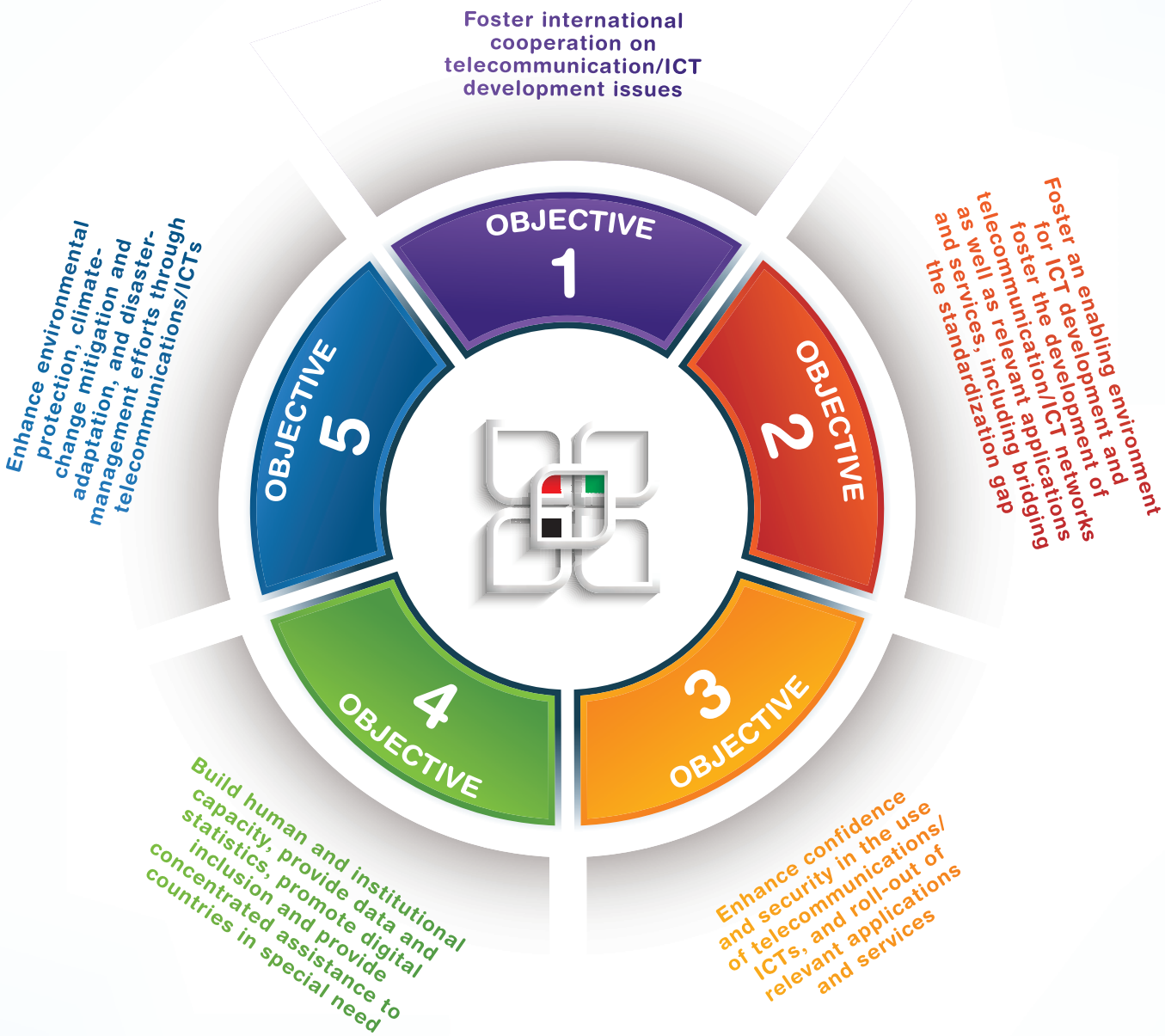
ITU-D FOUR-YEAR ROLLING OPERATIONAL PLAN

2018-2021



TELECOMMUNICATION DEVELOPMENT BUREAU

ITU-D
FOUR-YEAR ROLLING OPERATIONAL PLAN
2018-2021

INTRODUCTION

Foreword by the Director of the Telecommunication Development Bureau (BDT)

The purpose of this document is to present for TDAG's consideration the highlights and key elements of the revised draft four-year rolling operational plan for the Telecommunication Development Sector for the 2018-2021 timeframe.

The details relating to the implementation of the Operational Plan for the year 2016 are presented in the 2016 Performance Report.

The Operational Plan reflects the following changes which were adopted by WTDC-14 as well as the ITU-D component of the Strategic Plan for 2016-2019:

- Five ITU-D objectives
- 15 related outputs based on the five ITU-D objectives
- Specific outcomes for each of the five ITU-D objectives

The Operational Plan provides the framework within which the objectives of the ITU-D will be implemented during 2018-2021. It encompasses all relevant information regarding outcomes, outcome indicators, outputs and related key performance indicators as well as human resource requirements.

In preparing the draft operational plan, the Bureau has sought to respond to the expectations and priorities expressed by our membership.

The key elements of the draft four-year rolling operational plan are as follows:

- ITU-D objectives and related outputs are derived from the draft Strategic Plan of the Union thus ensuring a consistent planning hierarchy and the necessary linkage across the different planning tools and instruments (ITU Strategic, Financial and Operational plans);
- Description of the outcomes and outcomes indicators;
- Enhancement of the annual expected results and related performance indicator definitions at output level;
- Identification of the key risk factors as well as preventive measures.

The revised draft operational plan as outlined below is presented to the 2017 meeting of the Telecommunication Development Advisory Group for its advice and comments.

Brahima Sanou

Director, Telecommunication Development Bureau

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PART 1

EXECUTIVE SUMMARY

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Outline and key actions of the 2018-2021 Operational Plan

The 2018-2021 timeframe will be another challenging timeframe for the ITU-D sector. As from 2018, after the World Telecommunication Development Conference 2017 (WTDC-17), the implementation of its outcomes, i.e. the new Action Plan and the Regional Initiatives will be the Sector priority. As from 2020 we will also see the initial implementation of the new 2020-2023 Strategic Plan. This new Strategic Plan will inter alia set the strategic and financial frameworks within which the ITU-D will organize its work and implement its work programme for that period. In addition, the work of the sector will continue to be reinforced by the activities of the ITU-D Study Groups. The preparation of WTDC-21 will start in 2020 through the organization the regional preparatory meetings (RPMs).

The complete draft four-year rolling Operational Plan for the Telecommunication Development Sector for 2018-2021 can be found at https://www.itu.int/en/ITU-D/TIES_Protected/OP2018-2021.pdf.

The high-priority areas for the ITU-D have been identified as the following (without associating any order of priority):

2.1 International cooperation

- To ensure that the major ITU-D Conference and meetings planned for 2018-2021 (TDAG, Study Group meetings, RPMS, WTDC-17) are conducted in a successful manner on the basis of timely preparatory and organizational work;
- To implement the new Action Plan and the resolutions and recommendations as will be adopted by the 2017 World Telecommunication Development Conference (WTDC-17);
- To assist ITU-D Study Groups in their studies according to their work programmes, with special emphasis on the topics that may be identified by post-WTDC-17 conference activities.

2.2 Enabling environment, ICT networks and innovation

- To assist Member States in developing and implementing appropriate and transparent legal and regulatory framework that promotes access to information and communication technologies (ICTs);
- To foster cooperation and exchange of experiences and regulatory best practices among telecommunications regulators by ensuring that the Global Symposium for Regulators (GSR) is held annually and rotates in different regions, to the extent possible;
- To enhance 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;
- To pursue and enhance partnership, innovation and resource mobilization to further the implementation of BDT initiatives and projects.

2.3 Cybersecurity and ICT applications

- To strengthen the capacity of Member States to incorporate and implement cybersecurity policies and strategies into nation-wide ICT plans, as well as appropriate legislation;
- To enhance ability of Member States to respond to cyber threats in a timely manner;
- To Improve capacity of countries for the planning of national sectoral e-strategies to foster the enabling environment for upscaling ICT applications;
- To improve the capacity of countries to leverage ICT/mobile applications and 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.

2.4 Capacity building, statistics and digital inclusion

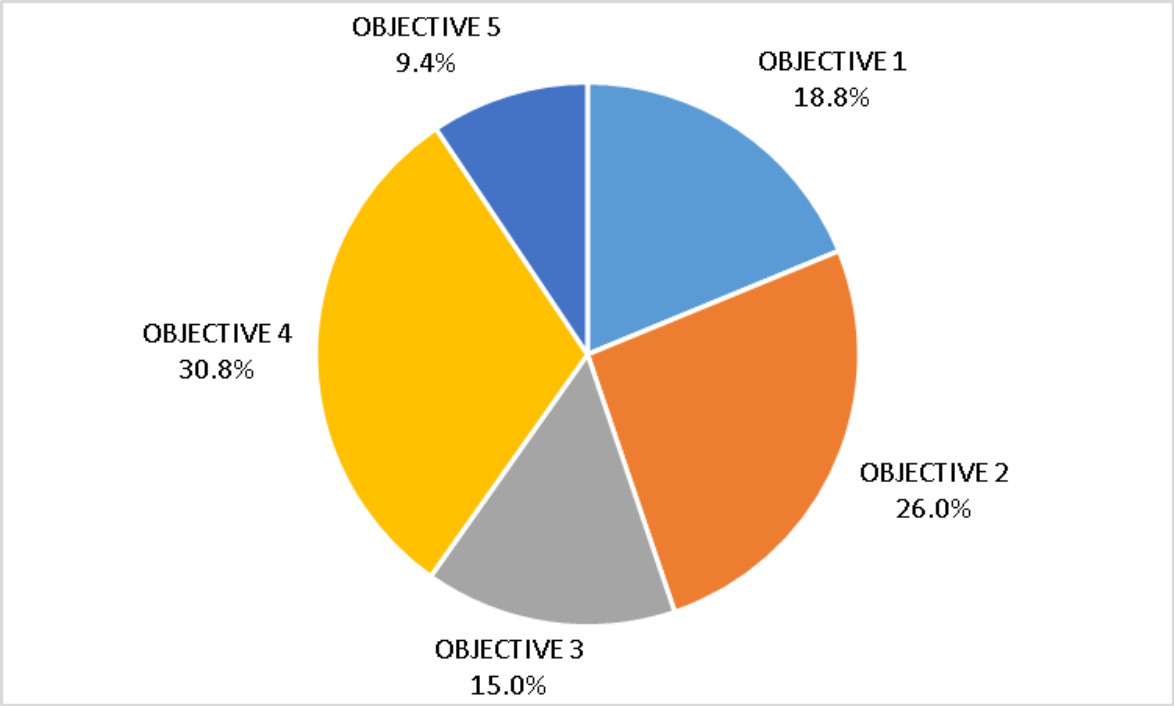
- To improve knowledge and skills of ITU membership in the use of telecommunications/ICTs;
- To enhance dialogue between telecommunication/ICT data producers and users and increased capacity and skills of producers of telecommunication/ICT statistics to carry out data collections at the national level based on international standards and methodologies;
- To strengthen the 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;
- To improve 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;
- To improve access to and use of telecommunications/ICTs in LDCs, LLDCs, SIDS and countries with economies in transition.

2.5 Climate change and disaster management

- To enhance the capacity of Member States in relation to climate-change adaptation, mitigation policy, regulatory frameworks as well as e-waste policy;
- To assist Member States in disaster-preparedness and relief and provides technical, policy, regulatory and legal support in the area of emergency telecommunications.

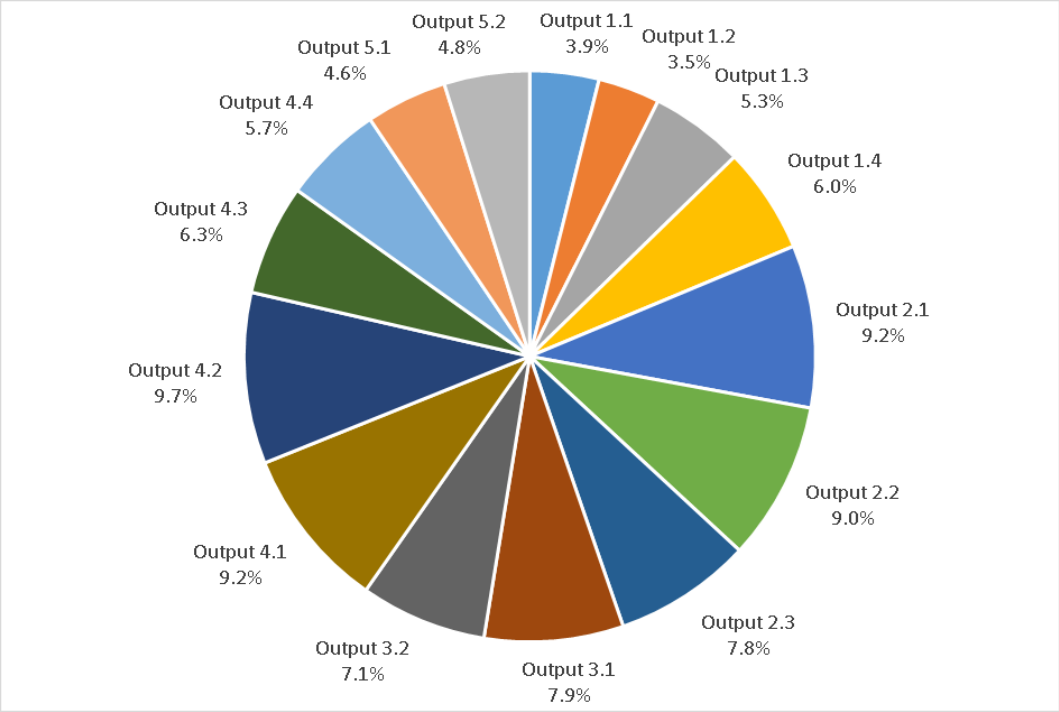
Planned human resources by objectives and outputs

Chart A below presents the breakdown of planned human resources by objectives among the proposed five ITU-D objectives for the 2018-2021 timeframe.



Objective 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 adaptation and mitigation and disaster management efforts through telecommunication/ICTs

Chart B below presents the breakdown of planned human resources by outputs among the 15 outputs of the Telecommunication Development Sector for the 2018-2021 timeframe.



Output 1.1: World Telecommunication Development Conference (WTDC)	**Output 3.2:** ICT applications and services
Output 1.2: Regional preparatory meetings (RPMs)	**Output 4.1:** Capacity building
Output 1.3: Telecommunication Development Advisory Group (TDAG)	**Output 4.2:** Telecommunication/ICT statistics
Output 1.4: Study groups	**Output 4.3:** Digital inclusion of people with specific needs
Output 2.1: Policy and regulatory frameworks	**Output 4.4:** Concentrated assistance to LDCs, SIDS and LLDCs
Output 2.2: Telecommunication/ICT networks, including conformance and interoperability and bridging the standardization gap	**Output 5.1:** ICTs and climate-change adaptation and mitigation
Output 2.3: Innovation and partnership	**Output 5.2:** Emergency telecommunications
Output 3.1: Building confidence and security in the use of ICTs	

Structure of the Operational Plan

The 2018-2021 Operational Plan sets out details on the objectives, their respective outputs, outcomes, as well as the outcome indicators, the annual expected results, performance indicators and risk analysis.

The Plan follows a results-based structure based on the objectives of the ITU-D contribution to the ITU strategic plan. It is organized as follows:

Part 1 presents the executive summary of the 2018-2021 Operational Plan.

Part 2 provides, for each of the objectives, the following information:

- Description of the objective
- Human resources allocation for the entire period (2018-2021)
- Description of the output and major trends/policy issues relating to the output

The result-based analysis consists of:

- Description of the outcomes and outcome indicators
- Statement of the annual expected results and performance indicators (PIs) for the four-year period
- Risk analysis

Part 3 provides for each Department of the Bureau:

- Description of the Department (including regional and area offices)
- Human resources allocation for the 2018-2021 period

Part 4 presents a set of tables and charts on resource allocations for the 2018-2021 timeframe.

Part 5 presents in detail the Regional Initiatives per region on a RBB basis.


Objectives
Outputs
Activities
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
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 Telecommunica-tions/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
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

01 EXECUTIVE SUMMARY

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PART 2

THE FIVE OBJECTIVES OF THE TELECOMMUNICATION DEVELOPMENT BUREAU

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OBJECTIVE 1

Foster international cooperation on telecommunication/ICT development issues

Summary

Objective 1 aims to enhance high-level discussion, information-sharing and consensus-building on telecommunication/ICT developmental, technical and policy issues amongst members. In this regard, the purpose of Objective 1 is to develop, agree, implement, and review the work programmes and priorities for the four-year development cycle through the preparation and approval of the action plan and draft strategic plan by World Telecommunication Development Conferences, the preparatory process undertaken through the regional preparatory meetings, the implementation of the work programme for the ITU-D Study Groups, and the advisory role of the Telecommunication Development Advisory Group.

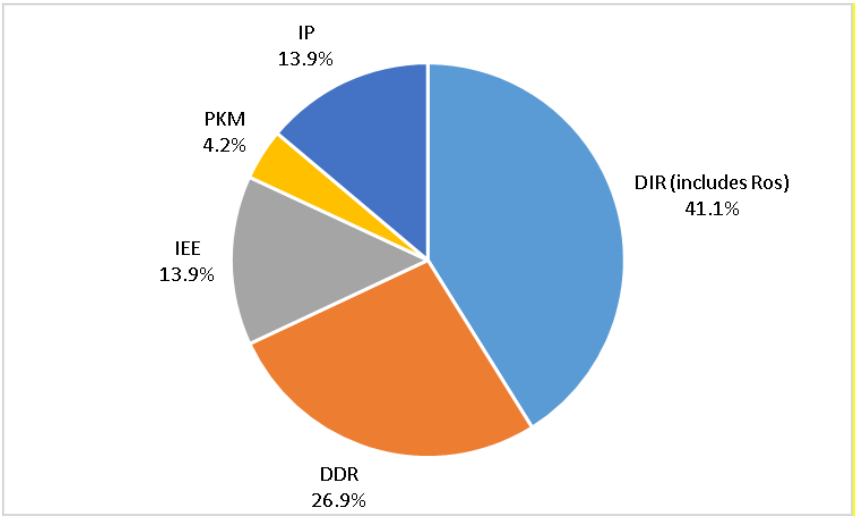
Objective 1 includes the following outputs:

- World Telecommunication Development Conference (WTDC)
- Regional preparatory meetings (RPMs)
- Telecommunication Development Advisory Group (TDAG)
- Study groups

For the years 2018 to 2021, the estimated human resources to be allocated to objective 1 represent **18.8%** of the total human resources of the Telecommunication Development Bureau.

Chart 1 provides the breakdown of the human resources allocated to objective 1 by department.

Chart 1



Output 1.1 World Telecommunication Development Conference (WTDC)

Description

Held every four years, the World Telecommunication Development Conference (WTDC) is a high-level platform for Member States to develop priorities, strategies and action plans to guide the work of ITU D over the following four-year period. WTDC is a direct service to members that provides the pre-eminent high-level forum for discussion, information-sharing and consensus-building on telecommunication/ICT developmental, technical and policy issues.

