommunication (DITT) and APNIC. The workshop was supported by ITU-DoCA (Australia) project. The workshop was attended by around 50 participants from government, regulators, industry and academia. Following the workshop, consultations on IPv6 roadmap development were also held with key stakeholders in Bhutan.

- More than 30 participants raised their awareness on Conformity and Interoperability (C&I) for 4G LTE through the ITU Asia-Pacific CoE online distance learning programme organized in partnership with CAICT.

- Enhanced regulatory cost modeling tool for promoting affordable access of voice and data services by building the regulatory capabilities of Bangladesh Telecommunication Regulatory Commission (BTRC), 5-8 June 2018.

- The V Latin-American Telecommunications Congress was jointly organized with GSMA LA, ASIET and CAF from June 19 to 22 in Cartagena, Colombia. More than 500 people attended the Congress. In a poll distributed to 150 attendees, the panel organized by the ITU ranked second (out of seven) under the category "Which was the most relevant panel?".

- Assisted Guatemala to define a model for the National Internet Exchange Point (IXP) and started the coordination of its physical implementation;

- Cybersecurity technical Training for Suriname and for the Caribbean during the first week of July;

- Improved regional collaboration on regulatory, economic and technical aspects of post-NGN, 4G and 5G and facilitated dialogue between policy-makers, regulators and the private sector during an ITU Regional Conference, which was held in Kiev, Ukraine, on 7-9 June 2017 and which was attended by 125 participants from 7 countries.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 101, 123, 176, 177, 178, 203
WTDC Resolutions: 1, 9, 10, 17, 21, 23, 30, 32, 43, 47, 48, 62

2.3- Innovation and partnership

- Partnership in the ICT ecosystem: Partnership and resource mobilization enhanced through direct contacts, networking and meetings. Between 1 January and 30 June 2017, 19 new partnership agreements have been signed with various stakeholders: on ICT Applications (5), multi-thematic (4), human capacity building (3), infrastructure and e-waste (2), regulatory and market environment, digital inclusion and emergency telecommunications (1). Beneficiary regions of these new signed agreements were Global (9), The Americas (4), Arab States, Asia-Pacific (2), Africa, and CIS (1). The BDT internal database on partnership agreements have been enhanced to support BDT resource mobilization efforts and to facilitate identification of potential partners. BDT pays particular attention at nurturing relationship with existing partners and engaging with them in lasting relationship. In addition, BDT also recognizes the importance of widening and diversifying its partners' base through outreaching activities towards nontraditional partners. Therefore, in a convergent ICT ecosystem, entities from other sectors are becoming new BDT partners, such as Pierre Fabre Foundation for projects in m-health or International Solid Waste Association for projects related to e-waste.

- ITU has been working in alliance with PAHO during 2017 on updating a study on successful experiences on e-health in the Americas region and in replicating successful e-health initiatives. The study has advanced as scheduled, and there have been many coordination meetings with Peruvian health authorities and Salvadorian health and telecommunication authorities with the aim to replicate in El Salvador and/or Honduras a teleconsultation scheme and a maternity and newborn sms application.

- Sponsorship Opportunities: In 2017, a new interactive sponsorship platform, available in the six ITU official languages, has been launched for social and side-events activities taking place at the occasion of BDT organized events. Opportunities were opened for Study Group meetings, GSR-17 Side Events, WTDC-17 Side-events as well as ITU-D 25th Anniversary. This website/portal proposes opportunities to entities to enhance their visibility, promote brands, and showcase ICT products and solutions. Discounts are offered to ITU-D Membership for open events/meetings as well as for multiple sponsored activities. All resources mobilized are used to organized activities sponsored and to implement activities, projects and initiatives, including the regional initiatives, in the framework of the WTDC-14 and WTDC-17 Action Plans.

- Following the 7th Private Sector Chief Regulatory Officers' (CRO) and the establishment of the CRO Working Group on Digital Financial Inclusion (CRO WG-DFI) on 14-15 November 2016, Bangkok, Thailand, coordination with identified countries (i.e. Mongolia and Sudan) and relevant stakeholders from the financial and ICT/telecommunications public and private sector entities was kicked-off in 2017. Several CRO WG-DFI e-meetings took place and assessment missions to Mongolia and Sudan were carried out by end June 2017 for which the outcomes were presented at the 8th CRO and CRO WG-DFI meetings demonstrating the need for enhanced collaboration between financial and ICT/telecommunication regulators to achieve UFA. A Private-Sector Roundtable led by CRO industry members has been organized as a pre-event of WTDC-17. Among other things, the roundtable will review CRO progress and outcomes, collect inputs and recommendations to further promote the private sector's engagement in the work of ITU-D in areas of common interest, and foster enhanced cooperation between Member States, Sector Members, Associates and Academia. Partnerships have been, and continue to be, fostered with Academia to promote the development of telecommunications/ICTs, in particular the introduction of new technologies and promotion of ICT innovation, including through the development of studies and platforms for increased engagement with Academia

- Drafting of the Impact Study on ICT④SDGs continued sound progress and all chapters were finalized to be launched at WTDC-17. The Study will present an in-depth roadmap for sustainable economic growth by exploiting the recent developments in Information and Communication Technology (ICT) and creating an environment that nourishes ICT-centric innovation and generates new employment opportunities.

- National Innovation workshop conducted during country reviews has brought together multi-stakeholders and multi-sectors to co-create contributions to foster national digital innovation policies in Rwanda on 23 and 24 February, 2017.

- National workshop and Innovation ecosystem stakeholders' consultations were held throughout the process of the country reviews for Kenya to help strengthen the ICT centric innovation ecosystems. BDT presented the preliminary outcome of the study on 24 March, 2017 in Nairobi, Kenya.

- National ICT innovation ecosystem stakeholder consultations held from 13 to17 March in Buenos Aires, Argentina. This technical assistance is being provided to Argentina with aim to strengthen the startup ecosystem and ICT SMEs and improve their competitiveness.

- First regional innovation forum was held on 28 and 29 March in Chisinau, Moldova, as a joint initiative between EUR and CIS regions. The expected outcome was to share challenges and opportunities, discuss good practices, and offer a platform for twinning, networking and learnings of ongoing and planned country level initiatives on Innovation.

- National stakeholders' workshop and additional interviews for the country review of the ICT centric innovation ecosystem for Moldova were held from 12 to 19 May, 2017 in Chisinau, Moldova.

- Innovation track was successfully delivered for the WSIS Forum 2017 where startups and government policy makers met in order to strengthen digital industries and innovation capacity and leverage investment to bridge the innovation divide.

- The Innovation toolkit <Bridging the Digital Innovation Divide> for strengthening ICT-centric ecosystems was launched during a session in the WSIS 2017 innovation track. This toolkit has been developed to help countries develop a Digital Innovation Framework, a set of policies and projects that foster national innovation.

- The Meeting of the working group responsible for preparing for the work plan of the Arab Technology Incubators and Techno parks Network (ARTECNET) was held at the Smart Village, Egypt, on 18-20 April 2017, attended by 15 participants from 9 countries.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 72
WTDC Resolutions: 1, 5, 30, PP-14 Decisions: 5, 13

Objective 3

"Enhance confidence and security in the use of telecommunications/ICTs, and roll-out of relevant applications and services"

The results achieved during the period of January to June 2017 are as follows:

3.1- Building confidence and security in the use of ICTs

- Launched the Gaming Booklet of the Child Online Protection challenge in partnership with the Ministry of Communications and Information Technology which contains a detailed description of the games that are applied during the challenge on 4 March 2017;

- Conducted Child Online Protection Challenge in Port Said, Egypt on 4 March 2017, in partnership with the COP National Committee in Egypt and other stakeholders. More than 60 students learned via gamification about the Internet safety.

