ITU-D four-year rolling operational plan

2019-2022

ITU-D
FOUR-YEAR ROLLING OPERATIONAL PLAN
2019-2022

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 2019-2022 timeframe.

The details relating to the implementation of the Operational Plan for the year 2017 are presented in the 2017 Performance Report.

The Operational Plan reflects the following changes which were adopted by WTDC-17 as well as the ITU-D component of the Strategic Plan for 2020-2023:

- Four ITU-D objectives
- Specific outcomes for each of the four ITU-D objectives
- 17 related outputs based on the four ITU-D objectives

The Operational Plan provides the framework within which the objectives of the ITU-D will be implemented during 2019-2022. 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 2018 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

Outline and key actions of the 2019-2022 Operational Plan

The 2019-2022 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 high-priority areas for the ITU-D have been identified as the following (without associating any order of priority):

2.1 International cooperation and agreement

- Ensuring the successful organization and completion of the major ITU-D Conference and meetings planned for 2019-2022 (TDAG, Study Group meetings, RPMs, WTDC-21) on the basis of timely preparatory and organizational work.
- Implementing the ITU-D Action Plan and the resolutions and recommendations adopted by the 2017 World Telecommunication Development Conference (WTDC-17).
- Ensuring enhanced knowledge-sharing, dialogue and partnership among the ITU membership on telecommunication/ICT issues.
- Ensuring timely and effective implementation of telecommunication/ICT development projects and regional initiatives.
- Developing and strengthening partnerships to mobilize resources to promote sustainable telecommunication/ICT development.

2.2 Development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs

- Assisting ITU membership in maximizing the use of new technologies for the development of their information and communication infrastructures and services and building global telecommunication/ICT infrastructure.
- Supporting the ITU membership, in particular developing countries, in building trust and confidence in the use of ICTs.
- Assisting Member States to strengthen their capacities on disaster risk reduction, management, and emergency telecommunications, including assistance to enable Member States to address all phases of disaster management, such as early warning, response, relief, and restoration of telecommunication networks.

2.3 Enabling policy and regulatory environment conducive to sustainable telecommunication/ICT development

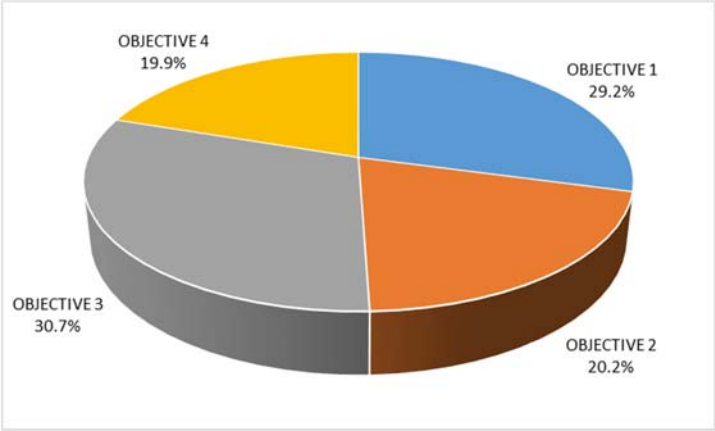
- Supporting ITU membership in creating an enabling legal, policy and regulatory environments conducive to the development of telecommunications /ICTs in a digital economy, strengthening communication and collaboration with other sectors such as those dealing with health, education, energy, transport, agriculture and finance to leverage the cross-sectoral nature of ICTs on economic and social development, and ensuring that all can benefit from ICTs by building sound policy and regulatory frameworks.
- Supporting ITU membership in taking informed policy and strategic decisions based on high-quality, internationally comparable ICT statistics and data analysis.
- Developing necessary institutional capacity building and human skills development policies, strategies in telecommunications/ICT and guidelines and deliver them to members, especially in developing countries, in order to assist them in enhancing and strengthening their human and institutional capacity and setting up national programmes.
- Supporting ITU-D memberships to foster digital transformation through ICT entrepreneurship and increased ICT innovation in the ICT ecosystem, while encouraging empowerment of grassroots key stakeholders and creating new opportunities for them in the telecommunication/ICT sector.

2.4 The development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development (inclusive digital society)

- Providing concentrated assistance to Least Developed Countries (LDCs), Small Island Developing States (SIDS), Landlocked Developing Countries (LDCs) and countries with economies in transition.
- Supporting ITU membership, in collaboration and partnership with other United Nations organizations and the private sector, in fostering the use of telecommunications/ICTs in the various facets of information-society development, in particular in underserved and rural areas, and for sustainable development and attaining the UN Sustainable Development Goals (SDGs) and implementing the World Summit on the Information Society (WSIS) Action Lines.
- Promoting digital inclusion for empowering women and girls, persons with disabilities and other people with specific needs.
- Assisting Member States to enhance their capacities on and improve the use of telecommunication/ICTs in mitigating and responding to the devastating effects of climate change.