Result-based analysis

Outcomes	Outcome indicators
· Draft strategic plan for 2016-2019	· ITU-D input to the ITU strategic plan agreed on by the WTDC
· WTDC Declaration	· WTDC Declaration, highlighting the main conclusions and priorities established by the Conference, and reinforcing the political support towards ITU's development mission and strategic objectives, adopted by WTDC
· WTDC Action Plan	· Action Plan, aligning the work of ITU-D with the strategic objectives of ITU, prepared and adopted by WTDC
· Resolutions and recommendations	· New and revised Resolutions and Recommendations adopted by WTDC and in between Conferences, as appropriate
· New and revised Questions for study groups	· New and revised Questions, reflecting the needs of the membership adopted by WTDC, and in between Conferences, as appropriate

Annual expected results		Performance indicators (PIs)	
2018	• 30% action plan implementation rate	•	Action plan implementation rate
2019	• 50% action plan implementation rate	•	Action plan implementation rate
2020	• 90% action plan implementation rate	•	Action plan implementation rate
2021	• 100% action plan implementation rate	•	Action plan implementation rate

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Stakeholders/ partners	• Insufficient participation of countries	High	Medium	• Close coordination with memberships to ensure participation in the WTDC
	• Membership faces high rotation of authorities and of staff			
	• Delayed responses to participation in preparatory and main meeting	Low	Low	• Active collaboration with membership taking into account lessons learned from past experiences
2- Implementation	• Objectives and action plan to meet timelines	Medium	Medium	• Active collaboration with membership and partners to meet shortened timeline

Output 1.2 Regional preparatory meetings (RPMs)

Description

WTDC Resolution 31 (Rev. Hyderabad, 2010) instructs the Director of BDT to organize, within the financial limitations, one regional development conference or preparatory meeting per region for each of the six regions (Africa, Americas, Arab States, Asia-Pacific, CIS and Europe), in a reasonable time-frame, prior to the last meeting of TDAG and before the next WTDC, avoiding overlap with other relevant ITU-D meetings, and making full use of the regional offices to facilitate such conferences or meetings.

WTDC Resolution 17 (Rev. Dubai, 2014) further instructs the BDT Director that an annual meeting be held for each region in order to discuss the regional initiatives and projects for each region and mechanisms for implementation of the initiatives adopted and to make known the needs of the different regions, and that a regional development forum (RDF) may be held in conjunction with the annual meeting for each region.

Regional preparatory meetings (RPMs) are direct services to members and are organized to achieve greater regional coordination and engage members early on in the WTDC preparation process. They also seek to identify issues, at the regional level, that need to be addressed to foster the development of telecommunications/ICTs, taking into account the expression of pressing needs facing members in the region. The RPMs are expected to identify top-priority areas, which are essential for the telecommunication/ICT development of countries of the region.

Result-based analysis

Outcomes	Outcome indicators
• Increased level of agreement on priority areas	• Level of agreement and consensus achieved on priority areas at the RPMs in preparation for the WTDC
• Assessment of the implementation of the Action Plan and of the WSIS Plan of Action	• Level of implementation for items in the Action Plan and the WSIS Plan of Action Level assessed (percentage) and reported on to the membership at the RPMs in preparation for WTDC
• Identification of regional initiatives	• Number of regional initiatives, identified during RPMs for submission to WTDC
• Increased number of contributions and proposals for the Action Plan	• Number of contributions and proposals for the Action Plan received by the RPMs and WTDC, and percentage of countries in the region involved in the preparatory process

Annual expected results		Performance indicators (PIs)
2018	• Implementation of WTDC-17 decisions linked to RPMs outcomes for the 2018-2021 period	• Percentage of regional initiatives implemented in a timely manner and within available resources
2019	• Regional priorities and expertise shared at the annual Regional Development Forums • Implementation of WTDC-17 decisions linked to RPMs outcomes for the 2018-2021 period	• Number of participants • Participants' level of satisfaction with regards to meeting organization, facilities and outcomes • Percentage of regional initiatives implemented in a timely manner and within available resources
2020	• Implementation of WTDC-17 decisions linked to RPMs outcomes for the 2018-2021 period	• Percentage of regional initiatives implemented in a timely manner and within available resources
2021	• Preparation of the reports on the outcomes of the 2020 RPMs to WTDC-21	• Timely preparation of the reports (percentage of reports prepared and made available on time)

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Implementation	• Delayed Host Country Arrangements	Medium	Medium	• Active collaboration with Host Countries to meet targets as planned
2-Participation	• Delayed responses to participation	Low	Low	• Active collaboration with membership taking into account lessons learned from past experiences

Output 1.3 Telecommunication Development Advisory Group (TDAG)

Description

The role of the Telecommunication Development Advisory Group (TDAG) is to advise the Director of BDT on the implementation of the WTDC Action Plan, including priorities and issues relating to the BDT budget and the ITU-D operational plan.

One annual TDAG meeting is planned for the next four-year period, in order to continue to maintain and strengthen cooperation among all Member States and Sector Members.

Result-based analysis

Outcome	Outcome Indicators
• Enhanced review of priorities, programmes, operations, financial matters and strategies	• Review of ITU-D priorities, programmes, operations, financial matters and strategies by TDAG implemented
• Work programme	• Regular review by TDAG of progress in the implementation of the established work programme/plan adopted by WTDC conducted
• Comprehensive preparation of progress report to the Director of BDT on the implementation of the work programme	• Progress reports delivered to the BDT Director with advice on corrective action to be taken by BDT delivered

Annual expected results		Performance indicators (PIs)
2018	• Preparation and organization of the 23th meeting of TDAG and implementation of the recommendations and advice • Efficient support to the TDAG activities, including the TDAG meeting • Regional support to the TDAG activities, mainly the TDAG meetings	• Number of BDT submissions timely prepared and distributed • Number of contributions from members, including their posting on the web timely processed • Dissemination of the final summary of the TDAG meeting within 30 days following completion of the meeting • Relevance of the contributions received • Number of participants
2019	• Preparation and organization of the 24th meeting of TDAG and implementation of the recommendations and advice • Efficient support to the TDAG activities, including the TDAG meeting • Regional support to the TDAG activities, mainly the TDAG meetings	• Number of BDT submissions timely prepared and distributed • Number of contributions from members, including their posting on the web timely processed • Dissemination of the final summary of the TDAG meeting within 30 days following completion of the meeting • Relevance of the contributions received • Number of participants
2020	• Preparation and organization of the 25th meeting of TDAG and implementation of the recommendations and advice • Efficient support to the TDAG activities, including the TDAG meeting • Regional support to the TDAG activities, mainly the TDAG meetings	• Number of BDT submissions timely prepared and distributed • Number of contributions from members, including their posting on the web timely processed • Dissemination of the final summary of the TDAG meeting within 30 days following completion of the meeting • Relevance of the contributions received • Number of participants
2021	• Preparation and organization of the 26th meeting of TDAG and implementation of the recommendations and advice • Efficient support to the TDAG activities, including the TDAG meeting • Regional support to the TDAG activities, mainly the TDAG meetings	• Number of BDT submissions timely prepared and distributed • Number of contributions from members, including their posting on the web timely processed • Dissemination of the final summary of the TDAG meeting within 30 days following completion of the meeting • Relevance of the contributions received • Number of participants

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Stakeholders/ partners	• Insufficient participation of countries • Membership faces high rotation of authorities and of staff	High	Medium	• Close coordination with memberships to ensure participation in the TDAG
2- Finance	• Implementation of strategy & actions impacted by lack of resources	Medium	High	• Active collaboration with partners and membership to address identified gaps
3- Implementation	• Percentage implementation of strategy & actions	Medium	Medium	• Active collaboration to ensure timely submissions & contributions

Output 1.4 Study groups

Description

ITU-D study groups provide an opportunity for all Member States and Sector Members, Associates and Academia, to share experiences, present ideas, exchange views and achieve consensus on appropriate strategies to address ICT priorities. ITU-D study groups are responsible for developing reports, guidelines and Recommendations based on input received from the membership. Information is gathered through surveys, contributions and case studies, and is made available for easy access by the membership using content-management and web-publication tools.

Pursuant to WTDC Resolution 2 (Rev. Dubai, 2014), the scope of work for Study Group 1 is to study "Enabling environment for the development of telecommunications/ICTs", and of Study Group 2 to study "ICT applications, cybersecurity, emergency telecommunications and climate-change adaptation". The working procedures to be followed by the ITU-D study groups are set out in WTDC Resolution 1 (Rev. Dubai, 2014). Continuous efforts are made to mainstream gender equality and accessibility into the ITU-D study groups.

Result-based analysis

Outcome 1	Outcome indicators
• Enhanced knowledge-sharing and dialogue among Member States and Sector Members (including Associates and Academia) on emerging telecommunication/ICT issues for sustainable growth	• Number of participants in ITU-D Study Group meetings and related activities • Number of contributions to ITU-D Study Groups received

Annual expected results		Performance indicators (PIs)
2018	• In accordance with WTDC-17 decisions	• In accordance with WTDC-17 decisions
2019	• In accordance with WTDC-17 decisions	• In accordance with WTDC-17 decisions
2020	• In accordance with WTDC-17 decisions	• In accordance with WTDC-17 decisions
2021	• In accordance with WTDC-17 decisions	• In accordance with WTDC-17 decisions

Outcome 2	Outcome indicators
• 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	• Membership with strengthened capacity to develop and implement ICT strategies and policies and deploy infrastructure and applications

Annual expected results		Performance indicators (PIs)
2018	• In accordance with WTDC-17 decisions	• In accordance with WTDC-17 decisions
2019	• In accordance with WTDC-17 decisions	• In accordance with WTDC-17 decisions
2020	• In accordance with WTDC-17 decisions	• In accordance with WTDC-17 decisions
2021	• In accordance with WTDC-17 decisions	• In accordance with WTDC-17 decisions

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1-Finance	• Insufficient financial resources.	High	Medium	• Prepare realistic estimates. • Prepare forecasts based on coordination and communication with the members. • Undertake reality checks based on historical data and experience gained during similar events in the past. • Assess whether or not savings can be made.
2-Organizational matters	• Inadequate level of support for processing documents, facilitating the Study Group process and the running of meetings.	High	Medium	• Seek the necessary level of resources and support to ensure that the processing of documents and the smooth running of the meetings can be ensured.
3-Stakeholders/ partners	• No or a limited number of contributions from the members to progress the work of the related • Study Group Questions.	High	Low	• Encourage, through all appropriate ways and means possible the submission of contributions from the membership on the topics under study in order to ensure that the agreed work plans can be implemented.
4-Stakeholders/ partners	• Low or limited participation by the membership in the work of the related Study Group Questions.	High	Low	• Raise further awareness of the planned and ongoing work of the Study Groups and their value to the membership.

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

Summary

The main purpose of Objective 2 is to assist the ITU membership in achieving a more inclusive information society through improved decision-making aimed at creating and maintaining an enabling telecommunication/ICT policy and regulatory environment, in developing and implementing effective financing policies and strategies; to assist the ITU membership in maximizing the utilization of appropriate new technologies for the development of their telecommunication/ICT networks, and to promote ICT-related innovation.

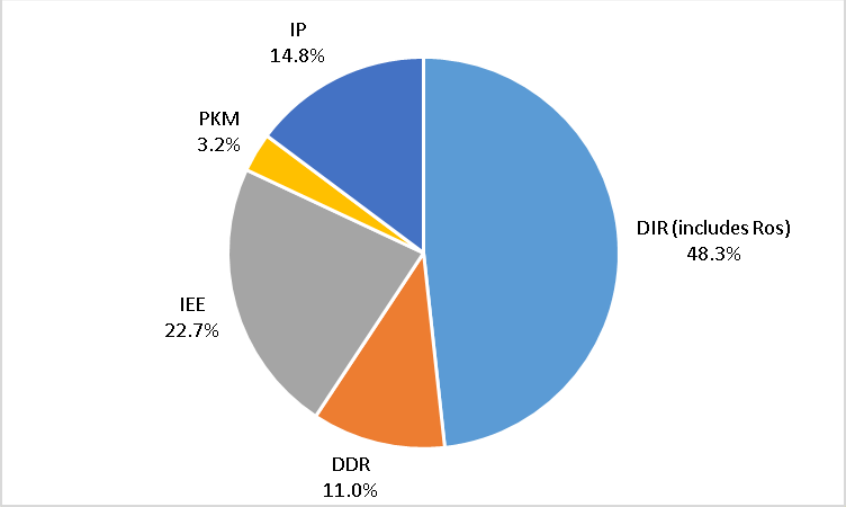
Objective 2 includes the following outputs:

- Policy and regulatory frameworks
- Telecommunication/ICT networks, including conformance and interoperability and bridging the standardization gap
- Innovation and partnership

For the years 2018 to 2021, the estimated human resources to be allocated to Objective 2 represent **26.0%** of the total human resources of the Telecommunication Development Bureau.

Chart 2 provides the breakdown of the human resources allocated to Objective 2 by department.

Chart 2



Output 2.1 Policy and regulatory frameworks

Description

The ICT sector is experiencing tremendous change. With the ever-escalating global demand for ubiquitous, always-on, rapid and easy access to data and applications, led by the deployment of broadband networks that facilitate convergence of information, communications and broadcasting, the way in which services are delivered to and accessed by consumers has radically changed. Communications no longer just connect people: the Internet of things (IoT) is fast becoming a reality.

In evolving towards a digital economy, ICTs are increasingly recognized as critical to social and economic growth and competitiveness of countries. As the ICT industry is facing many changes in today's digital world from the transition in technologies, to the emergence of new players, the displacement of revenues, and changes in business models, new and innovative ways of regulation are required to ensure that all can benefit from ICT services.

An enabling environment must take into consideration all areas that have an impact on the spread and uptake of ICTs, including the elaboration, implementation and review of national ICT policies, plans and guidelines. Regulators need to continue to be kept informed of current costing issues, as well as financial mechanisms and economic modelling, in order to be able to measure the impact and implications for a national competitive environment. Added to that, technological growth has expanded the capability of ICT use across sectors, including health, education, agriculture, governance, finance, disaster management or even smart cities. Other sectors rely on us for providing the secure and sustainable broadband connectivity, meaning that policy makers and regulators are faced with greater complexity and cross-sectoral implications of ICTs regulation. It is important that the interaction of the ICT sector for stimulating growth in the digital economy alongside other sectors be understood and, wherever possible, managed by policy and regulatory frameworks that take this reality into consideration. In the midst of the profusion of services and platforms, regulators and policy-makers need to continue to pay attention to fostering infrastructure development, investment in high-speed networks, innovation and efficient use of scarce resources, while at the same time focusing increasingly on consumer protection (privacy, data protection, etc.) and ensuring affordable access for all to ICTs and the digital economy.

Result-based analysis

Outcomes	Outcome indicators
· 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 · Improved decision-making on policy and regulatory issues and conducive policy, legal and regulatory environment for the ICT sector	· Number of participants in face-to-face events and training on economic, policy, legal and regulatory issues, including the Global Symposium for Regulators (GSR), Economic and Financial Fora and Thematic Workshops · Number of active users benefitting from online platforms for collaboration, knowledge and information exchange on policy, legal and regulatory issues · Number of countries with improved capacity to take policy and regulatory decisions to create an enabling environment for collaborative regulation and ICT development and empowerment of communities, business and consumers in a smart connected society

Annual expected results		Performance indicators (PIs)
2018	· At least 10% additional Member States to have institutional, policy, legal and regulatory framework in place for the ICT sector so as to foster affordable access, inclusion, and trust in a smart connected society · At least 10% additional Member States have guidelines in place to build the foundation for collaborative regulation at national, regional and global level · Situation analysis conducted awareness increased, dialogue fostered, and guidelines prepared on specific topics to foster digital empowerment of institutions, business and consumers in a smart connected society · Countries supported on specific topics	· Percentage of Member States supported over the 4 year period · Response rate to the annual questionnaires to members · Publications, reports, studies prepared, guidelines adopted, and events organized on specific topics
2019	· At least 10% additional Member States to have institutional, policy, legal and regulatory framework in place for the ICT sector so as to foster affordable access, inclusion, and trust in a smart connected society · At least 10% additional Member States have guidelines in place to build the foundation for collaborative regulation at national, regional and global level · Situation analysis conducted awareness increased, dialogue fostered, and guidelines prepared on specific topics to foster digital empowerment of institutions, business and consumers in a smart connected society · Countries supported on specific topics	· Percentage of Member States supported over the 4 year period · Response rate to the annual questionnaires to members · Publications, reports, studies prepared, guidelines adopted, and events organized on specific topics

Annual expected results (Continued)		Performance indicators (PIs)
2020	· At least 10 % additional Member States to have institutional, policy, legal and regulatory framework in place for the ICT sector so as to foster affordable access, inclusion, and trust in a smart connected society · At least 10% additional Member States have guidelines in place to build the foundation for collaborative regulation at national, regional and global level · Situation analysis conducted awareness increased, dialogue fostered, and guidelines prepared on specific topics to foster digital empowerment of institutions, business and consumers in a smart connected society · Countries supported on specific topics	· Percentage of Member States supported over the 4 year period · Response rate to the annual questionnaires to members · Publications, reports, studies prepared, guidelines adopted, and events organized on specific topics
2021	· At least 10 % additional Member States to have institutional, policy, legal and regulatory framework in place for the ICT sector so as to foster affordable access, inclusion, and trust in a smart connected society · At least 10% additional Member States have guidelines in place to build the foundation for collaborative regulation at national, regional and global level · Situation analysis conducted awareness increased, dialogue fostered, and guidelines prepared on specific topics to foster digital empowerment of institutions, business and consumers in a smart connected society · Countries supported on specific topics	· Percentage of Member States supported over the 4 year period · Response rate to the annual questionnaires to members · Publications, reports, studies prepared, guidelines adopted, and events organized on specific topics

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Finance	· Lack of resources to provide the appropriate support level in case of high demand from countries, partners and Members	Medium	Medium	· Prepare an appropriate budget forecast and resource mobilization strategy in collaboration with IP. · Implementation of activities on a cost sharing basis
2- Competency / knowledge	· Lack of qualified experts in the domains concerned	Medium	Low	· Anticipate the resources requirements and initiate recruitment procedures as soon as possible. Keep the roster of experts up-to-date. · Early identification of experts · Looking for new experts into the Region to increase the number of experts in ITU roster · Close coordination with TSB and BR to attend to the needs of countries
3- Stakeholders / partners	· Insufficient commitment of countries at regional and/or local level	High	Low	· Improve cooperation with countries, regional offices and regional organizations so as to guarantee appropriate level of involvement by countries at the regional and/or local level
4- Stakeholders / partners	· Insufficient participation of countries · Membership faces high rotation of authorities and of staff · Delays in country activity due to unforeseen local events and circumstances · Turn-over of Membership Staff hindering coordination and dialogue	High	Medium	· Intensive coordination with countries and regional organizations in regards to the relevance of their contribution/support for successful implementation · Close coordination with memberships to ensure participation in ITU events
	· Insufficient number of projects formulated by Member States and sector members	Medium	High	· Assist Member States in project formulation

Perspective (Ctn'd)	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
5- Government and key ICT public Institutions	· Lack of coordination at national level between Government-Regulator and Operators as well as across the sectors	Medium	Low	· Raise awareness of policy makers and political leaders at national level on collaborative regulation

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

Description

Infrastructure is central for enabling universal, sustainable, ubiquitous and affordable access to ICTs and services for all.

The ICT sector is characterized by rapid technological change, and by convergence of technological platforms for telecommunications, information delivery, broadcasting and computing. The deployment of common broadband technology and network infrastructures for multiple telecommunication services and applications and the evolution to all IP-based wireless and wired next-generation networks (NGNs) and their evolutions open up opportunities but also imply significant challenges for developing countries.

The rapid deployment of wireless and mobile technologies indicates the growing importance of radio spectrum management and the role it plays in the socio-economic development of countries. Also notable is the worldwide transition from analogue to digital broadcasting, enabling more efficient use of spectrum and higher quality audio and video delivery.

Conformity with international standards and interoperability, i.e. the ability of equipment from different vendors to successfully communicate between them, can help avoid costly market battles over different technologies. Availability of high-performing and interoperable products accelerates widespread deployment of infrastructure, technologies and associated services, granting people access to the information society regardless of location or choice of device. Increasing the knowledge and capacity of developing countries for the effective application/implementation of standards (Recommendations) developed in ITU T and ITU R is fundamental for bridging the standardization gap.