- Organized in cooperation with the Arab Regional Cybersecurity Centre (ARCC) the Regional ALERT (Applied Learning for Emergency Response Teams) Cyber Drill — 5th Edition, held in Doha, Qatar, on 5-9 March 2017. More than 11 countries attended the drill with around 100 participants.

- The Drill was followed by two days training on 8-9 March 2017 conducted by Cyber Wellness Center (CWC) of the EC-Council. Participants divided into two tracks: Technical Track covered

Web Vulnerabilities modules (SQAP) and Management Track covered Chief Information Security Officer (CISO) modules. Trainings were preceded by pre-assessment tests and followed by post assessment tests.

- CIRT Readiness Assessment was performed for Republic of Mali, 20-23 March 2017 with the involvement and awareness building of stakeholders in the country. The assessment will facilitate the planning and implementation of CIRT in Mali.

- Raised awareness and developed guidelines on Child Online Protection (COP);

- Selected countries were assisted in establishing their national CIRTs and regional cybersecurity drills were conducted to test readiness of CIRTs and strengthened optimal coordination between Arab CIRTs.

- In terms of technical and policy frameworks, a regional study was conducted on "Cloud Computing in Arab Countries: Legal and Legislative Aspects, Facts and Horizons" to help define the legal measures that ensure data privacy and secure use of the Internet and its various applications.

- Assisted Sudan in the development of its national child online protection strategy framework in 2017;

- Awareness was raised among 100 school students regarding the Internet safety through the organization of the Child Online Protection Challenge in Port Said, Egypt on 4th March 2017, in partnership with the COP National Committee in Egypt and other stakeholders.

- The ITU developed National Cybersecurity strategy (NCS) for Mauritania for the period 2017-2022, preceded by a workshop to assess the current cybersecurity status through consultation with the national stakeholders, with planned work on CIRT implementation with potential funding by both ITU and host.

- Built capacity among the cybersecurity professionals in Djibouti through the Arab Regional Cybersecurity Centre (ARCC) by conducting two weeks' training that covered the "Web Security Attacks and Solutions" on 14-18 May 2017 and the "Vulnerability Assessment Penetration Testing Training" on 21- 25 May 2017;

- Organized a workshop on "Cybersecurity and risk assessments in practice" during the ITU-D Study Group 2 Meeting in January;

- Launched the 2nd edition of the Global Cybersecurity Index. The index aims at measuring the level of commitment of Member States to cybersecurity.

- The Meeting of the working group responsible for preparing for the work plan of the Arab Technology Incubators and Techno parks Network (ARTECNET) was held at the Smart Village, Egypt, on 18-20 April 2017, attended by 15 participants from 9 countries.

- Organized cybersecurity technical training, including a cyberdrill, for Suriname and for the Caribbean during the first week of July. The event covered 98 participants from 6 countries.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 72, 130, 179, 181,
WTDC Resolutions: 1, 5, 9, 15, 30, 37, 45, 67, 69, 78

3.2- ICT applications and services

- A new joint effort was launched with WHO African Region during the First WHO Africa Health Forum that took place in Kigali, Rwanda on 27-28 June 2017 to scale up Digital Health

services in Africa. The partnership will focus on building a capable workforce to effectively use ICT as well as addressing the need of multi-stakeholders partnership models that can bring about sustainable adoption of Digital Health.

- A Cooperation Agreement with FAO was prepared to reinforce the working relationship on e-Agriculture issues and expand the scope and depth of activities.

- A joint UNESCO-ITU Mobile Learning Policy Review will be conducted in selected countries to review national ICT in education initiatives and produce a detailed report containing both an evaluation against international benchmarks and a set of policy recommendations based on good practices supported by evidence. Palestine was selected as a first country to start with.

- A Joint UNESCO-ITU "Policy Forum on Mobile Learning" was held on 24 March 2017 attracting over 300 participants and stressed on the importance of cross-sectoral collaborations in developing the necessary E-skills.

- A major agreement was signed with the European Commission and WHO to set up a mHealth Innovation and Knowledge Hub in Europe. The Hub will be collecting and disseminating research and experience related to the large-scale implementation of mHealth programs and support Member States in setting up large-scale mHealth programs.

- Assistance was provided to Zimbabwe through an infrastructure and equipment audit to extend telemedicine services in remote areas of the country, as well as in-country training.

- Assistance was provided to Senegal to develop their national eHealth Action Plan.

- A "Toolkit and Implementation Guidelines for a Digital Health Platform" was developed to guide decision makers and health planners in designing and implementing a national "digital health platform".

- A first draft of a Common ICT for SDG Platform was developed to provide an overall architecture of a common digital infrastructure that can deliver a set of integrated and cross-cutting services based on common standards and Enterprise Principles.

- A Letter of Intent was signed with WHO and UN-HABITAT to develop a joint programme on Smart Healthy Cities to identify champion cities around the world to create models for the use of ICT as a key enabler to transform health conditions in cities.

- Organized a smart learning capacity building workshop on 26-28 February 2017 in Dubai, UAE, hosted by the Mohamed Bin Rashid Smart Learning Programme. 10 countries from the Arab region participated in the workshop. This workshop comes in implementation of the signed cooperation agreement with the TRA and Mohamed Bin Rashid Smart Learning Programme of the UAE.

- Preparatory work and meetings on mDiabete for Senegal with Ministry of Health, Ministry of ICT of Senegal, WHO and mobile telecoms operators for the preparation of phase 2 of the project completed during the 1st quarter of 2017. At the end of phase 1, the project registered the participation of 110,000+ users in its database.

- Work with Burkina Faso resulted in the decision to implement m-Cervical Cancer programme, and preparatory work was undertaken in March 2017 for the launching of the initiative scheduled for April 2017 in Ouagadougou.

- Built capacities of policy-makers regionally in formulating national strategies for smart learning through the implementation of the signed cooperation agreement with the Telecommunication Regulatory Authority of the United Arab Emirates and the Mohamed Bin Rashid Smart Learning Programme. The first capacity building workshop took place in Dubai on 26-28 February 2017 with the participation of 18 participants from 10 countries.

- In partnership with FAO, the national e-agriculture strategy for Papua New Guinea was further refined and some of the priority solutions identified. The engagement with stakeholders towards its implementation was further strengthened.

- Enhanced regulatory capability to deal with suitable framework on Over-the-Top (OTT) Services for Vientiane, Lao PDR, on 19-23 June 2017;

- Increased regional collaboration on smart cities and improved understanding of the underlying technologies and related challenges at ITU Regional Workshop held in Samarkand, Uzbekistan, on 1-2 June 2017;

- Facilitated the exchange of experiences and discussed innovative solutions based on the Internet of Things and Future Networks technologies at an ITU Regional Workshop, which was held in in Saint Petersburg, Russia, from 19 to 20 June 2017 and which attracted 69 participants from 11 countries.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 72, 139, 140, 183, 202
WTDC Resolutions: 1, 5, 30, 54

Objective 4

"Build human and institutional capacity, provide data and statistics, promote digital inclusion and provide concentrated assistance to countries in special need"

The results achieved during the period of January to March 2017 are as follows:

4.1- Capacity building

- The 3rd Center of Excellence Steering Committee meeting for the Europe region was held in Copenhagen on 17 January 2017, which approved the work plan and training programme for 2017. In follow up, the training catalogue with Training Opportunities by European CoEs was released in March.

- The 5th meeting of the Group on Capacity Building Initiatives (GCBI) was held successfully from 8 to 9 February 2017. Members reviewed ITU's work on CB during the past year and provided guidance on the way forward.

- The online publication "Capacity Building in a Changing ICT Environment" was released. The first focuses on mobile technologies for skills development and lifelong learning. It features the work of an international team of experts, tackling the issues in an analytical, critical, and conceptual fashion.