Result-based analysis

Outcomes	Outcome indicators
• 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	• Number of countries with improved capability of planning and operating ICT networks and services • Number of countries with Broadband Master Plan developed
• 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 subregional levels by promoting the establishment of mutual recognition agreement (MRA) regimes and/or building testing labs, as appropriate	• Number of countries that implement projects for establishing Conformance and Interoperability (C&I) national, regional, and subregional programmes
• 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)	• Number of countries with increased capacity in the area of frequency planning and spectrum management and measurement and regulation related to human exposure to (EMF) • Number of countries with spectrum management Master Plans finalized
• 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	• Number of countries that implemented projects on the transition from analogue to digital broadcasting

Annual expected results		Performance indicators (PIs)
2018	• Assessment study on C&I conducted at regional/subregional level • Providing and maintaining ITU Interactive Terrestrial Transmission Maps through the ITU web • Improvement of the capacity of developing countries to put in place a sustainable and appropriate Conformance and Interoperability Regime at national, Regional and Sub-regional levels, through implementation of training activities in the premises of Testing Labs, direct assistance promoting the establishment of MRAs regimes and/or building Testing labs as appropriate, Regional Forums and Seminars, implementation of projects and development of guideline and tools. • Providing and maintaining ITU Interactive Terrestrial Transmission Maps through the ITU web • Support provided to developing countries to plan, deploy, operate and maintain sustainable, accessible and resilient ICT networks and services, including broadband wireless and wire-line infra-structure, especially to Rural and Remote areas • Enhancement of knowledge and effective application of ITU Recommendations in developing countries, including conformance and interoperability (C&I) testing of systems manufactured on the basis of ITU Recommendations • Most of the ITU Member States have digital terrestrial television broadcasting • Most of the Member States have NTFA, have spectrum management strategy or masterplan or using SMS4DC • Awareness increased and guidelines prepared on broadcasting and spectrum management topics • Countries supported on spectrum management and broadcasting topics	• Studies conducted for assessing the status of implementation of the C&I programmes and testing laboratories in place in all Regions • Training Activities on C&I conducted for all Regions • Number of countries supported for implementing C&I programmes • Number of publications, reports, studies prepared on specific topics • ITU Interactive (Optical Fibers Microwaves and Satellite) Transmission Maps covering all Regions and made available through the ITU web. • Number of communities, and disadvantaged groups, in developing countries connected to broadband • Number of countries without digital terrestrial television broadcasting • Number of countries without NTFA • Roadmaps, case studies, guidelines and reports prepared for digital broadcasting implementation and spectrum management related topics • Percentage of Member States supported • Percentage of Member States using SMS4DC

Annual expected results (continued)		Performance indicators (PIs) (continued)
2019	• Assessment study on C&I conducted at regional/subregional level • Providing and maintaining ITU Interactive Terrestrial Transmission Maps through the ITU web • Improvement of the capacity of developing countries to put in place a sustainable and appropriate Conformance and Interoperability Regime at national, Regional and Sub-regional levels • Enhancement of knowledge and effective application of ITU Recommendations in developing countries, including conformance and interoperability (C&I) testing of systems manufactured on the basis of ITU Recommendations • Support provided to developing countries to plan, deploy, operate and maintain sustainable, accessible and resilient ICT networks and services, including broadband wireless and wire-line infra-structure, especially to Rural and Remote areas • Most of the ITU Member States have switched off analogue terrestrial television broadcasting • Most of the Member States have NTFA, have spectrum management strategy or masterplan or using SMS4DC and 60 % of the ITU Member States have regional cross-border frequency coordination agreement • Awareness increased and guidelines prepared on broadcasting and spectrum management topics • Countries supported on spectrum management and broadcasting topics	• Studies conducted for assessing the status of implementation of the C&I programmes and testing laboratories in place in all Regions • National and/or Regional C&I Programmes implemented • Training Activities on C&I conducted for all Regions • Number of countries supported for implementing C&I programmes • Number of publications, reports, studies prepared on specific topics • ITU Interactive (Optical Fibers, Microwaves and Satellite) Transmission Maps covering all Regions and made available through the ITU web • Number of communities, and disadvantaged groups, in developing countries connected to broadband • Number of countries still with analogue terrestrial television broadcasting • Number of countries without NTFA • Roadmaps, case studies, guidelines and reports prepared for digital broadcasting implementation and spectrum management related topics • Percentage of Member States supported • Percentage of Member states using SMS4DC

Annual expected results (continued)		Performance indicators (continued)
2020	• Most of the ITU Member States have switched off analogue terrestrial television broadcasting • 5% of the countries started the implementation of digital radio • Most of the Member States have NTFA, have spectrum management strategy or masterplan or using SMS4DC and 70 % of the ITU Member States have regional cross-border frequency coordination agreement • Awareness increased and guidelines prepared on broadcasting and spectrum management topics • Countries supported on spectrum management and broadcasting topics • Assessment study on C&I conducted at regional/subregional level • Providing and maintaining ITU Interactive Terrestrial Transmission Maps through the ITU web • Improvement of the capacity of developing countries to put in place a sustainable and appropriate Conformance and Interoperability Regime at national, Regional and Sub-regional levels • Enhancement of knowledge and effective application of ITU Recommendations in developing countries, including conformance and interoperability (C&I) testing of systems manufactured on the basis of ITU Recommendations • Support provided to developing countries to plan, deploy, operate and maintain sustainable, accessible and resilient ICT networks and services, including broadband wireless and wire-line infra-structure, especially to Rural and Remote areas	• Number of countries still with analogue terrestrial television broadcasting • Number of countries started the implementation of the digital radio • Number of countries without NTFA • Roadmaps, case studies, guidelines and reports prepared for digital broadcasting implementation and spectrum management related topics • Percentage of Member States supported • Percentage of Member States using SMS4DC • Studies conducted for assessing the status of implementation of the C&I programmes and testing laboratories in place in all Regions • National and/or Regional C&I Programmes implemented • Training Activities on C&I conducted for all Regions • Number of countries supported for implementing C&I programmes • Number of publications, reports, studies prepared on specific topics • ITU Interactive (Optical Fibers, Microwaves and Satellite) Transmission Maps covering all Regions and made available through the ITU web. • Number of communities, and disadvantaged groups, in developing countries connected to broadband

Annual expected results (continued)		Performance indicators (continued)
2021	• Most of the ITU Member States have switched off analogue terrestrial television broadcasting • 10% of the countries started the implementation of digital radio • Most of the Member States have NTFA, have spectrum management strategy or masterplan or using SMS4DC and 80 % of the ITU Member States have regional cross-border frequency coordination agreement • Awareness increased and guidelines prepared on broadcasting and spectrum management topics • Countries supported on spectrum management and broadcasting topics • Providing and maintaining ITU Interactive Terrestrial Transmission Maps through the ITU web • Support provided to developing countries to plan, deploy, operate and maintain sustainable, accessible and resilient ICT networks and services, including broadband wireless and wire-line infra-structure, especially to Rural and Remote areas	• Number of countries still with analogue terrestrial television broadcasting • Number of countries started the implementation of the digital radio • Number of countries without NTFA • Roadmaps, case studies, guidelines and reports prepared for digital broadcasting implementation and spectrum management related topics • Percentage of Member States supported • Percentage of Member States using SMS4DC • Number of publications, reports, studies prepared on specific topics • ITU Interactive (Optical Fibers, Microwaves and Satellite) Transmission Maps covering all Regions and made available through the ITU web. • Number of communities, and disadvantaged groups, in developing countries connected to broadband

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Finance	• Lack of resources to provide the appropriate support level in case of high demand from countries	Medium	Medium	• Appropriate budget forecast to be prepared. Mobilization of additional/ extra-budgetary resources when required • Engage in partnerships and or co-host events with other ICT regional organizations to avoid duplications and waste of resources • Search for partnerships with BDT Sector Members to maintain implementation • Engage partners & stakeholders
2-Competency / knowledge	• Lack of qualified experts in the field of activity	High	Medium	• Anticipate resources requirements and initiate recruitment procedures as soon as possible. Create and keep up-to-date a roster for experts • Look for new experts in the Region • Close coordination with TSB and BR to attend the needs of countries • Make appropriate workload forecast taking into consideration similar needs in various countries

Perspective (Ctn'd)	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
3-Stakeholders / partners	• Insufficient commitment by countries	High	Low	• Ensure and improve cooperation with countries so as to guarantee appropriate level of involvement by countries
	• Insufficient participation of countries due to Membership's high rotation of staff and authorities, and budgetary constraint			• Close coordination with memberships to ensure participation in ITU events • Promote and improve project implementation to ensure availability of funds
	• Insufficient number of projects formulated by Member States and sector members			• Assist Member States in project formulation
4- Government and key ICT public Institutions	• Coordination at national level between Government-Regulator and Operators.	Medium	Low	• Raise awareness of policy makers and political leaders at national level
5- Implementation	• Timing & Implementation Issues	Medium	Medium	• Effective planning of activities and actions

Output 2.3 Innovation and partnership

Description

The national ability of rapid innovation is seen as the key factor for facilitating the overall competitiveness of countries in a globally interconnected world of ICT-based services especially through strategic partnerships including public-private partnership (PPP) particularly with engagement of ITU-D membership in order to mobilize resources and roll out capital-intensive telecommunication/ICT environment from policy-regulatory frameworks, infrastructure, to various innovative applications.

Thus, there are strong needs to support both the Objectives with Outputs of ITU-D Sector adopted at the WTDC-14 as well as the ITU-D membership through innovation and partnerships in, *inter alia*, a) developing policy-coherent approaches and guidelines to ICT innovation, based on best practices, to be integrated into national development agendas; b) developing internationally comparable measurement of ICT innovation capabilities at national levels; c) fostering ICT innovation in the public sector at all levels of government to enhance the delivery of public services, improve efficiency, coverage and equity, and create positive externalities in the rest of the economy; d) undertaking initiatives that support entrepreneurship and the start-up and expansion of new ICT firms; and e) developing cooperation and partnerships among developed and developing countries and other organizations, to encourage and support innovation and creativity methodologies, mobilize resources, and adopt cost-effective ICT solutions.

Result-based analysis

Outcomes	Outcome indicators
• Strengthened member's capacity to integrate telecommunication/ICT innovation in national development agendas. • Enhanced partnerships, including PPP to foster the development of telecommunications/ICTs.	• Number of countries with strengthened capacity on telecommunication/ICT innovation • Number of initiatives and projects fostering innovation • Number of strategic partnerships including PPP signed and implemented to foster the development of telecommunication/ICT networks as well as relevant applications and services • Number of projects to foster the development of telecommunications/ICT signed and implemented

Annual expected results		Performance indicators (PIs)	
2018	• Enhanced toolkits to build and increase countries innovation capacity • Assessments and guidelines provided to strengthen ICT-centric innovation ecosystem • Enhanced tools for partnerships, resource mobilization and membership (e.g. partnership and sponsorship opportunities websites, membership portal etc.) • New partners in various ITU-D activities • At least 30 new partnerships signed to implement initiatives and/projects	• Number of ITU members to have the assessments and guidelines on ICT innovation. • Publications, reports, studies prepared, guidelines adopted, and events organized on specific topics • Number of new partners in various ITU-D activities • Number of new partnership signed and/or implemented
2019	• Assessments and guidelines provided to strengthen ICT-centric innovation ecosystem • Knowledge transfer from best practices, guidelines on ICT Innovation Enhanced tools for partnerships, resource mobilization and membership (e.g. partnership and sponsorship opportunities websites, membership portal etc.) • New partners in various ITU-D activities • At least 30 new partnerships signed to implement initiatives and/projects	• Number of ITU members to have the guidelines and assessment on ICT innovation. • Publications, reports, studies prepared, guidelines adopted, and events organized on specific topics • ITU-D Members' feedback concerning their level of satisfaction with services provided • Number of new partners in various ITU-D activities • Number of new partnership signed and/or implemented
2020	• Assessments and guidelines provided to strengthen ICT-centric innovation ecosystem • Knowledge transfer from best practices, guidelines on ICT Innovation • Enhanced tools for partnership, resource mobilization and membership (e.g. partnership and sponsorship opportunities' websites, etc.) • New partners in various ITU-D activities • At least 30 new partnerships signed to implement initiatives and/projects	• Number of ITU members to have the guidelines and assessment on ICT innovation • Publications, reports, studies prepared, guidelines adopted, and events organized on specific topics • ITU-D Members' feedback concerning their level of satisfaction with services provided • Number of new partners in various ITU-D activities • Number of new partnership signed and/or implemented

Annual expected results (Continued)		Performance indicators (PIs)
2021	• Assessments and guidelines provided to strengthen ICT-centric innovation ecosystem • Knowledge transfer from best practices, guidelines on ICT Innovation • Enhanced tools for partnership, resource mobilization and membership (e.g. partnership and sponsorship opportunities' websites, etc.) • New partners in various ITU-D activities • At least 30 new partnerships signed to implement initiatives and/project	• Number of ITU members to have the guidelines and assessment on ICT innovation. • Publications, reports, studies prepared, guidelines adopted, and events organized on specific topics • ITU-D Members' feedback • concerning their level of satisfaction with services provided • Number of new partners in various ITU-D activities • Number of new partnership signed and/or implemented

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Finance	• Lack of resources/ insufficient funding to provide the appropriate support to projects and initiatives	High	Medium	• Be strategic and pro-active for resources mobilization
2- Organizational Matters	• Insufficient resources committed timely to activities	Medium	Medium	• Streamline processes and reporting for execution of activities
3- Finance/ Operational	• Lack resources for in reach/outreach initiative , for Innovating products and services to launch ICT Innovation platform, or for enlisting partners around platform	High	Medium	• Extensive coordination and synergies within ITU • Be Proactive and strategically aligned with roadmaps for activities • Explore temporary help or free resources
4- Stakeholders/ partners	• Limited retention of existing members and difficulty in attracting new members	High	Medium	• Enhance communication with existing members and their engagement in ITU activities. • Proactive approach to reach out to new members.
5- Stakeholders/ partners	• Insufficient commitment of members and partners	Medium	Medium	• Raise awareness. Enhance communication with members and partners
	• Insufficient number of projects formulated by Member states and sector members	Medium	High	• Assist Member states in project formulation

Perspective (Ctn'd)	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
6- Ecosystem Engagement	· Lack of commitment or incentive from ecosystem partners to join our journey for transformation (e.g. Government, private sector, other ICT converged ecosystem, etc.)	High	Medium	· Find strategically aligned and motivated ecosystem players with a fit (complementary strengths and weaknesses)
7- Government and key ICT public Institutions	· Lack of coordination at national level between Government-Regulator and Operators.	Medium	Low	· Raise awareness of policy makers and political leaders at national level
8- Implementation	· Gaps identified in development plans	Medium	Medium	· Work with members on objectives/output requirements

OBJECTIVE 3

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

Summary

The purpose of Objective 3 is to support the ITU membership in facilitating the development and improving access to ICT-based applications and services, particularly in underserved and rural areas, achieving trust and confidence in the safe use of ICTs, and increasing the robustness of networks.

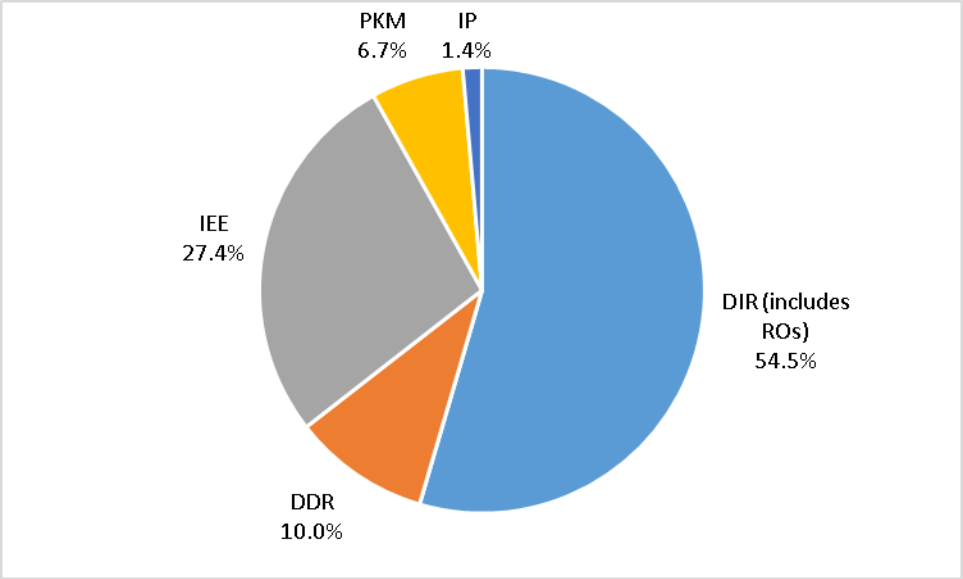
Objective 3 includes the following outputs:

- Building confidence and security in the use of ICTs
- ICT applications and services

For the years 2018 to 2021, the estimated human resources to be allocated to Objective 3 represent **15.0%** of the total human resources of the Telecommunication Development Bureau.

Chart 3 provides the breakdown of the human resources allocated to Objective 3 by department.

Chart 3



Output 3.1 Building confidence and security in the use of ICTs

Description

ICTs are integral to the economic and social development of all nations as well as to the development of the information society. Security is an essential element of the operation and use of ICTs, and requires that all persons involved be aware of security and take action appropriate to their role.

As the use of ICT continues to grow, cybersecurity and combating the transmission of e mail spam continues to be a priority among members. During the last four years, ITU D continued to work in this area.

BDT undertook many activities that offer development assistance to members and encourage cooperation among members, while under Question 3/2 products and materials were elaborated to support countries in developing national cybersecurity capabilities, to convene experts and to contribute to ongoing information-sharing on best practices. The Question also identified key areas of common concern, as well as gaps, based on contributions to a compendium and a survey, respectively.

Result-based analysis

Outcome 1	Outcome Indicators
• Strengthened capacity of Member States to incorporate and implement cybersecurity policies and strategies into nation-wide ICT plans, as well as appropriate legislation	• Number of countries with national strategies and policies related to cybersecurity • Number of countries with cybersecurity legal frameworks in place

	Annual expected results	Performance indicators (PIs)
2018	• 50% of Member States have cybersecurity strategies and policies in place	• Percentage of Member States assisted by BDT
2019	• Updated National Cybersecurity Toolkit published with partners	• Number of partners participating in the project • Number of Member States using the product as reference / model
2020	• 75% of Member States have cybersecurity strategies, legislation and policies in place	• Number of Member States assisted by BDT
2021	• 60% of Members States have national cybersecurity strategies enforced	• Number of Member States assisted by BDT

Outcome 2	Outcome indicators
• Enhanced ability of Member States to respond to cyber threats in a timely manner	• Number of CIRTs established and affiliated to international associations and/or fora • Number of countries establishing CIRT-to-CIRT cooperation

Annual expected results		Performance indicators (PIs)
2018	• 65% of Member States have CIRT established and cooperating with each other • Facilitated regional and sub-regional cooperation among CIRTs Needs assessment performed in 10 countries	• Number of Member States assisted in establishing the CIRT • Number of Regional Meetings / Cyber Drills involving national CIRTs • Needs assessment performed
2019	• 70% of Member States have CIRT established and cooperating with each other • 50 % of Member States Cyber Threat Intelligence capabilities in place • Facilitated regional and sub-regional cooperation among CIRTs • Needs assessment performed in 10 countries	• Number of Member States assisted in establishing the CIRT • Number of Regional Meetings / Cyber Drills involving national CIRTs • Needs assessment performed
2020	• 75% of Member States have CIRT established and cooperating with each other • Facilitated regional and sub-regional cooperation among CIRTs • Needs assessment performed in 10 countries	• Number of Member States assisted in establishing the CIRT • Number of Regional Meetings / Cyber Drills involving national CIRTs • Needs assessment performed
2021	• 60 % of Member States Cyber Threat Intelligence capabilities in place	• Number of Member States assisted in establishing the CIRT

Outcome 3	Outcome indicators
• Enhanced cooperation, information exchange and know-how transfer among Member States and with relevant players	• Number of Member States involved in global initiatives related to cybersecurity • Number of Member States participating in international dialogues and debates related to cybersecurity, as well as in the work of technical organizations and associations

Annual expected results		Performance indicators (PIs)
2018	• Increased ITU-D Sector Membership • Collaboration agreements formalized with cybersecurity stakeholder organizations • Annual Interactive Global Cybersecurity Index (GCI) & country profiles produced • 140 Member States participate in GCI	• Number of new Sector Members • Number of agreements established • Number of Member States participate in GCI
2019	• 60% of Member States engaged in ITU global initiatives as well as participating in international debates and dialogues • Annual Interactive Global Cybersecurity Index (GCI) & country profiles produced • 150 Member States participate in GCI	• Percentage of Member States participating in ITU meetings as well as at relevant international conferences • Number of Member States participating in GCI
2020	• 50% of member states using ITU global cybersecurity online data • Annual Interactive Global Cybersecurity Index (GCI) & country profiles produced • 160 Member States participate in GCI	• Percentage of Member States using ITU global cybersecurity online data • 180 Member States participate in GCI
2021	• 60% of member states using ITU global cybersecurity online data • Annual Interactive Global Cybersecurity Index (GCI) & country profiles produced • 180 States Member States participate in GCI	• Percentage of Member States using ITU global cybersecurity online data • 180 Member States participate in GCI

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Finance	• Lack of resources to provide the appropriate support level in case of high demand from countries	Medium	Medium	• Closely monitor budgets and planned expenditures, seek lowest cost options. Expend efforts for mobilization of additional/ extra-budgetary resources when required • Implementation of activities on a cost sharing basis
	• Mobilization of financial resources not sufficient for project development	Medium	High	• Raise awareness of political leaders at national level on the importance of investing in cybersecurity
2- Finance	• Budgetary constraints affecting participation	High	Medium	• Promote and improve project implementation to ensure availability of funds
3- Competence/ Knowledge	• Lack of qualified experts in the domains concerned	High	Medium	• Anticipate resource requirements and initiate recruitment procedures as soon as possible. Keep up-to-date the roster of experts. • Support of HQ to fulfill necessary requirements • Make adequate staff distribution
4- Stakeholders / Partners	• Insufficient commitment of countries and/or at local level	Medium	Low	• Improve cooperation with countries so as to guarantee appropriate level of involvement by countries and/or at the local level
	• Insufficient participation of countries due to Membership's high rotation of authorities and of staff	High	Medium	• Close coordination with memberships to ensure participation in ITU events
5- Cooperation & Coordination	• Cooperation & coordination issues in CIRT establishment	Low	Low	• Active collaboration with key stakeholders to improve coordination

Output 3.2 ICT applications and service

Description

The proven contribution of ICTs to national socio-economic development has been the subject of numerous studies. ICTs and associated applications, including mobile applications, which have come to be known as "e government", "e agriculture", "e education", "e health", "e entrepreneurship", etc., contribute to development by enabling access to and exchange of information and services anywhere and anytime, by supporting the rapid processing and storage of information and by improving the provision of public and private services, including education and professional development, health, transport, industry, human rights, environmental protection, trade, road safety, urban management, transfer of information for social welfare, agriculture information and services, government services, entertainment, information services, and commerce in general, making them much more effective, efficient, accessible and affordable, especially for poor and marginalized populations. ICTs also enhance access to markets, and increasingly facilitate direct democratic participation. They provide more cost-efficient and effective ways to preserve and promote local culture. They not only bring down the costs of economic and social activities, for example by replacing transport and postal services, but open up entirely new business opportunities.

ICT applications and services are an important demand-side driver that can encourage the adoption of broadband services and can create a virtuous circle for broadband infrastructure development, where new types of content and applications drive an ever-increasing need for more bandwidth. It is well recognized that access to broadband networks and services is critical to countries' economic growth. Broadband is essential for generating new skills and fueling economic growth and technological change across all sectors and for opening up a whole range of new applications and opportunities to better serve citizens' needs. In order to associate broadband with sustainable development, it is necessary to promote both ICT infrastructure development and ICT utilization and application in parallel.

The added value of ICT applications and services is also greatly increasing due to several technological advances that have been achieved in the field of telecommunication/ICT infrastructure, including cloud computing, the Internet of things (IoT), high-volume data exchange, and machine to-machine (M2M) communications in addition to spectacular developments in the field of public consumer applications such as social network media.

For ICT for Development initiatives, however, there has long been a realization that building information societies requires an ecosystem approach, supporting elements of which include an enabling environment, infrastructure build-out, capacity building and broad availability of ICT applications and services.

In order to take advantage of the potential benefits of the progress that has been made, developing countries need capacity and information on strategies, best practices, sources of expertise and financial support, as well as on the types of applications and technological platforms for e applications that would provide the most benefits to their citizens, based on the country's needs and current capabilities.

Result-based analysis

Outcome 1	Outcome indicators
• Improved capacity of countries for the planning of national sectoral e-strategies to foster the enabling environment for upscaling ICT applications	• Number of countries that developed/updated their national e-sectoral strategies (e.g. eHealth, eAgriculture, e-Learning, Healthy Cities, etc.)

Annual expected results		Performance indicators (PIs)
2018	• Technical assistance provided to e-sectoral strategies development • Toolkit made available in UN languages	• At least 4 countries assisted • Toolkit translated to UN languages
2019	• New Toolkit published for new emerging e-sectoral strategy development • Regional capacity building workshop held for e-sectoral strategies	• At least 1 new toolkit published • At least 1 regional workshop held • At least 5 countries participating in capacity building event
2020	• Technical assistance provided to e-sectoral strategies development • Toolkit made available in UN languages	• At least 4 countries assisted • Toolkit translated to UN languages
2021	• Technical assistance provided to e-sectoral strategies development • Regional capacity building workshop held for e-sectoral strategies	• At least 4 countries assisted • At least 5 countries participating in capacity building event

Outcome 2	Outcome indicators
• 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	• Number of countries that launched value-added ICT/mobile services for development

Annual expected results		Performance indicators (PIs)
2018	• Partnership agreements signed with key relevant partners • Project proposals developed for new emerging innovative ICT Applications areas	• At least 1 partnership agreement signed • At least 2 countries project proposals developed and funded
2019	• Partnership agreements signed with key relevant partners • Project proposals developed for new emerging innovative ICT Applications areas	• At least 1 partnership agreement signed • At least 2 countries project proposals developed and funded
2020	• Partnership agreements signed with key relevant partners • Project proposals developed for new emerging innovative ICT Applications areas • Impact assessment carried out in regions	• At least 1 partnership agreement signed • At least 2 countries project proposals developed and funded • Impact assessment made at least in 1 country/region
2021	• Partnership agreements signed with key relevant partners • Project proposals developed for new emerging innovative ICT Applications areas • Impact assessment carried out in countries/regions	• At least 1 partnership agreement signed • At least 2 countries project proposals developed and funded • Impact assessment made at least in 1 country/region

Outcome 3	Outcome Indicators
• Enhanced innovation, knowledge and skills of national institutions to use ICT and broadband for development	• Number of institutions with enhanced knowledge on ICT-for-development issues • Number of countries and other stakeholders participating in international/regional ICT-for-development event

Annual expected results		Performance indicators (PIs)
2018	• ICT Applications best practices report published • Knowledge sharing events held for ICT for Development • Increased number of ITU-D Study Groups ICT Applications related contributions	• At least 1 report published and promoted on Innovative ICT Applications for Development • At least 1 global/regional event ICT for Development held with more than 100 participants • At least 5 new contributions received for each question per meeting
2019	• ICT Applications best practices report published • Knowledge sharing events held for ICT for Development • Increased number of ITU-D Study Groups ICT Applications related contributions	• At least 1 report published and promoted on Innovative ICT Applications for Development • At least 1 global/regional event ICT for Development held with more than 100 participants • At least 5 new contributions received for each question per meeting
2020	• ICT Applications best practices report published • Knowledge sharing events held for ICT for Development • Increased number of ITU-D Study Groups ICT Applications related contributions	• At least 1 report published and promoted on Innovative ICT Applications for Development • At least 1 global/regional event ICT for Development held with more than 100 participants • At least 5 new contributions received for each question per meeting
2021	• ICT Applications best practices report published • Knowledge sharing events held for ICT for Development • Increased number of ITU-D Study Groups ICT Applications related contributions	• At least 1 report published and promoted on Innovative ICT Applications for Development • At least 1 global/regional event ICT for Development held with more than 100 participants • At least 5 new contributions received for each question per meeting

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Finance	• Lack of resources to provide the appropriate support level in case of high demand from countries	Medium	Low	• Closely monitor budgets and planned expenditures, seek lowest cost options • Expend efforts for mobilization of additional/ extra-budgetary resources when required • Implementation of activities on a cost sharing basis
2- Competence / Knowledge	• Lack of qualified experts in the domains concerned	High	Medium	• Anticipate the resources requirements and initiate recruitment procedures as soon as possible. Keep up-to-date the roster of experts. / • Support of HQ to fulfill necessary requirements • Make adequate staff distribution
3- Stakeholders / Partners	• Insufficient commitment of countries and/or at local level • Insufficient participation of countries due to Membership's high rotation of authorities and of staff, and budgetary constraints	High	Low	• Ensure and constantly improve cooperation with countries so as to guarantee appropriate level of involvement by countries and/or at the local level • Ensure intensive coordination with countries and regional organizations in regards to the relevance of their contribution/support for successful implementation • Close coordination with memberships to ensure participation in ITU events • Promote and improve project implementation to ensure availability of funds

Perspective (Ctn'd)	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
4- Stakeholders / Partners	• Lack of readiness by the country (e.g. ICT Infrastructure available, political stability and security)	High	Medium	• Readiness assessment to be conducted and contingency plan to be elaborated
5-Government and ICT public Institutions	• Half of the stakeholders involved in Smart Learning belong to the Educational Sector and hence out of our direct reach.	High	High	• Collaborate with regional organizations that have Education within their jurisdiction such as UNESCO, ALECSO, and ISESCO • Coordinate with the Ministries of ICT to bring in stakeholders from the Educational sector through their cooperation with their respective Ministries of Education.

OBJECTIVE 4

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

Summary

The purpose of Objective 4 is to assist the ITU membership in building human and institutional capacity in the field of telecommunications/ICTs, including through the use of study groups questions of priority to developing countries; to foster digital inclusion that promotes telecommunication/ICT accessibility to make informed and effective decisions on ICT policies and strategies based on high-quality, internationally comparable ICT data and statistics; and, to provide concentrated assistance to countries in special need.

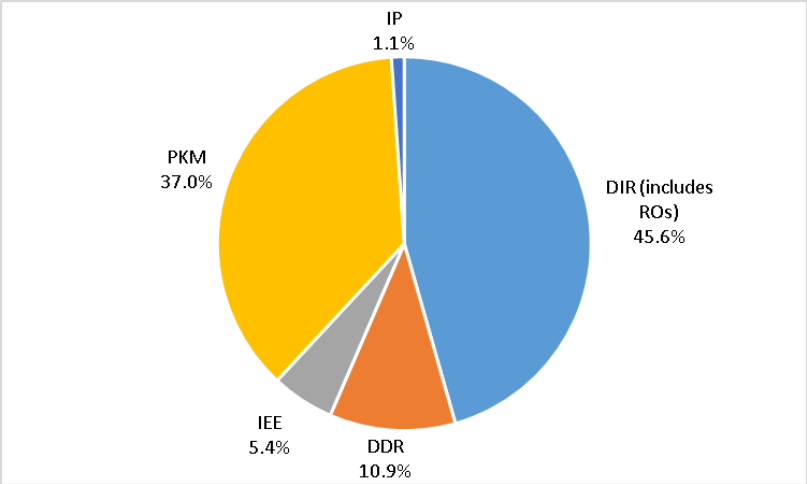
Objective 4 includes the following outputs:

- Capacity building
- Telecommunication/ICT statistics
- Digital inclusion of people with specific needs
- Concentrated assistance to LDCs, SIDS and LLDCs

For the years 2018 to 2021, the estimated human resources to be allocated to Objective 4 represent **30.8 %** of the total human resources of the Telecommunication Development Bureau.

Chart 4 provides the breakdown of the human resources allocated to Objective 4 by department.

Chart 4



4.1 Capacity building

Description

ITU, as the lead United Nations agency for telecommunication/ICT issues, is an important source of information, education and training in this field. This ITU leadership position carries with it a responsibility to ensure that human and institutional capacity building is of the utmost quality, is available worldwide, and represents the cutting edge of rapidly emerging technologies and changes taking place in the sector. It is thus important to provide opportunities for all, and especially developing countries, to acquire the specialized knowledge and skills they need to engage in and benefit from the telecommunication/ICT sector. This requires the promotion of an enabling environment and supporting the implementation of telecommunication/ICT initiatives.

Capacity building continues to be a cross-cutting issue that informs and enhances the overall ITU D mission. Therefore, it requires cooperation and partnerships between countries and broad stakeholder participation. These partnerships should include, among others, academia, experienced professionals and experts, as well as organizations with relevant expertise in the capacity-building activities.

Telecommunication/ICT-based education and training is particularly fundamental for developing countries. It will help them to improve skills and enable them to establish and develop their national e strategies for sustainable development. Therefore, research undertakings and the development of specialized training programmes in priority areas for the membership are required. Furthermore, the introduction of telecommunications/ICTs into education and human resources development for all groups is needed. It is also essential to enhance human potential through the use of distance-learning technologies and other developments in telecommunications/ICTs.

To facilitate coordination of its capacity-building support to the membership, ITU has established the ITU Academy, an online platform that integrates all ITU capacity-building activities. The ITU Academy is also enhancing human potential through provision of distance-learning solutions. Centres of excellence (CoEs) and Internet training centres (ITCs) are equally important platforms for education and information-sharing, which therefore fulfil an important role in ITU capacity-building activities under the ITU Academy.

A new strategy for CoEs has been developed under WTDC 10 Resolution 73. Through this strategy, there is alignment between the training provided and the priorities of the membership as decided at various WTDCs. The strategy takes effect after WTDC 14. ITU has also intensified the development of high-level training materials that will be available to CoEs, academia and other stakeholders. These training programmes are designed in such a manner that they can be delivered by accrediting institutions, leading to certification as part of degree programmes.

Regional, subregional and global forums and other capacity-building events remain important platforms for exchanging and sharing information among all stakeholders. These events provide developing countries with practical skills and hands-on learning, as well as offering opportunities for networking and creation of partnerships.

Result-based analysis

Outcome 1	Outcome indicators
• Enhanced capacity building of membership in international Internet governance	• Number of countries with enhanced capacity in international Internet Governance

Annual expected results		Performance indicators (PIs)
2018	• Awareness on international Internet governance enhanced in ITU Member States • At least 2 training activities or workshops on Internet governance per region delivered	• Number of workshops or training delivered • Satisfaction level with the workshops or training delivered
2019	• Awareness on international Internet governance enhanced in ITU Member States • At least 2 training activities or workshops on Internet governance per region delivered	• Number of workshops or training delivered • Satisfaction level with the workshops or training delivered
2020	• Awareness on international Internet governance enhanced in ITU Member States • At least 2 training activities or workshops on Internet governance per region delivered	• Number of workshops or training delivered • Satisfaction level with the workshops or training delivered
2021	• Awareness on international Internet governance enhanced in ITU Member States • At least 2 training activities or workshops on Internet governance per region delivered	• Number of workshops or training delivered • Satisfaction level with the workshops or training delivered

Outcome 2	Outcome indicators
• Improved knowledge and skills of ITU membership in the use of telecommunications/ICTs	• Number of countries with improved knowledge and skills in the use of telecommunications/ICTs

Annual expected results		Performance indicators (PIs)
2018	• ICT knowledge and skills improved in ITU Member States in priority areas • At least 2 training courses developed / updated • At least 50 training courses delivered	• Number of participants trained • Number of training courses developed / updated • Number of training courses delivered
2019	• ICT knowledge and skills improved ITU Member States in priority areas • 2 training courses developed / updated • 50 training courses delivered	• Number of participants trained • Number of training courses developed / updated • Number of training courses delivered
2020	• ICT knowledge and skills improved ITU Member States in priority areas • 2 training courses developed / updated • 50 training courses delivered	• Number of participants trained • Number of training courses developed / updated • Number of training courses delivered
2021	• ICT knowledge and skills improved in ITU Member States in priority areas • 2 training courses developed / updated • 50 training courses delivered	• Number of participants trained • Number of training courses developed / updated • Number of training courses delivered

Outcome 3	Outcome indicators
• Enhanced awareness of the role of human and institutional capacity building for telecommunications/ICTs and development for the ITU membership	• Number of countries made aware of the importance of human and institutional capacity building in their national agenda

Annual expected results		Performance indicators
2018	• Awareness on the role of human and institutional capacity building for Telecommunications/ICTs and development for the ITU membership enhanced ITU Member States • At least one regional event organized • Global ICT Capacity Building Symposium implemented successfully	• Number of regional and sub-regional events organized • Number and diversity of countries and participants that attended regional and sub-regional events • Number of participants in Global ICT Capacity Building Symposium
2019	• Awareness on the role of human and institutional capacity building for Telecommunications/ICTs and development for the ITU membership enhanced of ITU Member States • At least one regional event organized • Academia event implemented successfully	• Number of global, regional and sub-regional events organized • Number and diversity of countries and participants that attended global, regional and sub-regional events
2020	• Awareness on the role of human and institutional capacity building for Telecommunications/ICTs and development for the ITU membership enhanced ITU Member States • At least one regional event organized • Global ICT Capacity Building Symposium implemented successfully	• Number of global, regional and sub-regional events organized • Number and diversity of countries and participants that attended global, regional and sub-regional events • Number of participants in Global ICT Capacity Building Symposium
2021	• Awareness on the role of human and institutional capacity building for Telecommunications/ICTs and development for the ITU membership enhanced in ITU Member States • At least one regional event organized • Academia event implemented successfully	• Number of global, regional and sub-regional events organized • Number and diversity of countries and participants that attended global, regional and sub-regional events

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Finance	• Lack of Financial resources to meet demand for development of programmes and demand to support regions	Medium	Medium	• Prioritize budget items and request for financial support from internal stakeholders • Seek extra budgetary funding from projects and partnership contributions; • Seek strategic partnerships with BDT Sector Members
2- Competency/ Knowledge	• Lack of qualified experts in specialized areas who also have competencies in material development or training	High	Medium	• Increase channels of advertising for experts and initiate recruitment early • Support of HQ to fulfill necessary requirements • Make adequate staff distribution
3- Stakeholders/ Partners	• Insufficient commitment from stakeholders due to Membership's high rotation of authorities and staff, and budgetary constraints	Low	Medium	• Intensify consultations • Ensure intensive coordination with countries and regional organizations in regards to the relevance of their contribution/support for successful implementation • Close coordination with memberships to ensure participation in ITU events • Promote and improve project implementation to ensure availability of funds

Perspective (Ctn'd)	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
4- Stakeholders/ partners	• Low level of partnerships and participation in capacity building activities • Low partner resource allocation	High	Medium	• Stakeholder involvement in • capacity building program design; • Increased partner value proposition in capacity-building programmes
5- Human resources	• Inadequate staff against expected deliverables	High	High	• Redesign work and focus on strategic inputs with high impact; • Automate transactional processes and develop templates and guidelines
6- Environment	• Delays in country activities due to unforeseen local events	Medium	Low	• Develop adaptive and responsive implementation mechanisms and communicate with partners and donors

4.2 Telecommunication/ICT statistics

Description

With the growing recognition of ICTs as a driver for social development and economic growth, and as more and more people join the global information society and high-speed communication networks become an indispensable infrastructure, the tracking and measurement of developments in telecommunications/ICTs remain as relevant as ever. While there were almost 7 billion mobile cellular subscriptions globally and close to 3 billion people using the Internet worldwide by the end of 2014, there are still more than 4 billion people who are not yet connected to the Internet, mostly those living in rural areas of developing countries, for whom broadband Internet services are still unavailable or unaffordable.