- A Cooperation Agreement was signed with ARCTEL on the joint implementation of an Accelerated Management Course for Telecommunication Executives. The course aims to deliver high-quality and certified training for managers of the Communication Sector.

- The Report on Capacity Development in Internet Governance (IG) was finalized. It provides a detailed overview and assessment of existing IG capacity development activities globally and regionally and will be the basis for further work of ITU in this field.

- Supported the development of the Quality of Service and Experience (QoS/E) Framework and draft QoS/E guidelines for the WATRA region;

- Participated in the delivery of the Quality of Service Training for SADC, held in Gaborone, Botswana, on 8-10 May 2017. This training was attended by 106 participants from 8 SADC

countries. Country case studies from this training are used as reference materials for the Quality of Service Training programme and as input into the QoS/QoE manual.

- Supported the organization of the workshop on "Developing the ICT ecosystem to harness Internet-of-Things (IoT)" for the Africa region, held in Mauritius from 28-30 June 2017 and attended by 151 participants.

- Organized the Regional Forum on Internet of Things (IOT): Smarter Living in the Caribbean and Digital Financial Services (DFS) Workshop at HYATT Regency Hotel, Port of Spain, Trinidad & Tobago, on 24–26 April 2017 and 27–28 April 2017, respectively. 70 participants from 14 countries benefited from the Regional Forum on Internet of Things (IOT): Smarter Living in the Caribbean, and 90 participants from 14 countries benefited from the Digital Financial Services (DFS) Workshop.

- Under the framework of the ITU Academy's Centers of Excellence network, a total of 25 training courses were delivered between January-March 2017, with a total of 757 participants from all over the world.

- Organized the ITU CoE Training on "PKI, Digital Proofs and Security of Electronic Transactions", Tunisia, Tunis on 18-20 January, 2017. The training was attended by more than 15 participants.

- Organized the ITU CoE Training on "Fundamentals of Fiber and Optical Networks", Tunis-Tunisia on 30 January - 1 February 2017. The training was attended by more than 20 participants.

- Participated in partnership with Experts from BR in the Workshop on 5G organized by ATU from 30 January to 3 February 2017 in Nairobi. The workshop had collaboration from USAID Vendors private entities that shared their experience with in demystifying the 5 G and in presenting the new technological trends and uses of dedicated software for spectrum management.

- Organized with BR and participated in the Radiocommunication seminar (RRS-17), held in Dakar from 27 to 31 March 2017. More than 120 radiocommunication experts were trained on BR tools for space and terrestrial services.

- Girls in ICT Day event was celebrated in Addis Ababa with the collaboration of UN Women, UNDP Regional office, UNDP Country Office, UNECA and the Africa union Commission with 250 High school girls in Addis Ababa and a visiting delegation of 12 from United Republic of Tanzania. This served to encourage the young girls to see ICT as a career path for them.

- Assistance was provided to African countries of Senegal, Gambia, Cameroun Uganda, Sierra Leone and Zambia in organizing their Girls in the ICT events in 2017.

- Training on Practices for "KPI, Digital proofs and Security of Electronic Transactions" was organized in cooperation with CIFODECOM-Tunis. 14 participants attended the training.

- Training on "Fundamentals of Fiber and Optical Networks" was organized in cooperation with CIFODECOM-Tunis on 30 January-2 February 2017. 16 trainees attended the training.

- Partnered with the Asia-Pacific Telecommunity (APT) in organizing the "Preparing for International Conferences, 2017" Training. The training was delivered in two phases (On-Line and Face to Face) from 30 January to 3 February and 27-30 March 2017, respectively. 39 participants from 22 countries completed the online course, and 30 attended the face to face training.

- Training on "Engineering, Installation and Deployment of Optical Networks" was organized in cooperation with CIFODECOM-Tunis on 13-15 April 2017. More than 11 participants attended the training.

- Training on "Planning and Deployment of 4G/5G" was organized in cooperation with CIFODECOM-Tunis on 16-18 May, 2017. 14 participants attended the training.

- Training on Risk Management for ICT Implementation was organized in cooperation with SUDACAD-Sudan, from 30 April-2 May 2017. Due to the high demand of this training, a second session was organized on 23-25 May 2017 with the aim of identifying ICT project and business risks and provide structured process for the management of ICT risks. More than 30 participants attended the training from Arab countries, of which 10 were women.

- Annual regional workshop on human capacity development for African countries, held in June 2017 in Port-Louis, Mauritius with 121 participants from 27 countries in attendance. The workshop provided the platform for the ICT professional from the public service, industry and academia to enhance their understanding on the Internet of Things ecosystems issues in Africa.

- Training on IPv6 Certified Network Engineering was organized in cooperation with SUDACAD-Sudan on 07-09 May 2017. The training aimed to explore the current and future IP technologies and its infrastructure. More than 15 participants from Arab countries attended the training.

- Training on Business Analysis for ICT projects was organized in cooperation with SUDACAD-Sudan from 23-25 May 2017 with the aim of training participants from the Arab region on the role of ICT application on analyzing the business and enhancing the business environment. The training was attended by more than 20 participants, of which 7 were women.

- Within the framework of the partnership initiative with Telecommunications Regulatory Authority (TRA-UAE), a regional project was signed on human capacity building on IPv6 for Arab LDCs and Palestine. The project started its implementation in 2016 and 2 high and professional training activities were implemented in December 2016 and April 2017. The project aims to build human and institutional capacity to improve the technical skills in the development and use of IPv6, as well as to assist them to better deploy the IPv6. 28 participants from Arab LDCs and Palestine were trained and became certified IPv6.

- Since 2013, direct assistance was provided to 13 Arab countries in the organization of their Girls in ICT Day celebrations. During these years, Girls in ICT Day celebrations were also organized in Mauritania, Egypt, in collaboration with the Member States and other private companies. These activities in the different governorate in Egypt had the participation of over 700 high school girls.

- A cooperation agreement was signed in April 2017 with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) represented by the Employment Promotion Project (EPP) for the organization of "Girls in ICT Day Events" in Egypt until 2019.

- Co-organized a Girls in ICT Day in Aswan on 27 April 2017 in collaboration with GIZ, Continuing Educational Centre (CEC), and International Development Research Centre (IDRC). 60 girls were trained on infographic and Canva principles.

- Three ITU Asia-Pacific Centres of Excellence trainings were held in Asia-Pacific region on Spectrum Management, Internet and IPv6 Infrastructure Security and Conformity and Interoperability (C&I) for 4G LTE (detailed in 2.2).

- Facilitated the exchange of experiences between capacity building professionals at an ITU Regional Workshop, which was held in in Odessa, Ukraine, from 12 to 14 April 2017 and which attracted 62 participants from 9 countries.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 72, 137, 139, 140, 176, 188, 189, 197, 199, 202
WTDC Resolutions: 1, 5, 9, 15, 20, 21, 22, 30, 32, 40, 73, 77

4.2- Telecommunication/ICT statistics

- The latest edition of the ITU World Telecommunication/ICT Indicators Database and the ITU/World Bank joint publication "The Little Data Book on Information and Communication Technology 2017" were released in January 2017 and June 2017. The data will enable users to take informed decisions in the field of ICT, based on internationally comparable statistics.

- The Extraordinary Meeting of the EGTI/EGH took place on 1-3 March 2017. On 28 February, a meeting of the sub-group and independent consultant also took place. Two input documents (prepared by EGH/EGTI sub-group and Pyramid/Global Data) were discussed during the meeting. The meeting adopted a total of 14 indicators to be included in the IDI compared to the current list of 11 indicators. The results of the new IDI will be published in 2018, to provide sufficient time to undertake statistical tests and to allow sufficient time for countries to gather and report data on the newly included indicators.

- The 2017 short questionnaire data collection was completed. Around 164 countries submitted their responses to the WTI Short Questionnaire 2017. 114 countries responded to the ICT Household Short Questionnaire 2017, which is a significant increase from 2016 (67 countries).

- The "ICT Trends and Developments" reports for the Americas region, Asia and the Pacific and Europe were completed as an input to the Regional Preparatory Meetings (RPMs). The reports enabled the ITU membership to assess ICT trends in their regions, as a basis for discussions at the RPMs.

- The National Workshop on ICT Indicators was held in Huye, Rwanda on 25-29 April, 2017. The workshop, which was attended by 19 participants, strengthened the capacity of the country to produce administrative and survey-based statistics on telecommunications and ICT that are internationally comparable, timely, and accurate.

- The National Training Workshop on ICT statistics was conducted in Ulaanbaatar, Mongolia from 22 to 24 May 2017. The workshop was attended by more than 120 participants representing the ministry, regulator, NSO as well as operators and service providers. The workshop provided a forum to discuss in detail the list of ICT indicators collected by ITU and other issues related to improving the availability of quality and internationally comparable ICT statistics in the country.

- A capacity building workshop on ICT statistics was held for Mongolia (22 and 23 May 2017), which built capacity of more than 100 participants. Following the workshop, meetings were held with the policy maker (CITA) and main producers of official ICT indicators in Mongolia, namely CRC and the NSO.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 72, 137, 139, 140, 176, 188, 189, 197, 199, 202
WTDC Resolutions: 1, 5, 8, 30, 37, 43, 51, 52, 57, 60

4.3- Digital inclusion of people with specific needs

to ensure telecommunication/ICT accessibility for persons was disabilities. In addition, the capacity of Member States to develop and implement digital inclusion policies, strategies, and guidelines to ensure telecommunication/ICT accessibility for persons with disabilities was strengthened through the following:

- 650 ITU Members and stakeholders were made aware or had their capacity built in ICT accessibility policies, strategies, guidelines and good practices. This includes awareness raising during ITU-D Study Group Question 7/1 meetings; on public procurement of accessible ICTs to over 150 participants during the "European Workshop on Accessibility" held on 2-3 February 2017 in Brussels; in Costa Rica on 14 March 2017 to over 100 decision makers who participated in a political buy-in seminar on the topic of ICT Accessibility related to web accessibility (see details related to development of training below); and on 26 May 2017 to over 200 participants on the "Opportunities to promote Accessible ICTs from a global development perspective" in the event "International week – I am accessible" held by the Government of Spain through Ceapat-Imserso".

- Assistance was provided to Egypt to develop a national ICT accessibility policy. ITU Member State Egypt released its national ICT accessibility policy for persons with disabilities at its annual ICT accessibility conference in April 2017. The policy includes recommendations on additions to Egypt's draft Disability Act as well as its ICT and broadcasting laws and regulations covering web, TV, mobile and public access terminals accessibility along with public procurement of accessible ICTs.

- A national training programme on web accessibility "Internet for @ll" composed by a political buy-in at national level on ICT accessibility and two "face-to-face train-the-trainer" courses on "Accessible web content" and "Design and development of accessible websites" in line with the WCAG 2.0 web accessibility standards was developed. The pilot of this National training programme was implemented in Costa Rica from 13 to17 March 2017. During the decision maker's buy-in seminar awareness was raised among the Regulator, Superintendencia de Telecomunicaciones (SUTEL), Ministry of Science, Technologies and Telecommunications (MINCIT), the Universidad de Costa Rica and its Consejo Nacional para las Personas con Discapacidad (CONAPDIS). Within the political buy-in, ITU-D also made a presentation of a self-sustainable model that, as a result of a national certification for these two trainings, can generate in-country funds to also build capacity of persons with disabilities in using accessible websites. ITU also delivered the two training courses on web accessibility and as a result certified 44 trainers on "Accessible web content" and 20 trainers in "Design and development of accessible websites". These courses were delivered at the Universidad de Costa Rica that with the curriculum provided by ITU will take the lead at national level on this topic and will replicate the courses to ensure that Costa Rica governmental websites are made accessible and available for persons with visual disabilities (PwD) by the end of 2017. The curriculum of this National training programme on web accessibility was also translated into English in Q2 and will be translated into other ITU official languages until end of 2017.

- Girls in ICT Day events were organized globally on 27 April, including at ITU Headquarters and at all ITU regional offices, raising awareness and contributing to create a global environment that empowers and encourages girls and young women to consider studies and careers in the growing field of ICTs. Up to day, since 2011 when the first International Girls in ICT Day was celebrated, over 9,000 events in 166 countries have taken place, empowering more than

300,000 girls and young women from around the world. In 2017, some 70,000 girls from 134 countries participated in over 2,100 events: this includes events held in 30 countries in the AFR region, 33 in the AMS region, 12 in the ARB States, 20 in the ASP region, 6 in the CIS and 33 in EUR. The ITU Girls in ICT Portal received 487,000 page views in the first half of 2017. This compares to a total of 383,552 page views in 2016, and 337,936 page views in 2015. The Girls in ICT Portal houses a toolkit and branding materials for organizers to use in their events. It also includes a map of events worldwide, linked to pages where organizers can post pictures, videos and descriptions of the results of their events.

- Awareness about Girls in ICT Day has been raised among tens of millions worldwide and covered by BBC World TV in 2017. #GirlsinICT hashtag reached over 63 million Twitter accounts for 255,057,360 timeline deliveries this year.

- In 2017, the flagship Girls in ICT Day event organized in Geneva was connected with the Girls in ICT Day event organized in Vilnius, Lithuania during RPM-EUR and an event organized by Alfa Telecom in Beirut, Lebanon. These events, and events from around the world, are posted on the Girls in ICT Portal, which also hosts the Girls in ICT Facebook page and #girlsinict Twitter feed. The Portal is available at www.itu.int/girlsinict.

- ITU-D also raised awareness on how ICTs can promote girls' inclusion and access to education (particularly STEM) and contribute to gender equality and women's empowerment with over 40 stakeholders-participants during a WSIS workshop on 15 June 2017.

- Internet Access and Training Centre for persons with hearing disabilities was established in Vitebsk, Belarus in March 2017. The Centre provides five working places.

- Girls in ICT Day celebration was encouraged in the Asia-Pacific region in a number of countries. ITU staff at regional office participated at celebrations done by the Asia-Pacific Telecommunity (Fiji), Vanuatu (remotely) and Thailand. A targeted programme for 2017 to train girls in ICT was also launched in Thailand, together with the Ministry of Digital Economy and Society (Thailand) and partners.

The 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, was improved through:

- Raising awareness on the importance of training young people with job-ready digital skills among nearly 200 stakeholders during the June 2017 World Summit for the Information Society (WSIS) Forum "High Level Dialogue on Digital Skills for Decent Jobs for Youth". The session launched the joint ITU-ILO "Digital Skills for Decent Jobs for Youth" campaign to incentivize a range of stakeholders to train 5 million youth worldwide with job-ready digital skills by 2030. The Campaign has been launched under the "Global Initiative on Decent Jobs for Youth", supported by 22 UN agencies. ITU is leading the digital skills thematic area of the Global Initiative on Decent Jobs for Youth which seeks to scale up country action. More information about the campaign is available at www.itu.int/digitalskills.

- Creating and making available to all ITU members, young job seekers and entrepreneurs an online database of ICT-enabled resources. This database includes links to training opportunities, crowd funding for start-up capital, mentoring networks and job-matching services to enable members and youth to leverage digital opportunities to enhance their employment and entrepreneurship opportunities. See http://www.itu.int/net4/ITU-D/CDS/sis/Youth/Resources/index.asp.