ITU is recognized all over the world as the main source of internationally comparable data and statistics on telecommunications/ICTs. The statistical standards, definitions and methodologies developed by ITU are widely used by countries in their production of telecommunication/ICT statistics. Reliable, comprehensive and comparable statistics are indispensable to identify progress and gaps, track information-society developments at the national and global levels and support government and industry in making informed and strategic decisions to ensure equal access, use and impact of telecommunications/ICTs.

While the availability of comparable telecommunication/ICT statistics has considerably improved in recent years, major data gaps remain, in particular in developing countries, and in covering important areas such as measuring broadband speed and quality, international Internet bandwidth, investment and revenue in the ICT sector, household access to ICTs, individuals' use of ICTs, or gender equality in access and use of ICTs and access to ICTs by persons with disabilities. Countries are therefore encouraged to produce high-quality data based on internationally agreed standards and methodologies, which illustrate national digital divides as well as the efforts made through various programmes to close the gap, showing, as much as possible, the social and economic impact.

Result-based analysis

Outcome 1	Outcome indicators
• 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	• Number of countries and other stakeholders using internationally comparable telecommunication/ICT statistics for policy making and analysis

Annual expected results		Performance indicators (PIs)	
2018	• Enhanced availability of internationally comparable, timely ICT statistical databases • Accurate analysis of information society developments available	• Timely release of ITU WTI database • Number of country-level data points and indicators available in ITU WTI database • Number of downloads, citations, website hits and/or purchases of BDT statistical and research products and online resources
2019	• Enhanced availability of internationally comparable, timely ICT statistical databases • Accurate analysis of information society developments available	• Timely release of ITU WTI database • Number of country-level data points and indicators available in ITU WTI database • Number of downloads, citations, website hits and/or purchases of BDT statistical and research products and online resources
2020	• Enhanced availability of internationally comparable, timely ICT statistical databases • Accurate analysis of information society developments available	• Timely release of ITU WTI database • Number of country-level data points and indicators available in ITU WTI database • Number of downloads, citations, website hits and/or purchases of BDT statistical and research products and online resources
2021	• Enhanced availability of internationally comparable, timely ICT statistical databases • Accurate analysis of information society developments available	• Timely release of ITU WTI database • Number of country-level data points and indicators available in ITU WTI database • Number of downloads, citations, website hits and/or purchases of BDT statistical and research products and online resources

Outcome 2	Outcome indicators
• 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	• Number of countries participating in ITU ICT measurement events, including the World Telecommunication/ICT Indicators Symposium (WTIS) • Number of countries producing telecommunication/ICT statistics based on international standards and methodologies

Annual expected results		Performance indicators (PIs)
2018	• World Telecommunication/ICT Indicators Symposium and work of the statistical Expert Groups implemented successfully • Capacity of countries on telecommunication/ICT statistics based on international standards and methodologies provided to countries • ITU Manual on statistics updated	• Number of countries trained or advised on telecommunication/ICT statistics • Number of participants in the ITU World Telecommunication/ICT Indicators Symposium and in statistical Expert Groups • Updated ITU statistical manuals and guidelines
2019	• World Telecommunication/ICT Indicators Symposium and work of the statistical Expert Groups implemented successfully • Capacity building on telecommunication/ICT statistics based on international standards and methodologies provided to countries	• Number of countries trained or advised on telecommunication/ICT statistics • Number of participants in the ITU World Telecommunication/ICT Indicators Symposium and in statistical Expert Groups
2020	• World Telecommunication/ICT Indicators Symposium and work of the statistical Expert Groups implemented successfully • Capacity building on telecommunication/ICT statistics based on international standards and methodologies provided to countries	• Number of countries trained or advised on telecommunication/ICT statistics • Number of participants in the ITU World Telecommunication/ICT Indicators Symposium and in statistical Expert Groups

Annual expected results (Continued)		Performance indicators (PIs) (Continued)	
2021	• World Telecommunication/ICT Indicators Symposium and work of the statistical Expert Groups implemented successfully • Capacity building on telecommunication/ICT statistics based on international standards and methodologies provided to countries	• Number of countries trained or advised on telecommunication/ICT statistics • Number of participants in the ITU World Telecommunication/ICT Indicators Symposium and in statistical Expert Groups	

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1 - Finance	• Lack of resources to provide the appropriate support level in case of high demand from countries	Medium	Low	• Prepare appropriate budget forecast. • Implementation of activities on a cost sharing basis
2 - Competency / knowledge	• Lack of qualified experts in the domains concerned	Medium	Medium	• Anticipate resource requirements and initiate recruitment procedures as soon as possible • The region relies on the support of HQ to fulfill necessary requirements • Make adequate staff distribution • Keep the roster of experts up to date
3 - Stakeholders / partners	• Insufficient commitment of countries and/or at local level	Medium	Low	• Ensure and improve cooperation with countries so as to guarantee appropriate level of involvement by countries and/or at local level. • Close coordination with memberships to ensure participation in ITU events • Promote and improve project implementation to ensure availability of funds
4 – Human resources	• Lack of staff to implement expected deliverables	High	Medium	• Prioritize areas with high strategic impact
5- Statistics & reporting	• Inefficient use of statistics for policy making and analysis	Low	Low	• Accuracy of statistical database, • resources and reports

4.3 Digital inclusion of people with specific needs

Description

Digital inclusion means ensuring the accessibility of telecommunications/ICTs and the use of telecommunications/ICTs for the social and economic development of people with specific needs.

Despite the increasing deployment of telecommunication/ICT networks, equipment and applications, many people remain excluded from the information society. Furthermore, telecommunications/ICTs are not exploited to promote economic and social development of women and girls, persons with disabilities, including age-related disabilities, youth, children and indigenous peoples, who have specific needs that must be addressed to enable them to use telecommunications/ICTs. Special measures are required to ensure the inclusion of people with specific needs in the information society and to promote their social and economic development through telecommunications/ICTs.

Globally, fewer women than men have access to telecommunications/ICTs, in particular access to the Internet and broadband services. This gender divide is more apparent in developing countries. There is a need for national strategies to ensure that women and men enjoy equal access to telecommunications/ICTs, and that telecommunications/ICTs can be used for the social and economic empowerment of women and girls.

People with specific needs often face barriers to using telecommunications/ICTs. Persons with disabilities, including age-related disabilities, require accessible telecommunications/ICTs (including mobile phones, tablets, computers, websites and TVs) that they can perceive and understand and on which they can input commands. Legal, policy, regulatory and business practices can be implemented to ensure that accessible telecommunications/ICTs are widely available and affordable for persons with disabilities in ITU Member States.

Youth, women, persons with disabilities, including age-related disabilities, and indigenous peoples often require training in both basic and advanced digital literacy skills in order to participate actively in the information society. Despite the rise of digital natives in developing countries, the majority of youth worldwide are not currently digital natives. Once equipped with telecommunication/ICT skills, people with specific needs can harness the power of telecommunications/ICTs for their empowerment, including employment, entrepreneurship and lifelong learning. This is especially timely in the face of global youth unemployment and the skills mismatch between what youth learn in school and the telecommunication/ICT skills sought by employers, as well as the gender divide in telecommunication/ICT skills development. Young people can develop these skills where they are incorporated into national education plans and where schools are connected to the Internet, equipped with ICTs and possess teachers trained to impart such skills.

Such skills can also be developed in community ICT centres, including those funded by universal service/access funds. Community access strategies are at a crossroads, moving from mere provision of Internet access and basic digital literacy training to development of innovation hubs, where members of the community create their own telecommunication/ICT solutions to social and economic challenges. Likewise, universal access/service mandates and funds require updating to ensure they are used to promote accessibility and digital inclusion of people with specific needs. Using telecommunications/ICTs to ensure the digital inclusion of all peoples for social and economic development requires comprehensive national digital inclusion policies, strategies and guidelines, as well as national broadband plans that promote accessibility and digital inclusion of people with specific needs.

Result-based analysis

Outcome 1	Outcome indicators
• 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* (*people with specific needs are indigenous peoples, persons with disabilities, including age related disabilities, youth, women and girls)	• Number of countries with strengthened capacity to develop and implement digital inclusion policies and strategies

Annual expected results		Performance indicators (PIs)
2018	• Capacity of ITU Member States and other stakeholders strengthened on ICT accessibility services, policies and regulations	• Number of Member States and other stakeholders' capacity on developing and implementing ICT accessibility services, policies and regulations strengthened
2019	• Training/capacity building on designing and implementing digital inclusion policies, strategies/guidelines developed and delivered	• Type of training/capacity building developed and delivered
2020	• Training/capacity building on designing and implementing digital inclusion policies, strategies/guidelines developed and delivered	• Type of training/capacity building developed and delivered
2021	• Training/capacity building on designing and implementing digital inclusion practices, policies, strategies/guidelines developed and delivered	• Type of training/capacity building developed and delivered

Outcome 2	Outcome indicators
• Improved capacity of members to provide people with specific needs digital literacy training and training on the use of telecommunications/ICTs for social and economic development	• Number of countries with improved capacity to provide people with specific needs digital literacy training and training on the use of telecommunications/ICTs for social and economic development

Annual expected results		Performance indicators (PIs)
2018	• Training provided on development of accessible ICTs for persons with disabilities	• Number of trainers and members trained
2019	• Updated guidelines/ training materials on digital skills developed	• Type of guidelines/training materials developed
2020	• Training provided to members on updated digital skills and web literacy programmes in all regions	• Number of trainers and members trained • Number of training in regions
2021	• Training provided to members on the use of telecommunications/ICTs for social and economic development	• Number of trainers and members trained • Type of guidelines/training materials developed

Outcome 3	Outcome indicators
• 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	• Number of countries with improved capacity 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

Annual expected results		Performance indicators (PIs)
2018	• Capacity of ITU Member States strengthened on building digital inclusion programmes • Girls and young women encouraged to prepare for and enter ICT careers • Information shared with telecommunication/ICT stakeholders on the use of telecommunications/ICTs to promote economic and social development of people with specific needs	• Number of Member States' capacity built or strengthened • Number of participants in capacity building/training events • Number of girls and young women encouraged to prepare for and enter ICT careers • Number of digital inclusion programmes and practices shared • Number of website hits
2019	• Strategies on using ICTs for social and economic development of people with specific needs developed	• Type of strategies developed
2020	• Strategies on using ICTs for social and economic development of people with specific needs shared with members	• Number of digital inclusion programmes and practices shared • Number of website hits
2021	• Strategies on using ICTs for social and economic development of people with specific needs shared with members	• Type of strategies developed

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1-Stakeholders/ Partners	• Competing priorities with other BDT activities	High	High	• Create awareness and provide information about the importance of digital inclusion to Members and ITU Management
	• Low implementation of digital inclusion policies & strategies	Low	Low	• Encourage active consultation and collaboration with Member States
2- Finance	• Insufficient financial resources	High	Medium	• Support provided on resource mobilization and strategic partnerships to facilitate implementation of digital inclusion activities
3- Stakeholders/ partners	• Number of ITU Members and Sector Members unaware of BDT Digital Inclusion activities	Medium	Low	• Create awareness among ITU Members and BDT Sector Members, including through social network tools • Provide presentations and promote Digital Inclusion activities in ITU meetings and in other meetings and/or events of our Partners • Develop guidelines/ training for our Members in topics related to Digital Inclusion and social and economic development of persons with specific needs.
4- Implementation	• Low implementation of guidelines and activities	Low	Low	• Refocus implementation plans to address gaps

4.4 Concentrated assistance to LDCs, SIDS and LLDCs

Description

ITU assistance to the least developed countries (LDCs) goes back to 1971, when the Union accorded special assistance to LDCs through the implementation of relevant plenipotentiary conference resolutions. In 2002, direct assistance to LDCs was delivered for the first time to a small group of countries on a biennial basis. This assistance facilitated monitoring and evaluation of the impact made by the concentrated assistance to beneficiary countries. In 2006, the programme was expanded to include Small Island developing states (SIDS) and emergency telecommunications. In 2010, WTDC (Hyderabad, 2010) approved the inclusion of landlocked developing countries (LLDCs) and countries with economies in transition in this programme. Every decade, the United Nations holds a special conference on LDCs, SIDS and LLDCs. For the decade 2004-2014, the Fourth United Nations Conference on LDCs was held in Turkey in 2011, and adopted the Istanbul Programme of Action.

From 1-4 September 2014, the Third International Conference on Small Island Developing States (SIDS)was held in Apia, Samoa, the Conference endorsed unanimously the outcome document, called "The Small Island Developing States Accelerated Modalities of Action" (Samoa Pathway). ITU input to the Conference built on the contributions which were also made to the Fourth United Nations Conference on the Least Developed Countries (LDCs) which was held in Istanbul in 2011. The Second UN Conference on Landlocked Developing Countries (LLDCs) was held in November 2014, in Vienna, Austria.

Since 2003, ITU has maintained a dedicated programme for landlocked developing states (LLDCs) in implementing the Vienna Programme of Action (VPoA) for the landlocked developing countries (LLDCs).

ITU provided inputs for the launch of the toolkit for mainstreaming the Istanbul Program of OHRLLS for the LDCS as a monitoring and living document during the High- level Midterm Review of the Implementation of the Istanbul Programme of Action for the Least Developed Countries for the Decade 2011-2020.

ITU has mainstreamed the needs of LDCs, LLDCs and SIDS in all activities, initiatives, programmes and projects to assist LDCs to bridge the digital divide for a universal access. These activities included market Regulatory reforms; Emergency Telecommunications Plans; promote gender equality and the empowerment of women and girls, emergency telecommunications, disaster risk management, education, health, agriculture, human and institutional capacity, infrastructure, enabling policies and regulatory reforms, Spectrum Management, climate change adaptation and disaster management among many others as well as providing seed money to Countries in Special Need, which includes LDCs.

The results of ITU's deliverables trough harnessing the power of ICTs/Broadband, connectivity, universal access and telecommunication services will accelerate the development of the LDCs, LLDCs and SIDS towards smooth transition for graduation in the most efficient and transformative way. These are in line with ITU's commitments under internationally agreed documents such as the Istanbul Plan of Action for the LDCs, the Almaty Programme of Action, Vienna Programme of Action for the LLDCs, the SAMOA Pathway for

SIDS and the 2030 sustainable development agenda and other internationally agreed documents.

Output 4.4 will deliver targeted and highly differentiated assistance to countries with specific needs, including LDCs, SIDS, LLDCs and countries with economies in transition, in a number of priority areas.

WTDC Resolution 16 (Rev. Hyderabad 2010) and Resolution 30 (Guadalajara, 2010) of the Plenipotentiary Conference, on special measures for LDCs, SIDS, LLDCs and countries with economies in transition, which highlight the role of ICTs as enablers of national socio-economic development, provide BDT with a mandate to pay special attention to these categories of countries through concentrated assistance.

Result-based analysis

Outcome 1	Outcome indicators
• Improved access to and use of telecommunications/ICTs in LDCs, LLDCs, SIDS and countries with economies in transition	• Number of concerned countries with improved access to and use of telecommunications/ICTs

Annual expected results		Performance indicators (PIs)
2018	• At least 30% of LDCs, SIDS, LLDCs and economies in transition received concentrated assistance with improved access to and use of telecommunications/ICTs	• Number of Member States that received concentrated assistance on their priority needs
2019	• At least 30% of LDCs, SIDS, LLDCs and economies in transition received concentrated assistance with improved access to and use of telecommunications/ICTs	• Number of Member States that received concentrated assistance to fund their priority needs
2020	• At least 30% of LDCs, SIDS, LLDCs and economies in transition received concentrated assistance with improved access to and use of telecommunications/ICTs	• Number of Member States that received concentrated assistance to fund their priority needs
2021	• At least 30% of LDCs, SIDS, LLDCs and economies in transition received concentrated assistance with improved access to and use of telecommunications/ICTs	• Number of Member States that received concentrated assistance to fund their priority needs

Outcome 2	Outcome indicators
• Enhanced capacity of LDCs, SIDS and LLDCs in telecommunication/ICT development	• Number of concerned countries with improved telecommunication/ICT development

Annual expected results		Performance indicators (PIs)
2018	• At least 40% of Ministries of ICTs and offices of Regulators in LDCs, SIDS, LLDCs, and countries with economies in transition with enhanced capacity on telecommunication/ICT development	• Number of individuals from concerned countries trained in telecommunication/ICT development
2019	• At least 40% of Ministries of ICTs and offices of Regulators in LDCs, SIDS, LLDCs, and countries with economies in transition with enhanced capacity on telecommunication/ICT development	• Number of individuals from concerned countries trained in telecommunication/ICT development. • Reduced number of countries requesting technical assistance
2020	• At least 40% of Ministries of ICTs and offices of Regulators in LDCs, SIDS, LLDCs, and countries with economies in transition with enhanced capacity on telecommunication/ICT development	• Number of individuals from concerned countries trained in telecommunication/ICT development. • Reduced number of countries requesting technical assistance
2021	• At least 40% of Ministries of ICTs and offices of Regulators in LDCs, SIDS, LLDCs, and countries with economies in transition with enhanced capacity on telecommunication/ICT development	• Number of individuals from concerned countries trained in telecommunication/ICT development. • Reduced number of countries requesting technical assistance

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Finance	· Lack of financial resources to provide appropriate support to Member States	High	Medium	· Appropriate budget allocation and explore possible resource mobilization activities.
2-Stakeholders/ Partners	· Lack of support and cooperation from p artners in the field of climate change	Medium	Medium	· Develop close cooperation with other organizations to provide necessary support.
3- Human Resources	· Lack of staff exposure to issues related to the subject	High	Medium	· Support staff participation to training, events and discussions related to the topic.
4- Planning	· Action Planning & Coordination	Medium	Medium	· Improve planning and coordination processes

OBJECTIVE 5

Enhance environmental protection, climate-change adaptation and mitigation and disaster-management efforts through telecommunications/ICT

Summary

The purpose of Objective 5 is to assist the ITU membership by providing assistance to developing countries in disaster risk reduction and prevention, preparedness and relief/response and telecommunication infrastructure reconstruction/rehabilitation in countries affected by disasters, and to provide assistance to developing countries in the use of ICTs to mitigate and address the effects of climate change.

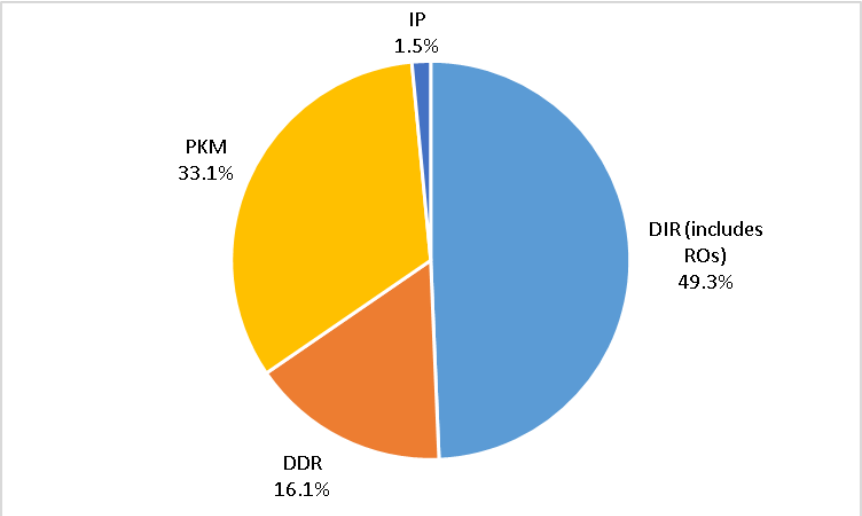
Objective 5 includes the following outputs:

- ICTs and climate-change adaptation and mitigation
- Emergency telecommunications

For the years 2018 to 2021, the estimated human resources to be allocated to Objective 5 represent **9.4 %** of the total human resources of the Telecommunication Development Bureau.

Chart 5 provides the breakdown of the human resources allocated to Objective 5 by department.

Chart 5



5.1 ICTs and climate-change adaptation and mitigation

Description

The process established by the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) and the ongoing negotiations of its Intergovernmental Negotiating Committee are important international actions aimed at addressing the threat of climate change, mitigating its adverse impacts and assisting all ITU Member States. Climate change will see climate/weather-related events occurring more frequently and having an intense impact on water resources, land use and marine ecosystems, thus in turn affecting the economies of all ITU Member States.

The critical importance of using telecommunications/ICTs to mitigate climate change and adapt to its adverse impact is widely recognized. This is why Member States should share best practices regarding sustainable telecommunication/ICT development and take into account the positive contribution of telecommunications/ICTs for sustainable development in other sectors of the economy.

Result-based analysis

Outcome 1	Outcome indicators
• Improved availability of information and solutions for Member States, regarding climate-change adaptation and mitigation	• Number of countries with enhanced awareness of solutions regarding climate change adaptation and mitigation

	Annual expected results	Performance indicators (PIs)
2018	• 30% of all Member States with improved availability of information and solutions for Member States , regarding climate change adaptation and mitigation	• Number of Member States assisted by BDT for increasing awareness on the impact of climate change and on promoting the use of telecommunications/ICTs to mitigate its negative effects
2019	• 30% of all Member States with Improved availability of information and solutions for Member States, regarding climate change adaptation and mitigation	• Number of Member States assisted by BDT for increasing awareness on the impact of climate change and on promoting the use of telecommunication/ICTs to mitigate its effects

Annual expected results (continued)		Performance indicators (PIs) (continued)
2020	• 30% of all Member States with Improved availability of information and solutions for Member States, regarding climate change adaptation and mitigation	• Number of Member States assisted by BDT for increasing awareness on the impact of climate change and on promoting the use of telecommunication/ICTs to mitigate its effects
2021	• 30% of all Member States with Improved availability of information and solutions for Member States, regarding climate change adaptation and mitigation	• Number of Member States assisted by BDT for increasing awareness on the impact of climate change and on promoting the use of telecommunication/ICTs to mitigate its effects

Outcome 2	Outcome indicators
• Enhanced capacity of Member States in relation to climate-change adaptation and mitigation policy and regulatory frameworks	• Number of countries with improved capacity in relation to climate change adaptation and mitigation policy and regulatory frameworks

Annual expected results		Performance indicators (PIs)
2018	• 40% of all Member States with enhanced capacity in relation to climate change adaptation and mitigation policy and regulatory frameworks	• Number of Member States assisted in developing their climate change strategies, policies and legislative frameworks
2019	• 45% of all Member States with enhanced capacity in relation to climate change adaptation and mitigation policy and regulatory frameworks	• Number of Member States assisted in developing their climate change strategies, policies and legislative frameworks

Annual expected results (Continued)		Performance indicators (PIs)(Continued)
2020	• 50% of all Member States with enhanced capacity in relation to climate change adaptation and mitigation policy and regulatory frameworks	• Number of Member States assisted in developing their climate change strategies, policies and legislative frameworks
2021	• 55% of all Member States with enhanced capacity in relation to climate change adaptation and mitigation policy and regulatory frameworks	• Number of Member States assisted in developing their climate change strategies, policies and legislative frameworks

Outcome 3	Outcome indicators
• Development of ICT e-waste policy	• Number of countries with e-waste policies developed

Annual expected results		Performance indicators
2018	• At least 40% of Member States with ICT e-waste policies	• Number of Member States assisted in developing e-waste strategy, policy and regulatory frameworks
2019	• At least 45% of Member States with ICT e-waste policies	Number of Member States assisted in developing e-waste strategy, policy and regulatory frameworks
2020	• At least 50% of Member States with ICT e-waste policies	• Number of Member States assisted in developing e-waste strategy, policy and regulatory frameworks
2021	• At least 55% of Member States with ICT e-waste policies	• Number of Member States assisted in developing e-waste strategy, policy and regulatory frameworks

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Finance	Lack of financial resources to provide appropriate support to Member States	High	High	Appropriate budget allocated and explore possible resource mobiliza-tion activities.
2- Stakeholders/ Partners	Lack of support and cooperation from partners in the field of climate change	Medium	Medium	Develop close cooperation with other organizations to provide necessary support.
3- Stakeholders/ Partners	Inadequate formulation of policies, frameworks and projects	Medium	High	Assist Member States in developing policies and frameworks
4- Human Resources	Insufficient human re sources to cope with work demand during multiple disast ers at the same time	High	Medium	Perform capacity building activities for ITU field staff and Member States.
5-Government, stakeholders and ICT public Institution	Lack of commitment from Member States	Medium	Low	Raise awareness of policy makers and political leaders at national level
6- Implementation	Lack of coherent implementation of guidelines and activities	Medium	Medium	Active consultation and collaboration with Member States

5.2 Emergency telecommunications

Description

Countries throughout the world are experiencing increased numbers of natural and man-made disasters, with a disproportionate impact on developing countries. LDCs, SIDS and LLDCs are particularly vulnerable to the impact that disasters can have on their economies and infrastructures, and such countries often lack the capacity to respond to disasters.

The critical importance of using telecommunications/ICTs to respond to these devastating phenomena is widely recognized. Because of the role telecommunications/ICTs play in all phases of a disaster – prediction, detection, mitigation and relief – it is important to develop disaster telecommunications preparedness plans and strategies, including taking account of the need for resilient and redundant infrastructures and systems as part of disaster risk reduction and early warning.

Because disasters often extend beyond the borders of a State, effective disaster management may involve the deployment of efforts by more than one country in order to prevent loss of human life and regional crisis. Prior coordination and collaboration among disaster-management experts, including governments, the private sector, international organizations and non-governmental organizations, before disasters increases the probability of saving human life when rescue operations are conducted and thereby mitigates the consequences of a disaster.

Member States should take account of a diverse range of telecommunication/ICT solutions that are appropriate and commonly available for disaster response and mitigation, including those provided by amateur radio services and satellite and terrestrial network services/facilities, taking into account persons with disabilities and specific needs.

Result-based analysis

Outcome 1	Outcome indicators
• Developed standards-based monitoring and early-warning systems linked to national and regional networks • Collaboration to facilitate emergency disaster response	• Number of countries with standards-based monitoring and early-warning systems and national emergency telecommunication plans developed

Annual expected results		Performance indicators (PIs)
2018	• At least 55% of Member States have early warning systems and in particular, developing countries • During natural disaster facilitate emergency disaster response for the Member States in need.	• Number of Member States assisted in developing and implementing early warning system • Number of Member States assisted in the case of disaster

Annual expected results (Continued)		Performance indicators (PIs) (Continued)
2019	• At least 60% of Member States have early warning systems and in particular, developing countries • During natural disaster facilitate emergency disaster response for the Member States in need.	• Number of Member States assisted in developing and implementing early warning system • Number of Member States assisted in the case of disaster
2020	• At least 65% of Member States have early warning systems and in particular, developing countries • During natural disaster facilitate emergency disaster response for the Member States in need.	• Number of Member States assisted in developing and implementing early warning system Number of Member States assisted in the case of disaster
2021	• At least 70% of Member States have early warning systems and in particular, developing countries • During natural disaster facilitate emergency disaster response for the Member States in need.	• Number of Member States assisted in developing and implementing early warning system • Number of Member States assisted in the case of disaster

Outcome 2	Outcome indicators
• Established partnerships among relevant organizations dealing with the use of telecommunication/ICT systems for the purpose of disaster preparedness, prediction, detection and mitigation	• Number of partnerships established dealing with the use of telecommunication/ICT systems for the purpose of disaster preparedness, prediction, detection and mitigation • Number of jointly implemented projects

Annual expected results		Performance indicators (PIs)
2018	• At least 50% of Member States have developed National Emergency Telecommunication Plans	• Number of Cooperation Agreements signed between ITU and other partners on projects that focus on telecommunications/ICTs for disaster preparedness, prediction, detection and mitigation Number of Member States assisted in developing their National Emergency telecommunication plans

Annual expected results (Continued)		Performance indicators (PIs) (Continued)	
2019	• At least 55% of Member States have developed National Emergency Telecommunication Plans	• Number of Cooperation Agreements signed between ITU and other partners on projects that focus on telecommunications/ICTs for disaster preparedness, prediction, detection and mitigation • Number of Member States assisted in developing their National Emergency telecommunication plans	
2020	• At least 60**%** of Member States have developed National Emergency Telecommunication Plans	• Number of Cooperation Agreements signed between ITU and other partners on projects that focus on telecommunications/ICTs for disaster preparedness, prediction, detection and mitigation • Number of Member States assisted in developing their National Emergency telecommunication plans	
2021	• At least 65**%** of Member States have developed National Emergency Telecommunication Plans	• Number of Member States assisted in developing their National Emergency telecommunication plans	

Outcome 3	Outcome indicators
• 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	• Number of countries with increased awareness for easy access to, and sharing of, information related to the use of telecommunications/ICTs for emergency situations

Annual expected results		Performance indicators (PIs)
2018	• At least 40% of Member States ratify the Tampere Convention	• Number of Regional workshops on Tampere Convention • Number of Member States that ratified the convention
2019	• At least 45% of Member States ratify the Tampere Convention	• Number of Regional workshops on Tampere Convention • Number of Member States that ratified the convention
2020	• At least 45% of Member States ratify the Tampere Convention	• Number of Regional workshops on Tampere Convention • Number of Member States that ratified the convention
2021	• At least 50% of Member States ratify the Tampere Convention	• Number of Regional workshops on Tampere Convention • Number of Member States that ratified the convention

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Finance	· Lack of financial resources to provide appropriate support to Member States	High	Medium	· Appropriate budget allocated and explore possible resource mobilization activities
2- Stakeholders/ Partners	· Lack of support and cooperation from partners in the field of emergency telecommunications	Medium	Medium	· Develop close cooperation with other organizations to provide necessary support
3- Human Resources	· Lack of staff exposure to issues related to the subject	Medium	Medium	· Support staff participation to training, events and discussions related to the topic
4-Infrastructure	· Lack of emergency first responder platforms and equipment	High	High	· Active liaison with partners and stakeholders to address gaps
5-Guidelines	· Absence of available guidelines, policies and legislative frameworks	Medium	Medium	· Active consultation and collaboration with member states

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Part 3 presents the Telecommunication Development Bureau as well as the different departments and divisions that are part of it.

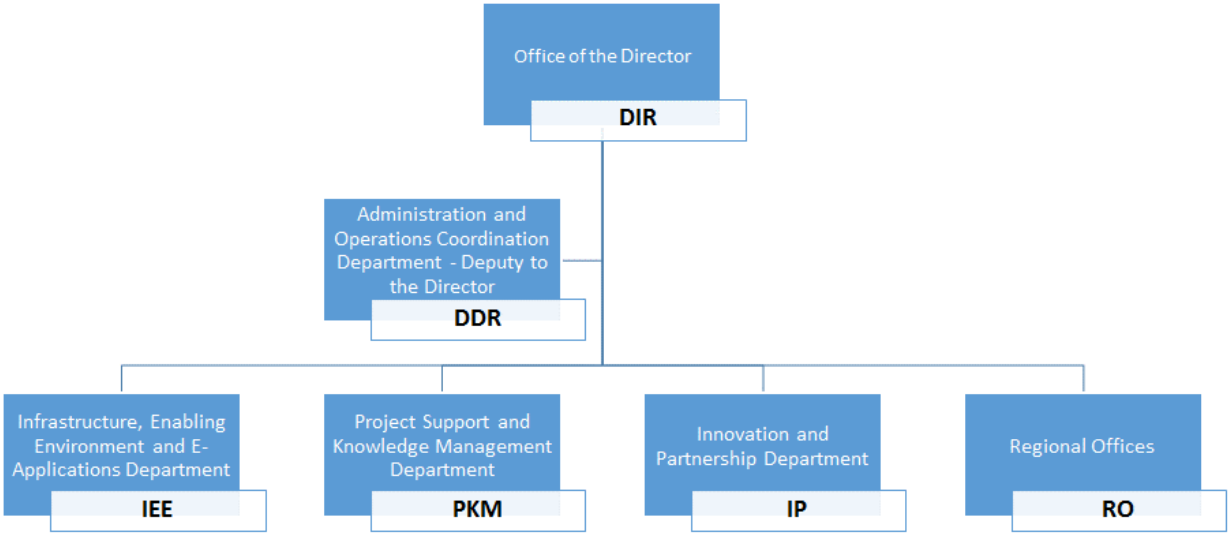
Summary

The mission of the BDT includes the organization and support of the outputs related to the five objectives of the Telecommunication Development Sector. These outputs consist of actions and activities that represent an important component when it comes to the financial and planning processes.

Telecommunication Development Bureau

The Telecommunication Development Bureau is responsible for assisting countries in the field of information and communication technologies (ICTs), facilitating the mobilization of technical, human and financial resources needed for their implementation, as well as promoting access to ICTs. The Telecommunication Development Bureau also promotes the extension of the benefits of ICTs to the entire world's inhabitants, participates in actions that contribute towards narrowing the digital divide, develops and manages programmes that facilitate information flow geared to the needs of developing countries.

The Bureau is organized into four Departments in addition to the Regional Offices. The chart below illustrates the structure of the BDT.


Office of the Director
DIR
Administration and Operations Coordination Department - Deputy to the Director
DDR
Infrastructure, Enabling Environment and E-Applications Department
IEE
Project Support and Knowledge Management Department
PKM
Innovation and Partnership Department
IP
Regional Offices
RO

Key activities

The key activities of the Telecommunication Development Bureau are linked to the following:

- Assistance to least developed countries, landlocked developing countries and small island developing states
- Broadband deployment in rural areas
- Capacity building
- Climate change adaptation and mitigation and e-waste management
- Conformance and interoperability capacity building
- Cyber security: building confidence and security in the use of ICTs
- Digital inclusion
- Emergency telecommunications
- Global symposium for regulators
- Indicators and statistics
- M-health applications to combat non-communicable diseases
- Partnership building and resource mobilization
- Innovation
- Policy and regulatory fora
- Project implementation
- Spectrum management system for developing countries
- Study group activities and knowledge sharing
- Transition from analogue to digital broadcasting
- Transition to new generation networks

Deputy to the Director and Chief of the Administration and Operations Coordination Department (DDR)

The Deputy to the Director and Chief of the Administration and Operations Coordination Department (DDR) is responsible for assisting and advising the Director in the direction and management of the Bureau including on all questions related to personnel, finance and operational planning process. The Department is responsible for leading the operational planning, assessment and reporting process within the framework of the Action Plan as adopted by the World Telecommunication Development Conference in coordination with the Heads of the other Departments in the Bureau and Regional Directors. The Department is responsible for management of the Administration Division (ADM), the Support Division (SUP), the IT Support Service and the Field Operations Support Service. The Department is also responsible for coordinating conferences and events preparation and for monitoring the implementation of decisions emanating from ITU and BDT governing bodies including Council, Conferences and Assemblies of the other Sectors for matters of relevance to BDT as well as from the Telecommunication Development Advisory Group. The Department is responsible for coordination of the Bureau's cooperation with other Sectors and General Secretariat.

Table 1 below shows the breakdown of the planned human resources (Work Months) by grade in the Deputy to the Director and Chief of the Administration and Operations Coordination Department (DDR) for the period 2018-2021.

Table 1 – DDR

Grade	2018	2019	2020	2021
D2	12	12	12	12
P5	24	24	24	24
P4	12	12	12	12
P3	48	48	48	48
P2	48	48	48	48
G6	72	72	72	72
G5	24	24	24	24

Infrastructure, Enabling Environment and E-Applications Department (IEE)

The Infrastructure, Enabling Environment and E-Applications Department (IEE) is responsible for assisting ITU Member States and ITU-D Sector Members with the utilization of appropriate technologies to build or extend their telecommunication infrastructure and adapt to the rapidly changing telecommunication/ICT environment. This includes the provision of guidelines and tools for the development of policy and regulatory frameworks, financing policies and strategies, development of telecommunication networks, the use of reliable and cost-effective ICT applications, cybersecurity, broadcasting and spectrum management. The Department is also responsible for promoting access to, as well as use and knowledge of, telecommunications and ICTs for groups which have been marginalized in their access to current mainstream information communications technology services, including women and girls, children and youth, indigenous people, persons with disabilities and people living in remote communities. The Department is also responsible for making contribution to and following-up the work of ITU-D Study Groups for issues related to the responsibilities of the Department.

Table 2 below shows the breakdown of the planned human resources (Work Months) by grade in the Infrastructure, Enabling Environment and E-Applications Department (IEE) for the period 2018-2021.

Table 2 – IEE

Grade	2018	2019	2020	2021
D1	12	12	12	12
P5	48	48	48	48
P4	72	72	72	72
P3	36	36	36	36
P2	24	24	24	24
G6	12	12	12	12
G5	36	36	36	36

Project Support and Knowledge Management Department (PKM)

The Project Support and Knowledge Management Department (PKM) is responsible for assisting ITU Member States and ITU-D Sector Members strengthen the institutional and organizational capability to adapt to the rapidly changing telecommunication/ICT environment through capacity building. The Department also provides administrative and technical support in the formulation of project proposals and implementation of projects, project monitoring and evaluation; produces and disseminates timely statistical and analytical data on the Telecommunication/ICT Sector and the Information Society; and supports the work of ITU-D Study Groups. The Department is also responsible for providing concentrated assistance to least developed countries, small island developing states, and landlocked developed countries. In addition, PKM implements activities and projects in the domain of emergency telecommunications, and climate change. The Department is also responsible for making contribution to and following-up the work of ITU-D Study Groups for issues related to the responsibilities of the Department.

Table 3 below shows the breakdown of the planned human resources (Work/Months) by grade in the Project Support and Knowledge Management Department (PKM) for the period 2018-2021.

Table 3 – PKM

Grade	2018	2019	2020	2021
D1	12	12	12	12
P5	48	48	48	48
P4	96	96	96	96
P3	48	48	48	48
P2	12	12	12	12
G6	12	12	12	12
G5	60	60	60	60

Innovation and Partnership Department (IP)

The Innovation and Partnership Department (IP) is responsible for the strategic planning and thinking that will properly position the BDT to accomplish the organizational goals and objectives and to achieve the corporate vision; partnership building and resource mobilization, including the management of the ICT-DF and other funds in trust to support the implementation of regional initiatives through bankable projects; and content coordination and strengthening of the synergy between the ITU-D Study Groups, the programmes and the special initiatives.

The table 4 below shows the breakdown by grade of the planned human resources (Work Months) in the Innovation and Partnership Department (IP) for the period 2018-2021.

Table 4 – IP

Grade	2018	2019	2020	2021
D1	12	12	12	12
P4	60	60	60	60
G6	24	24	24	24
G5	24	24	24	24

Regional and Area Offices

The Regional and Area Offices are responsible for proposing the operational policy and strategy of telecommunication development activities in their respective regions, coordinating with countries of the region to prioritize requirements, proposing inputs for the preparation of the operational plan based on these prioritized regional requirements, as well as coordinating and implementing technical cooperation activities in their respective regions, in the framework of projects, regional initiatives, or follow-up of World Telecommunication Development Conferences.

Table 5 below shows the breakdown of the planned human resources (Work Months) by grade in the Regional and Area Offices for the period 2018-2021.