120 digital inclusion programmes and practices were shared on the Digital Inclusion Newslog at http://digitalinclusionnewslog.itu.int/ from January to June 2017, with more than 4,500 views of the newslog posts during this time period.

Awareness was raised and best practices shared among ITU members through weekly publication of innovative digital inclusion practices and strategies on the ITU-D Digital Inclusion newslog. ITU members and related interested stakeholders have access through this newslog to the latest digital inclusion practices and strategies, such as digital literacy, coding training, initiatives to encourage more girls and women to take up ICT studies and careers and ICT accessibility practices for persons with disabilities.

Support was provided to over 100 indigenous leaders from ITU Member States in Americas Region to develop their capacity in using telecommunications/ICTs for the social and economic development though the on-line course (held from 17 April to 24 June) on "Access, development and use of web tools and digital content of interest of indigenous communities". (Joint OP action with Americas Region).

Raised ICT inclusiveness in Belarus by establishing an Internet Access and Training Centre for persons with hearing disabilities in Vitebsk, Belarus, in March 2017. The Centre provides five working places.

Raised capacity of teachers of 2 Internet Access and Training Centres for persons with hearing disabilities through joint ITU-IIET UNESCO training, which was held in Minsk, Belarus, from 15 to 16 May 2017;

Discussed results of the Girls in ICT Day initiative in CIS and outlined future directions of its development at ITU Regional Videoconference Seminar, which was held in Moscow, Russia, on 27 April 2017 and which attracted 60 participants from 6 countries.

PP Decisions: 5, 13, PP Resolutions: 25, 30, 32, 33, 34, 36, 37, 64, 70, 71, 131, 139, 140, 175, 184, 198, 202
WTDC Resolutions: 1, 5, 9, 11, 15, 20, 21, 22, 23, 30, 32, 55, 58, 68, 76, 77

4.4- Concentrated assistance to LDCs, SIDS and LLDCs

- To enhance the capacity of LDCs, the report on ICTs, LDCs, and the SDGs is under preparation. The report, which is being produced in cooperation with the UN Office of the High Representative for Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLs), will focus on ICT infrastructure and affordability developments (SDG 9, Target 9c). It will be launched in Q4 of 2017.

- Zambia received concentrated assistance in the form of equipment for schools for the blind.

- A presentation to highlight the importance of ICT infrastructure for development in LDCs was made at the Regional Meeting of African LDCs. The meeting was organized from 28 February to 01 March, in Dakar, by the UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS).

- Completed the Strategic Corporate plan for the recently established ICT Commission (ICTC) in Tanzania. The work started in 2016 with the diagnostic of the situation and the respective validation. In 2017, the draft strategic plan was drafted, and a stakeholders' consultative meeting was held in Dar Es Salaam. After inserting the received inputs, the final document is

in the process of being submitted to the ICTC. The Strategic Corporate Plan will help Tanzania to implement a structure ICT development programme.

- Celebrations in Girls in ICT in April. Sponsorship was given to some African countries, and a joint collaboration with UN agencies, such as UN Women, UNDP Regional Office, UNDP Country office and UNECA and the AUC in Addis Ababa, Ethiopia, was held.

- ITU Arab Regional Training Programme for Arab LDCs on IPv6 (CNE-2) in April. 14 trainees from 7 countries were trained on the IPv6 related security issues.

- Aimed at enhancing the capacity of LLDCs, a report on "America's landlocked developing countries (LLDCs): Connectivity opportunities and challenges in Bolivia and Paraguay" is currently under preparation.

- Supported integration of ICT in education in Kyrgyz Republic in April 2017 by supplying remote education facilities as technical assistance to the Institute of Electronics and Telecommunications under Kyrgyz State Technical University named after Iskhak Razzakov.

PP Decisions: 5, 13, PP Resolutions: 25, 30, 32, 33, 34, 36, 37, 70, 71, 123, 124, 125, 127, 135, 159, 160, 161, 193
WTDC Resolutions: 1, 5, 10, 15, 16, 18, 26, 35, 52, 53

Objective 5

"Enhance environmental protection, climate change adaptation and mitigation and disaster management efforts through telecommunication/ICTs"

The results achieved during the period of January to June 2017 are as follows:

5.1- ICTs and climate-change adaptation and mitigation

- A handbook on e-waste policies and legislative frameworks for ICT generated e-waste is currently under development. It will be published in Q3 of 2017.

- The publication on best practices on e-waste management, which identifies successful models of e-waste management centers, is under preparation.

- The e-waste management policy and regulatory framework for Saint Lucia were finalized.

PP Decisions: 5, 13, PP Resolutions: 25, 71, 182
WTDC Resolutions: 1, 5, 30, 66

5.2- Emergency Telecommunications

- ITU supported the Government of Zimbabwe in addressing the challenges following the devastation caused by severe floods through the deployment of emergency telecommunication equipment to Zimbabwe. The equipment was used to coordinate recovery and rehabilitation activities, including providing communication to the most affected communities in the country.

- Organized the second Multi-Stakeholder Forum on the Role of Telecommunications/ ICT in Disaster Management. The Forum was organized by the ITU Telecommunication Development Bureau (BDT), in cooperation with the Ministry of Information Technologies and Communications (MINTIC) of Colombia, from 29 to 31 August 2017 in Bogotá, Colombia.

- The II Workshop on Technologies for mitigating the effects of earthquakes and tsunamis was organized in Pisco-Peru on 21 and 22 June 2017.

- Pacific Training on VSAT Fundamentals and Installation took place in Vanuatu on 15-18 May 2017. It is part of the ITU project on the development of satellite communications capacity and emergency communications solutions for Small Islands Developing States of the Pacific.

PP Decisions: 5, 13, PP Resolutions: 25, 37, 71, 98, 136, 140, 182
WTDC Resolutions: 1, 5, 30, 34, 69

Implementation level by Objective (Result Based Management perspective)*

Chart 1 below provides a distribution of the actual use of the resources among the five objectives of the sector for the period of January to June 2017.

Chart 1

Implementation level by objective

OBJECTIVE 5	7.7%
OBJECTIVE 1	28.7%
OBJECTIVE 4	27.7%
OBJECTIVE 2	23.5%
OBJECTIVE 3	12.4%
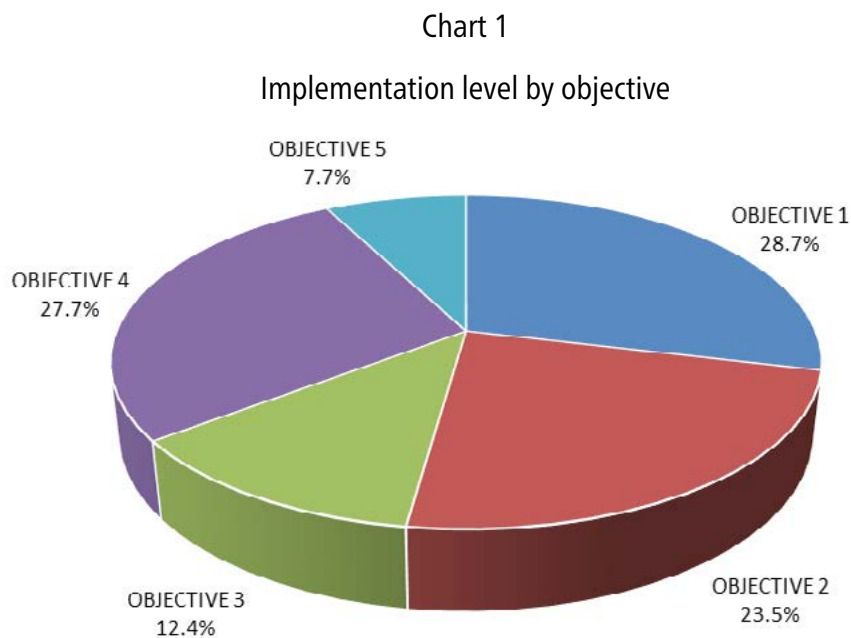
* Based on time allocation of staff members

Highlights of the operational plan implementation

This report highlights the results achieved as regards the implementation of the Operational Plan for the period 1 January to 30 June 2017 for the Telecommunication Development Sector. It also provides information by objectives and regions.