Table 5 – Regional and area offices

Grade	2018	2019	2020	2021
D1	48	48	48	48
P5	156	156	156	156
P4	48	48	48	48
P3	144	144	144	144
P2	24	24	24	24
G6	48	48	48	48
G5	192	192	192	192
G4/G3/G2	48	48	48	48

The tables below show the breakdown by region

TABLE 6 – AFR

Grade	2018	2019	2020	2021
D1	12	12	12	12
P5	48	48	48	48
P4	12	12	12	12
P3	48	48	48	48
G6	12	12	12	12
G5	60	60	60	60
G4/G2	24	24	24	24

Table 7 – AMS

Grade	2018	2019	2020	2021
D1	12	12	12	12
P5	48	48	48	48
P4	12	12	12	12
P3	36	36	36	36
P2	12	12	12	12
G6	12	12	12	12
G5	48	48	48	48

Table 8 – ARB

Grade	2018	2019	2020	2021
D1	12	12	12	12
P5	12	12	12	12
P4	12	12	12	12
P3	12	12	12	12
P2	12	12	12	12
G6	12	12	12	12
G5	24	24	24	24
G3	12	12	12	12

Table 9 – ASP

Grade	2018	2019	2020	2021
D1	12	12	12	12
P5	24	24	24	24
P4	12	12	12	12
P3	24	24	24	24
G6	12	12	12	12
G5	36	36	36	36
G3	12	12	12	12

Table 10 – CIS

Grade	2018	2019	2020	2021
P5	12	12	12	12
P3	12	12	12	12
G5	12	12	12	12

Table 11 – EUR

Grade	2018	2019	2020	2021
P5	12	12	12	12
P3	12	12	12	12
G5	12	12	12	12

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This section presents the planned human resources and the planned Service Level Agreements (documentation and publications pages) for the period 2018-2021 in the Telecommunication Development Bureau.

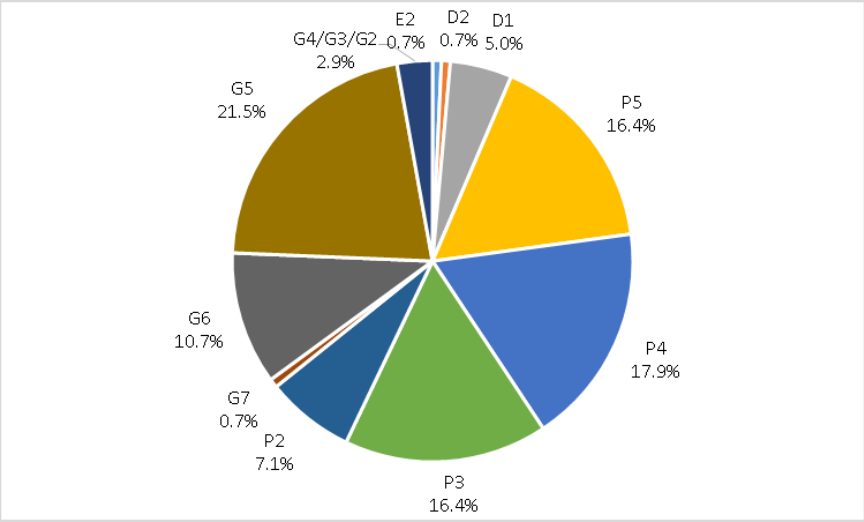
Human resources

Table 12 below shows planned human resources (Work Months) for the period 2018-2021.

Table 12

Grade	2018	2019	2020	2021	Total
E2	12	12	12	12	**48**
D2	12	12	12	12	**48**
D1	84	84	84	84	**336**
P5	276	276	276	276	**1104**
P4	300	300	300	300	**1200**
P3	276	276	276	276	**1104**
P2	120	120	120	120	**480**
G7	12	12	12	12	**48**
G6	180	180	180	180	**720**
G5	360	360	360	360	**1440**
G4/G3/G2	48	48	48	48	**192**

Chart 6 below shows the breakdown of total human resources by grade for the 2018-2021 timeframe

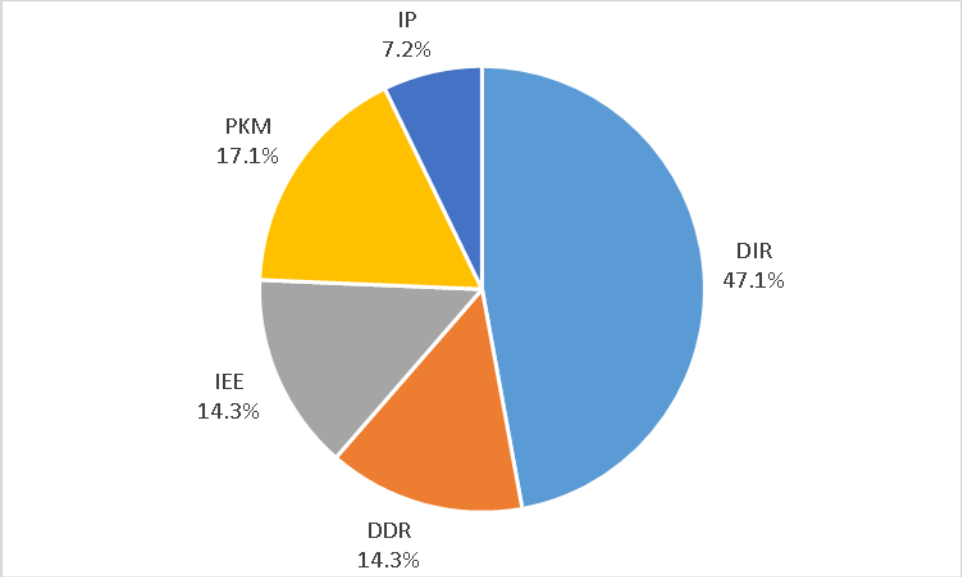


Breakdown of human resources by department for the 2018-2021 timeframe

Table 13

Department	Work/month
DIR	3,168
DDR	960
IEE	960
PKM	1,152
IP	480
Total	**6,720**

Chart 7



RBM Key Components

All major planning instruments of the ITU, strategic plan, financial plan, budget and now operational plan follow the same result-based structure, thus enabling a clear linkage between all these instruments and dimensions.

The purpose of Result-based management is to shift managerial and administrative emphasis from a process-focused approach to one based on performance and results. The premise is that if we plan in terms of the results we expect to achieve and then verify that we have achieved them, resources will be used effectively and service to membership will be maintained and even improved.

The main and key components of the result-based management are the following:

The vision: The better world ITU wants to see. The aspirational description of what is desired to achieve or accomplish in the mid-term or long term future. It is intended to serve as a clear guide for choosing current and future courses of action.

The mission: Mission refers to the main overall purposes of the Union, as per the Basic Instruments of ITU.

The strategic goals: Strategic goals refer to the Union's high-level targets to which the objectives contribute, directly or indirectly. These relate to the whole of ITU.

The objectives: Objectives refer to the specific aims of the Sectoral and intersectoral activities in a given period.

The outputs: The outputs are the final tangible results, deliverables, products and services achieved by the Union in the implementation of the operational plans. Outputs are cost objects and are represented in the applicable cost accounting system by internal orders.

The expected results: The desired results involving benefits to end-users, expressed as a quantitative or qualitative standard, value or rate. The expected results are the direct consequences or effects of the generation of outputs that leads to the fulfilment of a certain objective.

The key performance indicators: The measures of whether and/or the extent to which the expected accomplishments have been achieved. Also known as KPIs, they define and measure progress toward delivery of expected results. A measure of how well something is being done. Performance indicators are the criteria used to measure the achievement of outputs or outcomes. These indicators may be qualitative or quantitative.

The key risk indicators: An indication of the possibility of future impact. Serve as an “early warning” to identify a potential event that could prevent the achievement of business objectives. Typically forward looking indicators.

The activities: The actions taken to transform inputs into outputs.

The resources: The personnel and other resources necessary for undertaking actions, producing outputs and achieving accomplishments/result.

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REGIONAL INITIATIVES

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AFRICA REGIONAL INITIATIVES

AFR1: Strengthening human and institutional capacity building

Regional Initiative objective: To provide stakeholders in Africa, on a sustainable basis, with human resources and skills needed for harmonious development of the telecommunication/ICT sector.

Result-based analysis

Expected results	Key Performance indicators
Enhanced skills and human capacity in the design and development of telecommunication/ICT strategies, including conformity and interoperability	Number of countries with built enhanced capacity
Increased local expertise through cooperation between countries	Number of cooperation agreements or expertise exchange program implemented.
Increased access to training resources, including training manuals, for all stakeholders in the African telecommunication/ICT sector	Number of manuals published and number of connexions to ITU training facilities.
Promotion of technical cooperation between telecommunication/ICT training institutions in regard to capacity and resources	Number of MoU signed between countries
Increased availability of public access to knowledge, in particular by raising public and consumer awareness	N/A
Forums for exchanging and sharing information between the various groups having a stake in the telecommunication/ICT sector in Africa, in particular young people, women and persons with disabilities and specific needs	Number of meetings organized in the region

Expected results (Cont'd)	Key Performance indicators
Enhanced human capacity building on legal aspects in order to address security and trust in the use of telecommunications/ICTs, particularly where cyberthreats are concerned	Number of training in Cybersecurity
Greater availability, development and usage of local content and languages, and corresponding webpage development	Number of websites in local language
Improved specialized skills development to meet the ICT needs of persons with disabilities and specific needs in order to promote ICT usage, particularly in regard to Internet applications	Number of meetings
Promotion of research and development (R&D) in African countries	Number of ICT R&D centers

AFR2: Strengthening and harmonizing policy and regulatory frameworks for the integration of African telecommunication/ICT markets

Regional Initiative objective: To facilitate and promote the reform of Africa's national telecommunication/ICT sectors and the implementation of telecommunication/ICT strategies in order to achieve subregional and regional integration of telecommunication/ICT infrastructure, services and markets including the "Implementation of the Smart Africa Flagship Initiatives".

Result-based analysis

Expected results	Key Performance indicators
Implementation of the reference framework for harmonization of telecommunication/ICT regulatory policies in Africa	Number of harmonized texts and regulations within RECs
Development of competitive African telecommunication/ICT markets	Number of meetings addressing costs and tariffs
Harmonized technical standards to provide increased connectivity of networks and services	Number of Regional interconnection agreements

Expected results (Cont'd)	Key Performance indicators
Establishment of a harmonized policy to reduce the level of intra-continental traffic routed by extra-continental transit centres	Number of regional IXP and transit points in the region
Development of a harmonized strategy for universal access, taking into account the needs of young people, women, persons with disabilities and specific needs, and indigenous peoples	Number of countries applying an USO approved framework
Development of high-quality and affordable telecommunication/ICT services	N/A
Establishment of a regional framework for cooperation (training, internships, mutual assistance) on e-waste	Number of meetings organized on e-waste
Development and harmonization of national and regional regulations on cybersecurity and ICT applications	Number of common set of laws approved by RECs
Harmonization of the quality-of-service regulatory framework at regional level to ensure consumer satisfaction	Number of countries applying consumers satisfaction reports
Development of a set of tools and mechanisms for measurement of a consumer satisfaction index	Number of consumer satisfaction tools developed
Establishments of Electronic devices assembly plants	Number of plants established

AFR3: Development of broadband access and adoption of broadband

Regional Initiative objective: To assist Member States in the development of broadband infrastructure and access thereto in urban and rural areas, with particular emphasis on subregional and continental interconnection.

Result-based analysis

Expected results	Key Performance indicators
National telecommunication/ICT master plans to meet the requirements of developing countries	Number of countries assisted with Master plan Development
Improved broadband backbone infrastructure and access to affordable telecommunication/ICT services in urban and rural areas	Number of countries with improved network and affordable services
Guidelines on rural connectivity, including policy, appropriate technologies and power supply issues, and best practices	Number of countries with implemented guidelines
Enhanced human capacities in the area of broadband communication networks	Number of countries with enhanced capacity
Interconnection of countries by means of high-capacity links, including access to undersea cables for landlocked countries, as part of the follow-up to the Connect Africa summit	Number of countries with interconnected nodes
Development of mechanisms and tools to facilitate the use of ICTs by persons with disabilities and specific needs	Number of countries with development of mechanism and tools
Ease of access to submarine cables for all countries, and especially landlocked countries, on fair terms	Number of countries with access on fair terms
Promoting the establishment of national and regional Internet exchange points (IXPs)	Number of national IXPs Number of Regional IXP
Promoting the development of local content and localized access	Number of countries with local content Number of types of local content
Promoting IPv4 to IPv6 migration	Number of countries testing and implementing IPv4 to IPv6 migration

AFR4: Spectrum management and transition to digital broadcasting

Regional Initiative Objective: To assist Member States in the transition to digital broadcasting and spectrum management.

Result-based analysis

Expected results	Key Performance indicators
Support for the elaboration of spectrum-management plans at the national, regional and global levels, including the transition to digital broadcasting	Number of requesting countries assisted
Assistance in using the tools to support the developing countries in improving the international coordination of terrestrial services in border areas	Number of countries using SMS4DC
Capacity building in spectrum management and digital broadcasting technologies	Number of experts from countries trained
Elaboration of studies, benchmarks and guidelines on the economic and policy aspects of the assignment and use of the radio-frequency spectrum, taking into account Resolution 9 (Rev. Hyderabad 2010) of the World Telecommunication Development Conference	Number of BDT publications
Assistance to countries in fostering people-inclusive strategies in digital broadcasting, to include the availability of universal broadcasting receivers for commercial use at affordable prices	Availability of affordable Digital receivers in countries
Assistance to Member States in meeting the deadline for the analogue-to-digital switchover	All requiring countries assisted for DSO

AFR5: Building confidence and security in the use of telecommunications/ICTs

Regional Initiative Objective: To assist Member States in defining and implementing appropriate strategies for the protection of ICT infrastructure and building confidence in the use of ICTs and applications.

Result-based analysis

Expected results	Key Performance indicators
Enhanced coordination and sustained national and regional approaches to cybersecurity	Number of countries with enhanced coordination
Support for institutional and organizational mechanisms at national and regional levels to effectively implement cybersecurity strategies	Number of countries with effective implemented cybersecurity strategies
Development of appropriate measures to protect consumers, children and other vulnerable persons in the use of ICTs	Appropriate measures development
Creating awareness of cyberthreats, cybersecurity measures and quality of service in the use of ICTs	Number of cyber drills
Adoption of measures for privacy and personal data protection	Number of countries with adoption of measures
Promoting the development of national and regional computer incident response teams (CIRTs)	Number of countries assisted
Development of a harmonized strategy to strengthen information security and combat spam and cyberthreats.	Number of countries with developed strategy

AMERICAS REGIONAL INITIATIVES

AMS1: Emergency telecommunications

Regional Initiative Objective: To provide assistance to Member States at all phases of disaster management, i.e. disaster preparedness including early warning, disaster response/relief and rehabilitation of telecommunication networks, particularly in small island developing states (SIDS) and the least developed countries (LDCs).

Result-based analysis

Expected results	Key Performance indicators
Identification of suitable technologies to be used for emergency communications	N/A
Improving linkages and information sharing on emergency communications in order to maximize resources, lead to more innovative and effective programmes for the Americas region and allow, *inter alia*, coordinated actions in border areas	Number of meetings and workshops organized
Design of national and subregional emergency communication plans and early-warning systems, with special focus on SIDS and LDCs, taking into account the impact of climate change	Number of countries assisted in the design of their emergency communications plans
Development of appropriate policy, regulatory and legislative frameworks on emergency communications at national and regional level	Number of professionals trained and countries assisted with their policies and regulatory frameworks
Increased human capacity skills on emergency communications	Number of persons and countries benefited • At least 50 persons/year • At least 4 countries/year
Temporary availability of emergency communication equipment in the Americas region, at the initial stage of a disaster intervention, as part of ITU cooperation in cases of emergency.	100% of the countries that demanded support from the ITU assisted in due time

AMS2: Spectrum management and transition to digital broadcasting

Regional Initiative Objective: To provide assistance to ITU Member States in the transition to digital broadcasting and spectrum management.

Result-based analysis

Expected results	Key Performance indicators
Support for the elaboration of spectrum-management plans at the national, regional and global levels, including the transition to digital broadcasting	Number of countries from Americas Region provided with support
Assistance in using tools to support developing countries in improving the international coordination of terrestrial services in border areas	Number of participants and countries attending meetings and forums
Capacity building on spectrum management and digital broadcasting technologies	Number of professionals and countries benefited • At least 30 persons/year • At least 6 countries/year
Elaboration of studies, benchmarks and guidelines on the policy and economic aspects of the assignment and use of the radio-frequency spectrum, taking into account Resolution 9 (Rev. Hyderabad 2010) of the World Telecommunication Development Conference	Number of studies carried out and countries assisted
Assistance to countries in fostering people-inclusive strategies in digital broadcasting, to include the availability of universal broadcasting receivers for commercial use at affordable prices	Number of countries assisted

AMS3: Development of broadband access and adoption of broadband

Regional Initiative Objective: To provide assistance to Member States in the development of policies to increase broadband access and uptake.

Result-based analysis

Expected results	Key Performance indicators
Development or improvement of national broadband plans to guide policies for increasing access to broadband services and promoting investment in networks	Number of Member States from Americas Region provided with support, through ITU regional office, at all phases of the development of policies to increase broadband access and uptake
Improved access to broadband infrastructure, services and applications in urban and rural areas, especially access for landlocked developing countries	At least 2 countries assisted and 20 participants attending workshop
Assistance to countries in promoting access to ICTs in public social service institutions, such as educational centres, health centres and social rehabilitation centres, and the use of ICTs by the population to access these social services	N/A
Capacity building in broadband communication networks and in the development of ICT applications that address local needs, including applications relating to e-government, e-medicine, e-education and e-commerce, in the light of prevailing social, economic and demographic conditions	Number of persons and countries benefited • At least 30 persons/year • At least 5 countries/year
Support to non-profit cooperatives that provide services in underserved rural and suburban areas	N/A
Consolidation and dissemination of information related to the deployment and operation of networks based on interoperable international mobile telecommunications (IMT), satellite networks and fibre-optic networks suited to providing enhanced broadband coverage and connectivity in rural areas at affordable prices to the users	Number of participants and countries attending meetings and forums

AMS4: Reduction of telecommunication service prices and Internet access costs

Regional Initiative Objective: To provide assistance to Member States in defining and coordinating policies, ways and means to reduce the cost of access and interconnection, as well as the prices of telecommunication and Internet services and Internet for users, through necessary investments.

Result-based analysis

Expected results	Key Performance indicators
Studies of policies that enable reduction of the prices paid by users for the different telecommunication services	Number of professionals attending and number of benefited countries in specific forum
Study of legal and regulatory options and actions at the regional, subregional and local levels to be implemented in order to achieve an effective reduction in the cost of international mobile roaming for the user	Direct assistance provided to a country without IXP
Study of the policy and regulatory aspects for enabling the implementation of Internet exchange points (IXPs)	Number of professionals attending and number of benefited countries in specific forum
Promoting the development, as appropriate, of national, subregional and regional IXPs, subject to national decision	As above
Promotion of cooperation and information sharing	As above
Reduced cost of access to the international fibre-optic network, especially for landlocked developing countries and small island developing states	Number of countries that improved their raking on the ICT Development Index
Capacity building for the administration and management of IXPs.	Number of professionals and countries benefited

AMS5: Capacity building to engage in global ICT policy, with special focus on improving cybersecurity and developing countries' participation in the existing Internet governance institutions

Regional Initiative Objective: To enhance the capacity building of Member States, especially developing countries, with a view to promoting an enabling environment, supporting the implementation of ICT initiatives and encouraging developing countries to participate actively in forums on global ICT policy, in close collaboration with existing institutions.

Result-based analysis

Expected results	Key Performance indicators
Enhanced coordination and sustained national and regional approaches to cybersecurity	Number of countries from Americas Region provided with support
Support for institutional and organizational mechanisms at the national and regional levels for the effective implementation of cybersecurity strategies	Number of countries provided with direct assistance
Strengthened ability of developing countries to fully engage in existing Internet governance forums in collaboration with the existing Internet institutions.	Number of countries effectively participating in Internet governance forums

ARAB STATES REGIONAL INITIATIVES

ARB1: Development of broadband access and adoption of broadband

Regional Initiative Objective : To assist Arab States (particularly least developed countries1) in the implementation and development of broadband infrastructure in urban and rural areas, and to develop, facilitate and spread access to broadband networks and services in the Arab States, including issues related to conformance and interoperability.

Result-based analysis

Expected results	Key Performance indicators
Establishment of national and regional strategic plans and work programmes for the telecommunication/ICT sector to meet the needs of the Arab countries in this field	Number of Countries provided with assistance to develop their National BB Plans
Improving broadband network infrastructure, including the deployment and connection of optical fibre cables, for the provision of good-quality and affordable telecommunication/ICT services in urban and rural areas, including migration to next-generation networks (NGN) and future networks (FN), keeping pace with the rapid developments in this vital, developing field	Number of countries with improved broadband network infrastructure including migration to next-generation networks (NGN) and future networks (FN)
Development of ICT applications that can support multilingualism and address local needs, particularly to cater for the specific needs of persons with disabilities and inhabitants of remote regions in relation to broadband networks	Number of applications developed Number of direct assistance provided
Development of human resources, through training programmes and workshops to exchange expertise, in order to address regulatory, technical and economic issues related to broadband communication networks, NGN and FN, and migration thereto	Number of trainees provided with the capacity building programs.

[1] There are six LDCs in the Arab region, namely: Comoros, Djibouti, Somalia, Yemen, Mauritania, and Sudan.

Expected results (Cont'd)	Key Performance indicators
Implementation of national programmes on conformance and interoperability, establishing cooperation agreements with regional laboratories to assist in this regard, and setting guidelines in accordance with international best practices, including regulatory frameworks that need to be considered	Number of countries adopting the same C&I Regime Number of established MRAs Number of countries assisted with planning testing labs
Development of guidelines and recommendations with regard to regional cloud computing taking into consideration regulatory frameworks.	Guidelines and recommendations developed One Pilot project launched.

ARB2: Building confidence and security in the use of telecommunications/ICTs

Regional Initiative Objective: To build confidence and security in the use of telecommunications/ICTs and e-commerce in the Arab region and combat all forms of cyberthreats, including the misuse of ICTs.

Result-based analysis

Expected results	Key Performance indicators
Formulation of national and regional regulatory and technical policies and frameworks and legal measures to ensure data privacy and combat the different forms of cyberthreats in the Arab region, thereby ensuring optimal and secure use of the Internet and its various applications and building confidence in the Internet	Number of countries assisted in formulating cybersecurity policies and strategies Study published on the legislations on cloud computing and data privacy in the Arab region
Establishment of national computer incident response teams (CIRTs) in the Arab region (in particular in least developed countries) and optimal coordination both among them and between them and CIRTs in the other regions	Number of assistance provided to establish CIRTS in LDCs Number of cyberdrills conducted

Expected results (Cont'd)	Key Performance indicators
Protection of Arab children and youth from harmful and abusive content on the Internet and making them aware of its risks, through the launch of awareness-raising campaigns and workshops, training curricula and study of the possibility of establishing a regional centre to prepare special awareness programmes to protect Arab children and youth from the risks of ICTs	Number of countries assisted to promote national COP issues

ARB3: Use of telecommunications/ICTs for smart and sustainable development and protection of the environment

Regional Initiative Objective: To raise awareness of the importance of sustainable development and environmental protection, and formulate legislation and regulatory frameworks in order to achieve smart and sustainable development.

Result-based analysis

Expected results	Key Performance indicators
Formulation of strategic plans and regulatory frameworks for the transition to smart and sustainable development in various relevant spheres	Number of countries assisted
Exchange of expertise between Arab countries in the field of smart and sustainable development in various spheres, and study of the negative effects resulting from e-waste and finding appropriate solutions to deal with it	Model Policy published on ICTs Generated E-waste Number of countries assisted in implementing the Model policy on E-waste
Addressing the challenges of scarce resources, for example water, in the Arab region by means of smart management of those resources using telecommunication/ICT applications	Implementation of Pilot Project on Smart Water Management Model policy published on Smart Water Management in Arab Region

Expected results (Cont'd)	Key Performance indicators
Use of telecommunications/ICTs to confront the consequences of climate change for the Arab region, formulation of mechanisms to control emissions of harmful gases, and gradual transitioning to clean and sustainable energy	Number of countries assisted to implement the ITU climate change toolkit Number of countries assisted with their National Plan on Emergency Telecommunications
Exchange of expertise in the field of policy for smart, sustainable and green cities in the Arab region, ensuring the gradual transformation of Arab cities to smart and sustainable cities.	Report on ICT roadmap for the transition to smart sustainable cities in the Arab region published Number of training programmes and trainees on smart sustainable cities.

ARB4: Smart learning

Regional Initiative Objective: To bring about a shift from traditional methods of teaching in schools and universities, using books and paper-based sources, to smart learning with the use of tablet computers, the latest software and modern telecommunication/ICT techniques to provide access to a range of academic information, resources and subject matters.

Result-based analysis

Expected results	Key Performance indicators
Eradication of digital illiteracy in the Arab region	Number of countries assisted with developing their national plans for eradication of digital illiteracy
Finding smart and low-cost computing devices, either with the support of Arab governments or by concluding agreements with manufacturers to provide such devices	Conduct a costs and benefits analysis to assess the use of computing devices in education. Publishing best practices on cooperation between governments and providers on deployment of computing devices in schools
Development of Arab educational e-content for schools and universities in the Arab region	Publish guidelines for Online Educational Resources for education, in collaboration with relevant stakeholders such as Alecso Number of countries assisted with their National Strategies for E-Learning

ARB5: Ensuring access to telecommunications/ICTs, in particular for persons with disabilities

Regional Initiative Objective: To ensure the right of access to telecommunications/ICTs for persons with disabilities in the Arab region.

Result-based analysis

Expected results	Key Performance indicators
Formulation and updating of national and regional regulatory policies and frameworks to ensure access for persons with disabilities of all kinds to telecommunications/ICTs, facilitating their involvement in the community and enabling them to enjoy their full rights	Number of countries assisted on developing national policies on ICT Accessibility for persons with disabilities
Development of ICT applications and software that enable persons with disabilities to access information, references and other resources for education and leisure, and provision of specialized national and regional applications for libraries, databases and other purposes via the Internet and other telecommunication/ICT media	Number of countries assisted to make governmental websites accessible to PWDs Establishment of a regional innovation center for accessibility with the purpose of promoting ICT accessibility applications
Participation of persons with disabilities in Arab workshops, training courses and conferences, by providing all the requirements and facilities and removing all the obstacles	Publishing of manual on PWDs participation in workshops, training courses and conferences by regional organizations in the Arab region

ASIA-PACIFIC REGIONAL INITIATIVES

ASP1: Special consideration for least developed countries, small island developing states, including Pacific island countries, and landlocked developing countries

Regional Initiative Objective: To provide special assistance to least developed countries (LDCs), small island developing states (SIDS), including Pacific island countries, and landlocked developing countries (LLDCs) in order to meet their priority ICT requirements.

Result-based analysis

Expected results	Key Performance indicators
Improved infrastructure and enhanced access to affordable ICT services	Number of activities to facilitate enhanced access to international connectivity Study of Pacific benchmark for telecom/ICT service prices
Improved enabling environment to facilitate ICT development	Number of countries assisted (A minimum of 7 LDCs, SIDS, including Pacific Island Countries and LLDCs to be assisted per year on their priority areas)
Appropriate national, subregional and regional frameworks for cybersecurity	Number of countries (SIDS including Pacific/LDCs/LLDCs) assisted on improving their cybersecurity framework. (A minimum of 8 assistances to member states for CIRT assessment or improving cybersecurity framework)
Enhanced skills of relevant human resources	Number of persons and countries trained - At least 50 persons per year - At least 8 countries per year Number of trainings conducted At least 2 per year
Addressing specific issues and challenges in the Pacific island countries	Number of countries provided with direct assistance - Assistance to 4 member states

ASP2: Emergency telecommunications

Regional Initiative Objective: To provide assistance to Member States at all phases of disaster management, i.e. disaster preparedness including early warning, disaster response/relief and rehabilitation of telecommunication networks.

Result-based analysis

Expected results	Key Performance indicators
Identification of suitable technology options and solutions to be used for emergency communications	Number of technology options and solutions identified
Creation of common databases to share information on emergency communications	Number of countries assisted Number of users of the database
Design of national and subregional emergency communication plans, taking into account the impact of climate change	Availability of guidelines or reports on practices of emergency communication plans (at least one guidelines/report developed)
Development of appropriate policy, regulatory and legislative frameworks on emergency communications at national and regional level	Number of countries assisted in response to the request for review/development of related policies, regulations, laws (at least 4 countries assisted subject to the requests)
Availability of a dedicated set of equipment for emergency radio communication in the Asia-Pacific region	N/A
Capacity building in relation to emergency telecommunications and disaster preparedness	Number of persons and countries trained Number of trainings Number of training modules created At least 2 training modules
Mechanism for sharing information and best practices on utilizing ICTs for disaster preparedness, disaster response/relief and reconstruction among countries in the region and others	N/A

ASP3: Harnessing the benefits of new technologies

Regional Initiative Objective: To assist ITU Member States in utilizing new technologies and address human and technical capacity challenges related to issues such as those identified in the expected results, among others.

Result-based analysis

Expected results	Key Performance indicators
Assistance in the development of frameworks for new and emerging technical issues as well as for utilizing new technologies in, areas such as Digitization of broadcasting New technologies (e.g. IOT, IMT) Transition to IPv6 Digital literacy and inclusion for all (e.g. people with disabilities, etc.) ICT applications Multilingual local content Accredited laboratory Spectrum management and monitoring Cybersecurity, including issues such as combating spam and protection of children and other vulnerable groups, and the protection of personally identifiable information	a) Number of Members assisted b) Number of applications developed / deployed c) Number of participants of events

Expected results (Cont'd)	Key Performance indicators
- Number misuse - Issues related to climate change and e-waste - *Over-the-top (OTT) services* - Cloud computing - Quality of service - International mobile roaming - Cable landing stations	
Raised awareness and enhanced skills in relation to new technologies and technical issues as identified and others as requested	Number of persons and countries trained Number of workshops/trainings
Expert and technical assistance to members on resolving technical issues as identified and others as requested	Number of Members assisted
Identification of new and emerging technical issues which could be the focus of further expertise, assistance and capacity-building exercises	N/A
International cooperation on multistakeholder empowerment of ICT volunteers	Number of volunteer networks established Number of volunteers

ASP4: Development of broadband access and adoption of broadband

Regional Initiative Objective: To assist Member States in the development of broadband access in urban and rural areas and to support system construction to resolve social issues leveraging the benefits of telecommunication/ICT applications.

Result-based analysis

Expected results	Key Performance indicators
National broadband policies to meet the requirements of developing countries	N/A
Improved broadband infrastructure and access to affordable ICT services in urban and rural areas, including remote and hilly terrains as well as remote islands	Number of Members assisted
Development of telecommunication/ICT applications that can support address local needs	Number of countries assisted and number of applications / framework developed / reviewed (at least 4 applications)
Enhanced skills in the area of broadband and new communication networks for the relevant human resources	Number of trainings / workshops (At least 2 per year) Number of persons trained (At least 50 per year)
Implementation of solutions providing cost-effective broadband infrastructure addressing the deployment and operational challenges in rural and remote areas, including remote islands	Number of Members assisted and number of actions/projects addressing cost-effective solutions for broadband deployment in rural areas (at least 4 actions/projects implemented)
International cooperation on multistakeholder empowerment of ICT volunteers	N/A
Capacity building and deployment of cost-effective e-services , thereby reducing operational and administrative costs	Number of countries participated and assisted in e/m-services(at least 4)
Accelerating the evolution and deployment of next-generation network infrastructure, including mobile/wireless communication networks, land/submarine optical fibre cable networks and Internet networks, for both national and regional connectivity	Number of countries assisted on deployment of new technologies including wireless and/or wired (4 countries assisted)
Studies and assistance on effective utilization and optimization of optical fibre cable networks, especially submarine cable networks	N/A
Studies on traffic categorization and offering of necessary content bundles to reach more lower income groups	N/A

ASP5: Policy and regulation

Regional Initiative Objectives: To assist Member States in developing appropriate policy and regulatory frameworks, enhancing skills, increasing information sharing and strengthening regulatory cooperation.

Result-based analysis

Expected results	Key Performance indicators
Development of appropriate policy, regulatory and legislative frameworks relating to the regional initiatives where necessary	Number of tools and information guides to assist in the development of appropriate policy, regulatory and legislative settings, and Number of Members assisted
Enhancing the skills of relevant human resources	Number of persons and countries trained Number of trainings
Promotion of policy and regulatory cooperation and information sharing	Number of Policy and Regulatory Forums, Roundtables Number of participants Number of studies, Reports (At least 1 report per year)

CIS REGIONAL INITIATIVES

CIS1: Creating a child online protection centre for the CIS region

Regional Initiative Objective: To provide ITU Member States in the CIS region with centralized advisory and technical assistance on various aspects of child online protection.

Result-based analysis

Expected results	Key Performance indicators
Distance-training courses on safe use of Internet resources, with provision for testing children, parents, teachers, etc.	Number of children trained (parts of training basic - preschool and primary school children and middle - children of 5-9 classes); number of adults trained (part of training advanced - students, parents, teachers); number of children who passed the test and obtained certificate; number of adults who passed the test and obtained certificate
National systems for updating and disseminating lists of useful Internet resources for children, as well as lists of other Internet resources flagged as unsuitable	Number of Internet resources listed to "black" and "white" lists; the maximum ratio of incorrectly classified resources
Provision of more complete information for representatives of administrations, law-enforcement agencies, educational establishments and the private sector regarding the current legal/regulatory and organizational/technical frameworks in the area of child online protection	Number of subscribers (schools, operators, organizations) connected to the under RI created automated system
A database with data on existing technical solutions for child online protection	Number of technical solutions of the database; Number of countries having access to the created unified database on existing technical solutions for child online protection; number of organizations having access to the database

Expected results (Cont'd)	Key Performance indicators
Provision of recommendations for any interested party on selecting the best solution for child online protection for a given organization	Number of organizations who obtained recommendations
Training courses on solutions for child online protection as part of school and university programmes	Number of schools where the training course for child online protection was implemented as part of programme Number of higher education institution where the training course was implemented as part of programme Number of school children trained Number of students trained
Trial areas for systems restricting access to inappropriate resources for educational establishments in the region	Number of educational establishments connected to the trial area for the system restricting access to inappropriate resources

CIS2: Ensuring access to telecommunication/ICT services for persons with disabilities

Regional Initiative Objective: To assist ITU Member States in the CIS region in developing regulations and technical solutions, as well as in implementing specialized training programmes to ensure the accessibility and user-friendliness of ICTs for persons with disabilities.

Result-based analysis

Expected results	Key Performance indicators
Recommendations and regulations setting out infrastructure and content requirements in terms of accessibility and user-friendliness of ICTs for persons with disabilities	Number of regulatory documents elaborated
Recommendations on adapting web resources to make them as accessible as possible to persons with disabilities	Number of Internet resources where the recommendations have been implemented
Community access points for persons with disabilities, equipped with specialized IT equipment and software	Number of access points created Number of persons with disabilities who used the access points
IT training centre for persons with disabilities in the CIS region	Number of persons with disabilities trained
Methodology for training persons with disabilities to give them telecommunication/ICT user skills, and training for trainers in the use of these methodologies	Number of teachers trained to use methodology for training persons with disabilities

CIS3: Introduction of training technologies and methods using telecommunications/ICTs for human capacity building

Regional Initiative Objective: To assist ITU Member States in the CIS region in setting up and developing national programmes for introducing telecommunications/ICTs into education.

Result-based analysis

Expected results	Key Performance indicators
Further training courses, training sessions and seminars on introducing telecommunications/ICTs into education and human capacity building, including in rural areas	Number of further training courses/seminars provided Number of persons trained
Development of distance-learning technologies and methods in areas including the protection of ethnic minorities' rights to receive education in their own languages by providing additional educational opportunities	Number of online-areas created to provide trainings to ethnic minorities in their own languages
Development of methods for assessing personality traits in order to select the most suitable teaching methods for individual students using telecommunications/ICTs	Number of school children tested to assess their personality traits for selection the most suitable teaching methods using ICT
Recommendations on methods of setting up national programmes for the introduction of telecommunications/ICTs into education	Number of recommendations provided to the ministries on methods of setting up national programmes for the introduction of ICT into education
Comprehensive human capacity building through education using modern developments in telecommunications/ICTs	Number of trainings using modern developments in ICT; number of educational institutions using modern developments in ICT

CIS4: Development of broadband access and adoption of broadband

Regional Initiative Objective: To assist interested Member States in developing broadband access, including in rural and remote areas, using energy-efficient technologies.

Result-based analysis

Expected results	Key Performance indicators
Recommendations for Member States on the development of national ICT plans to meet the demands of populations in participating countries	Number of recommendations provided to Member States on the development of national ICT plan
Improved infrastructure for broadband access to ICT services of acceptable price and quality, in urban, rural and remote areas	Number of settlements where the infrastructure was improved
Measures to promote the development of broadband access with a view to connecting state social institutions, training centres, and healthcare and social rehabilitation centres, and to promote the use of ICTs by the general public in order to access social services	Number of social institutions, training centres, and healthcare and social rehabilitation centres connected to broadband access; number of persons provided with services through the infrastructure created/improved
Improved skills in the use of broadband access networks; this will involve online training seminars and other activities	Number of online trainings/seminars Number of persons trained
Recommendations on selecting the most suitable technologies for constructing broadband networks for countries with regions with low population density	Number of recommendations provided to the countries with regions with low population density
Assistance in the construction of satellite networks for broadband Internet access in countries with low population density	Number of satellite network access points created in the countries with low population density

CIS5: Building confidence and security in the use of ICTs

Regional Initiative Objective: To build the capacity of Member States in the CIS region in building confidence and security in the use of ICTs, within the framework of the concept of information ecology for sustainable development and combating the potential negative consequences of the impact of the information environment.

Result-based analysis

Expected results	Key Performance indicators
Human capacity building in the countries of the region in building confidence and security in the use of ICTs, with adaptation for age, health condition and area of activity, including for effective use of e-government services	Number of events aimed at capacity building in building confidence and security in the use of ICT Number of persons trained
Helping CIS countries participate collectively in global Internet governance policy	Number of joint CIS events (meetings, consultations) on global Internet governance policy
Parameters of the information environment and criteria for assessing their impact on humans	Number of consultations provided to Member States on the parameters of the Information environment and criteria for assessing their impact on humans
Recommendations on conducting information-ecology expert analyses of ICT projects and the information environment in which they are applied (region, country, town, etc.)	Number of information-ecology expert analyses of ICT projects and the information environment provided
Continuous professional development courses, training, seminars on monitoring the status of the information environment and its effect on humans, including building confidence and security in the use of ICTs	Number of professional development courses, training, seminars on monitoring the status of the information environment and its effect on humans, including building confidence and security in the use of ICT Number of persons trained

EDITION 2017
TELECOMMUNICATION DEVELOPMENT BUREAU

International Telecommunication Union
Place des Nations
CH-1211 Geneva 20
Switzerland

www.itu.int

ISBN 978-92-61-24031-8

Printed in Switzerland
Geneva, 2017