Overall implementation level

"

The operational plan framework provides a thorough view of the implementation level of the different objectives, outputs and actions

"

As at 30 June 2017, out of a total of 268 actions planned for 2017:

- 55 have been implemented

- 112 are ongoing (the activities have started and funds may have been activated)

- 57 are confirmed (the exact dates of the activities are known but no funds have been activated)

- 44 have not yet started (the budget has been approved but no date has been planned for the activities and no funds have been activated)

Implementation level by objective

Chart 1 below highlights, in terms of number, the status of actions (implemented, ongoing, confirmed, not yet started) by objective for period 1 January to 30 June 2017.

Chart 1

Status of actions by objective

Budget implementation level by regions (in Swiss francs)

Chart 2 below highlights the expenditure level by regions for the period of January to June 2017.

Chart 2

World or Multi-Regional

	Action Plan	Extra-budgetary (Global projects)
Budgeted	3,142,925	3,226,088
Consumption	1,390,636	753,988
% of consumption	44%	23%

EUROPE

	Action Plan	Extra-budgetary
Budgeted	263,668	648,801
Consumption	118,251	470,266
% of consumption	45%	72%

CIS Countries

	Action Plan	Extra-budgetary
Budgeted	226,048	
Consumption	147,052	
% of consumption	65%	

ARAB STATES

	Action Plan	Extra-budgetary
Budgeted	578,993	589,431
Consumption	189,200	13,815
% of consumption	33%	2%

THE AMERICAS

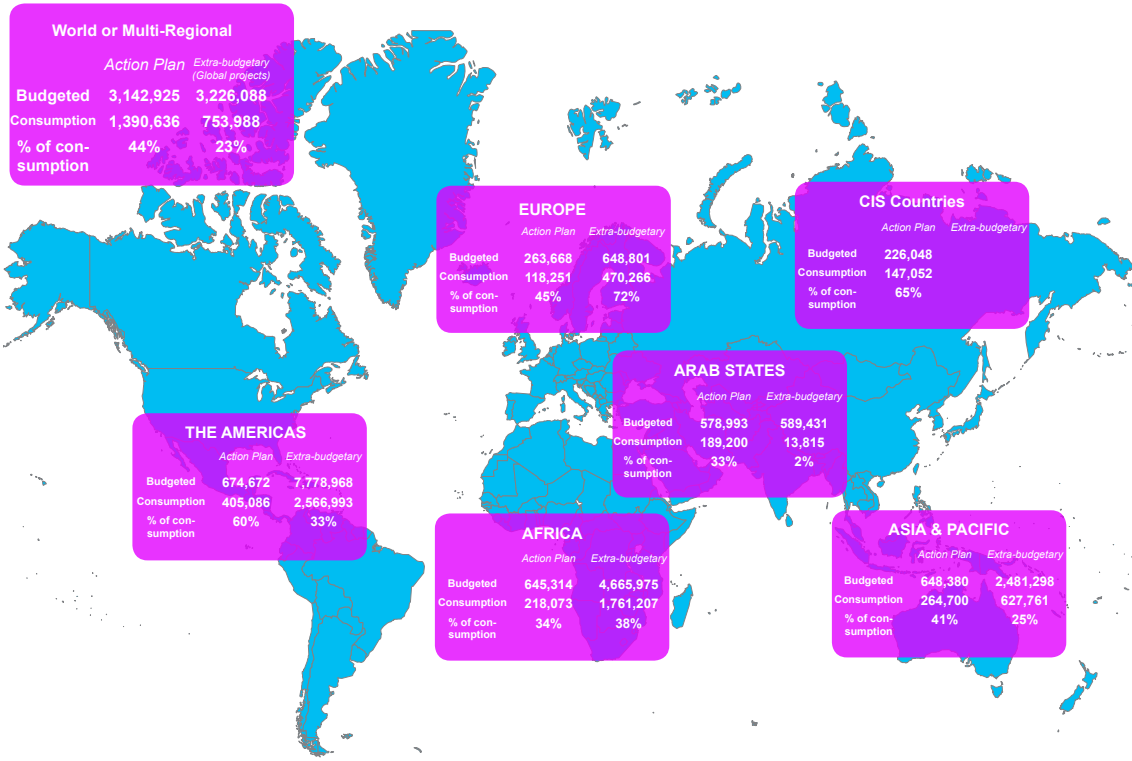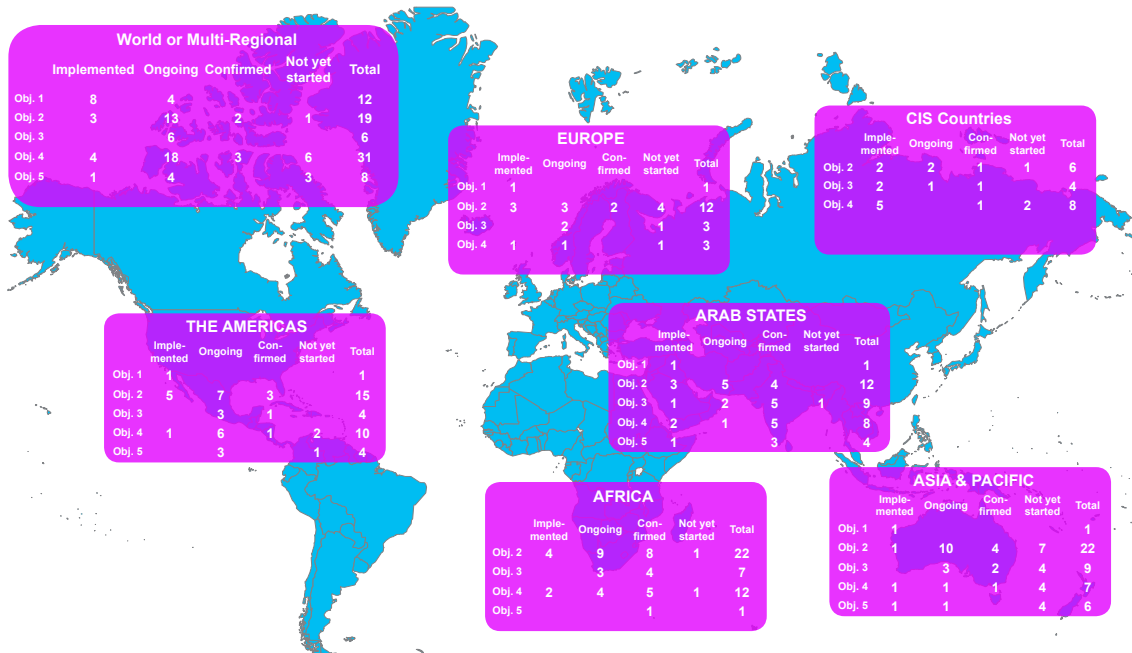|	Action Plan	Extra-budgetary
Budgeted	674,672	7,778,968
Consumption	405,086	2,566,993
% of consumption	60%	33%

AFRICA

	Action Plan	Extra-budgetary
Budgeted	645,314	4,665,975
Consumption	218,073	1,761,207
% of consumption	34%	38%

ASIA & PACIFIC

	Action Plan	Extra-budgetary
Budgeted	648,380	2,481,298
Consumption	264,700	627,761
% of consumption	41%	25%

Implementation level by objectives and regions (number of actions)

Chart 3 below shows, in terms of number, the implementation level of actions by objectives and regions for the period of January to June 2017.
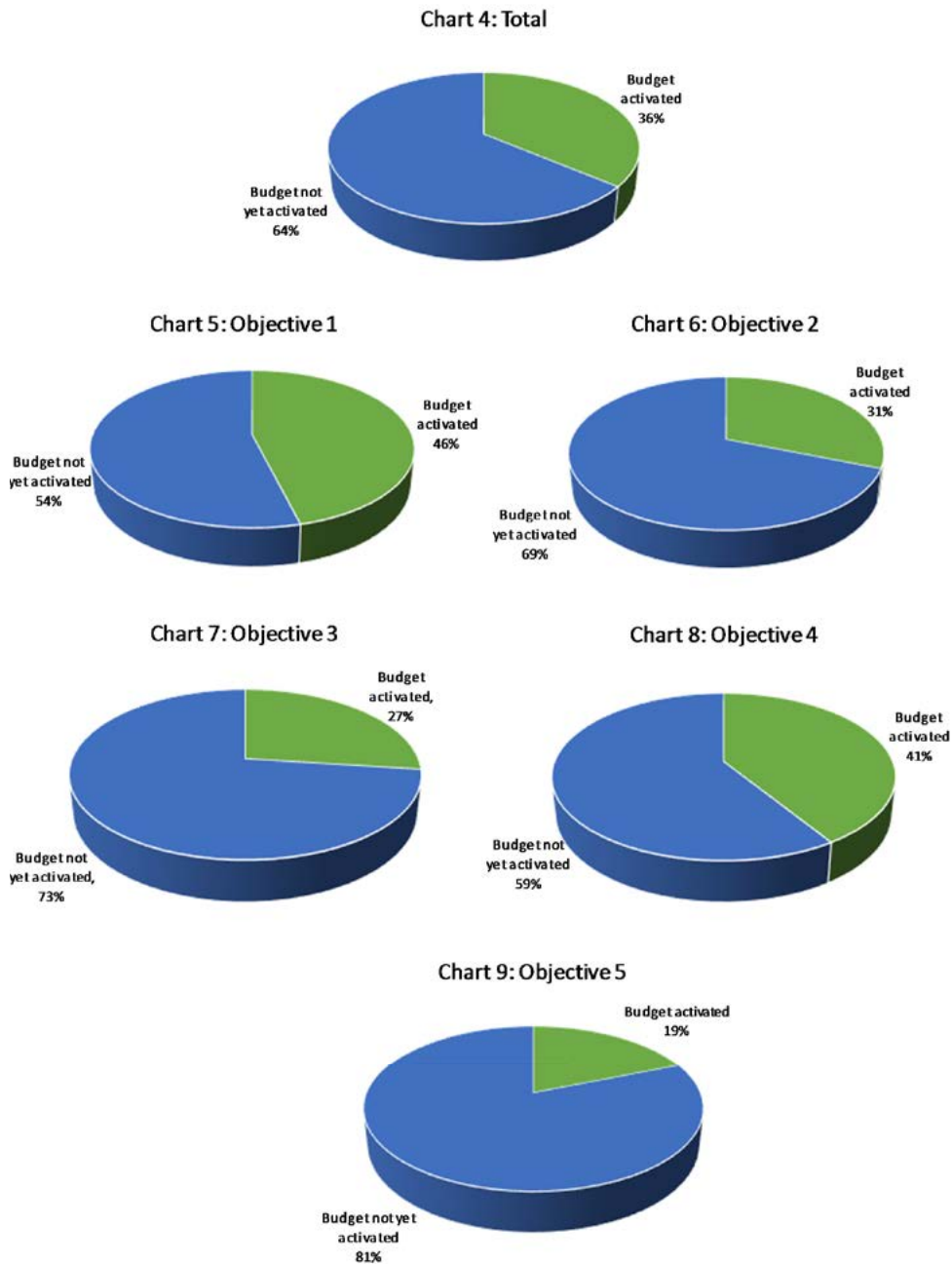
Chart 3

World or Multi-Regional

	Implemented	Ongoing	Confirmed	Not yet started	Total
Obj. 1	8	4			12
Obj. 2	3	13	2	1	19
Obj. 3		6			6
Obj. 4	4	18	3	6	31
Obj. 5	1	4		3	8

EUROPE

	Implemented	Ongoing	Confirmed	Not yet started	Total
Obj. 1	1				1
Obj. 2	3	3	2	4	12
Obj. 3		2		1	3
Obj. 4	1	1		1	3

CIS Countries

	Implemented	Ongoing	Confirmed	Not yet started	Total
Obj. 2	2	2	1	1	6
Obj. 3	2	1		1	4
Obj. 4	5		1	2	8

THE AMERICAS

	Implemented	Ongoing	Confirmed	Not yet started	Total
Obj. 1	1				1
Obj. 2	5	7	3		15
Obj. 3		3	1		4
Obj. 4	1	6	1	2	10
Obj. 5		3		1	4

ARAB STATES

	Implemented	Ongoing	Confirmed	Not yet started	Total
Obj. 1	1				1
Obj. 2	3	5	4		12
Obj. 3	1	2	5	1	9
Obj. 4	2	1	5		8
Obj. 5	1		3		4

AFRICA

	Implemented	Ongoing	Confirmed	Not yet started	Total
Obj. 2	4	9	8	1	22
Obj. 3		3	4		7
Obj. 4	2	4	5	1	12
Obj. 5			1		1

ASIA & PACIFIC

	Implemented	Ongoing	Confirmed	Not yet started	Total
Obj. 1	1				1
Obj. 2	1	10	4	7	22
Obj. 3		3	2	4	9
Obj. 4	1	1	1	4	7
Obj. 5	1	1		4	6

Budget implementation level by objectives

Chart 4 shows the global budget implementation level and charts 5 to 9 highlight the budget activated1 for each objective to the end of June 2017.

Chart 4

Chart 4: Total

Chart 5: Objective 1

Chart 6: Objective 2

Chart 7: Objective 3

Chart 8: Objective 4

Chart 9: Objective 5

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1 Budget activated: Amount of the budget of the action (ongoing and implemented) which has been committed and/or spent.

Highlights of the financial plan implementation

This report highlights the expenditure level as at 30 June 2017 for the Telecommunication Development Sector, including the Bureau (BDT). It also provides information by objectives and outputs.

Result-based budget statement by objectives

Table 1 below provides the expenditure level by objectives in a Result Based Budget perspective as at 30 June 2017 (based on planned allocation).

Table 1
(in thousands of Swiss francs)

Strategic objectives	Budget	Actual	Balance	Level of implementation 06/2017
Objectives of ITU-D				
D-1 Foster international cooperation on telecommunication/ICT development issues	7,848	3,660	4,188	46.6%
D-2 Foster an enabling environment for ICT development and foster the development of	6,652	2,993	3,659	45.0%
D-3 Enhance confidence and security in the use of telecommunications/ICTs, and roll-out of relevant applications and services	3,880	1,577	2,303	40.6%
D-4 Build human and institutional capacity, provide data and statistics, promote digital inclusion and provide concentrated assistance to countries in special need	8,257	3,527	4,730	42.7%
D-5 Enhance environmental protection, climate-change mitigation and adaptation, and disaster-management efforts	2,538	979	1,559	38.6%
Costs of ITU-D Strategic Goal	**29,175**	**12,736**	**16,439**	**43.7%**

> *The financial framework within which ITU-D operates requires rigorous forecast and management of the resources available*

Financial statement for the Telecommunication Development Sector

Table 2 below shows by section the ITU-D expenditures as at 30 June 2017 and the 2017 year end expenditure projections. As at 30 June 2017, expenditures amounted to CHF 12.7 million or 43.7 % of the ITU-D budget for 2017.

Table 2
(in thousands of Swiss francs)

		Budget	Expenditures as at 30/06/2017	Balance	Level of implementation	Projection as at 31/12/2017
Section 3	World Telecommunication Development Conference	1,026	84	942	8.2%	1,026
Section 4	Regional Telecommunication Development Conference	317*	317	0	100.0%	317
Section 5	Telecommunication Development Advisory Group	125	106	19	84.8%	125
Section 6	Study Group	349	331	18	94.8%	349
Section 7	Activities and programmes	4,363	1,405	2,958	32.2%	4,363
Section 9	Bureau	22,995	10,493	12,502	45.6%	22,995
TOTAL		**29,175**	**12,736**	**16,439**	**43.7%**	**29,175**

* Reflects the RPMs budget to be held in 2017.

Financial statement by objectives and outputs

Table 3 below shows the expenditures by ITU-D objectives and outputs as at 30 June 2017.

Table 3
(in thousands of Swiss francs)

		Budget	Expenditures	Balance	Level of implementation 06/2017	Level of implementation 06/2016
Objective 1	Foster Int. cooperation on Tel./ICT Dev. Issues					
	WTDC	1,026	84	942	8.2%	n/a
	RPM	317	317	0	100.0%	0%
	TDAG	125	106	19	84.8%	83.2%
	STG	349	331	18	94.8%	47.6%
	Subtotal Objective 1	**1,817**	**838**	**979**	**46.1%**	**41.2%**
Objective 2	Foster an enabling env. for ICT dev.	1,966	601	1,365	30.6%	30.1%
Objective 3	Enhance confidence and security	670	181	489	27.0%	36.0%
Objective 4	institutional capacity	1,372	557	815	40.6%	28.6%
Objective 5	protection, climate-change	355	66	289	18.6%	58.5%
Activities and prog.	**Subtotal Objective 2 to 5**	**4,363**	**1,405**	**2,958**	**32.2%**	**32.9%**
Total ITU-D activities	**Objective 1 to 5**	**6,180**	**2,243**	**3,937**	**36.3%**	**33.9%**

Financial statement for the Telecommunication Development Bureau

Table 4 below highlights by category of expenditure the expenditures for the Telecommunications Development Bureau as at 30 June 2017. As at 30 June 2017, expenditures amounted to CHF 10.5 million or 45.6% of the Bureau budget.

Table 4
(in thousands of Swiss francs)

		Budget	Expenditures	Balance	Level of implementation 06/2017	Level of implementation 06/2016
	Categories					
1	Staff costs	16,681	7,884	8,797	47.3%	48.1%
2	Other-staff costs	4,898	2,174	2,724	44.4%	46.0%
3	Mission expenses	530	200	330	37.7%	57.7%
4	Contractual serv.	110	19	91	17.3%	69.1%
5	Rental & mainten.	95	20	75	21.1%	17.9%
6	Purchase of equipmnt	54	38	16	70.4%	53.7%
7	Acquisition, furnit.	410	53	357	12.9%	23.3%
8	Utilities & services	130	63	67	48.5%	39.2%
9	Auditing, inter-agenc.	87	42	45	48.3%	52.9%
	TOTAL	**22,995**	**10,493**	**12,502**	**45.6%**	**47.7%**

Level of implementation by objectives

The chart below shows the budget and expenditures for ITU-D activities by objectives as at the end of June 2017.

(in thousands of Swiss francs)
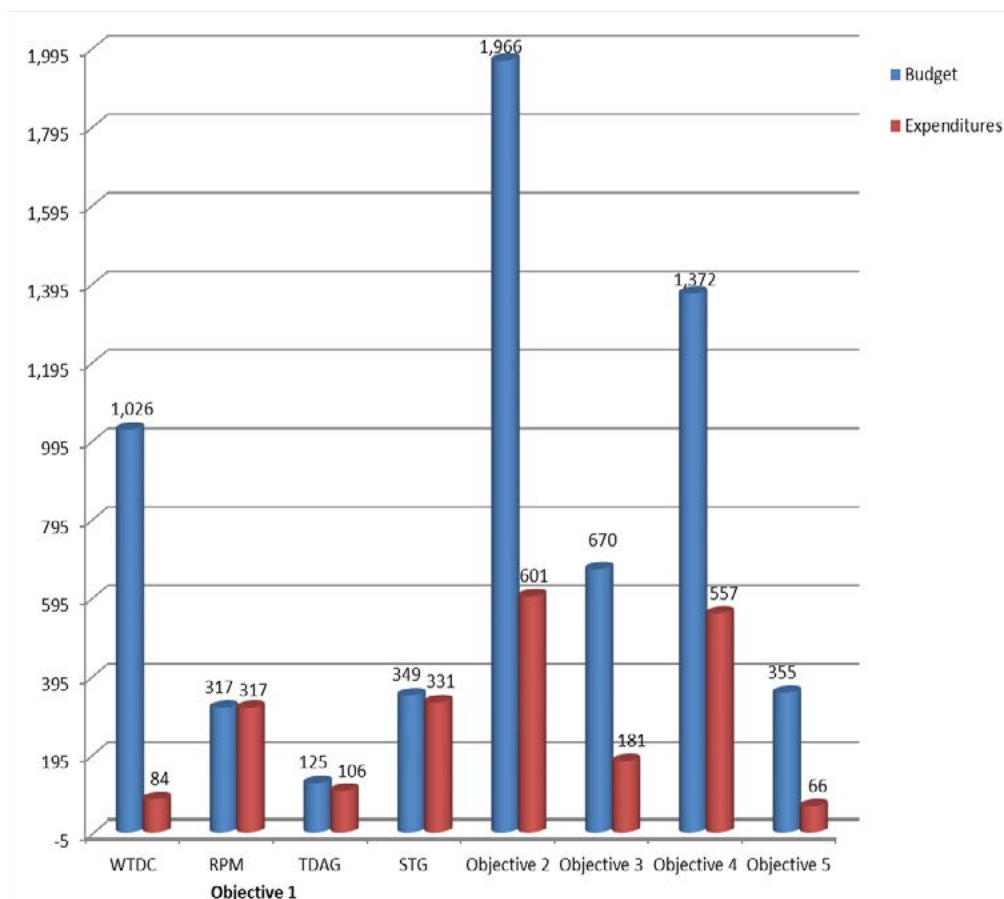
From Strategy to Execution

The progressive improvements of the Union's budgetary and financial structure reached a significant turning point with the introduction of the result-based budgeting and result based management.

In addition, the introduction of the re-structured operational plan of the Telecommunication Development Sector enhanced the integration between strategic planning, operational planning and financial planning.

The primary purpose of this performance report is to provide a quarterly assessment of the implementation of the BDT strategic, financial and operational plans using several facets and dimensions.

This report provides an assessment of the implementation of the strategic, operational and financial plan.

Strategic

The quarterly assessment of the strategic plan implementation provides a means for monitoring the implementation of the mission, objectives, outputs and priorities of the Telecommunication Development Sector.

Operational

The quarterly review of the operational plan puts emphasis on the outputs of the Sector as well as on the actions and activities undertaken by the Telecommunication Development Bureau (BDT) in connection with the implementation of these outputs.

It provides information regarding the implementation level of the outputs and actions as well as other pertinent operational data.

Financial

The financial quarterly reports highlight the financial elements of both the strategic and the operational plan.

It provides an overview of the budgetary performance for the period as well as the annual year end expenditure forecast which in turn may allow management to adjust its plans in order to achieve optimal budget performance and implementation of activities.