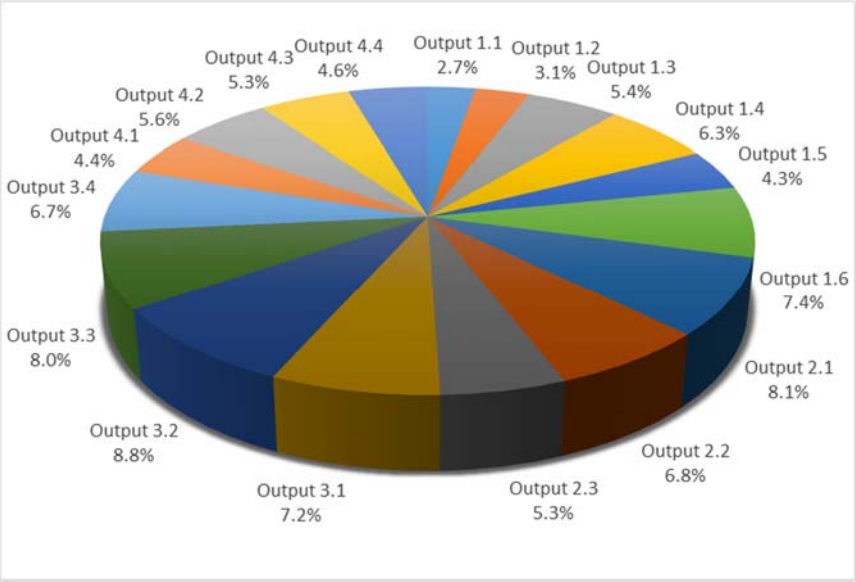
Planned human resources by objectives and outputs

Chart A below presents the breakdown of planned human resources by objectives among the proposed four ITU-D objectives for the 2019-2022 timeframe.



Objective 1: Coordination: Foster international cooperation and agreement on telecommunication/ICT development issues
Objective 2: Modern and secure telecommunication/ICT Infrastructure: Foster the development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs
Objective 3: Enabling environment: Foster an enabling policy, and regulatory environment conducive to sustainable telecommunication/ICT development
Objective 4: Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development

Chart B below presents the breakdown of planned human resources by outputs among the 17 outputs of the Telecommunication Development Sector for the 2019-2022 timeframe.



Output 1.1: World telecommunication development conference (WTDC) and WTDC final report	**Output 3.1:** Products and services on telecommunication/ICT policy and regulation for better international coordination and coherence, such as assessment studies and other publications, and other platforms to exchange information
Output 1.2: Regional preparatory meetings (RPMS) and final report of the RPMS	**Output 3.2:** Products and services on telecommunication/ICT statistics and data analysis, such as research reports, collection, harmonization and dissemination of high-quality, internationally comparable statistical data, and forums of discussion
Output 1.3: Telecommunication Development Advisory Group (TDAG) and reports of the TDAG for the BDT Director and for WTDC	**Output 3.3:** Products and services on capacity building and human skills development, including those on international Internet governance, such as online platforms, distance and face-to-face training programmes to enhance practical skills and shared material, taking into account partnerships with telecommunication/ICT education stakeholders
Output 1.4: Study groups and guidelines, recommendations and reports of study groups	**Output 3.4:** Products and services on telecommunication/ICT innovation, such as knowledge-sharing and assistance, upon request, on developing a national innovation agenda; mechanisms for partnerships; development of projects, studies and telecommunication/ICT innovation policies
Output 1.5: Platforms for regional coordination, including regional development forums (RDFs)	**Output 4.1:** Products and services on concentrated assistance to LDCs, SIDS and LLDCs and countries with economies in transition, to foster availability and affordability of telecommunications/ICTs.
Output 1.6: Implemented telecommunication/ICT development projects and services related to regional initiatives	**Output 4.2:** Products and services on telecommunication/ICT policies supporting the development of the digital economy, ICT applications and new technologies, such as information sharing and support for their deployment, assessment studies, and toolkits
Output 2.1: Products and services on telecommunication/ICT infrastructure and services, wireless and fixed broadband, connecting rural and remote areas, improving international connectivity, bridging the digital standardization gap, conformance and interoperability, spectrum management and monitoring, the effective and efficient management and proper use of telecommunication resources within the mandate of ITU, and the transition to digital broadcasting, such as assessment studies, publications, workshops, guidelines, and best practices	**Output 4.3:** Products and services on digital inclusion for girls and women and people with specific needs (elderly, youth, children and indigenous people, among others), such as awareness-raising on digital inclusion strategies, policies and practices, development of digital skills, toolkits and guidelines and forums of discussion to share practices and strategies

Output 2.2: Products and services in building confidence and security in the use of telecommunications/ICTs, such as reports and publications, and to contribute to the implementation of national and global initiatives	**Output 4.4:** Products and services on ICT climate-change adaptation and mitigation, such as promotion of strategies and dissemination of best practices on mapping vulnerable areas and developing information systems, metrics, and e-waste management
Output 2.3: Products and services on disaster risk reduction and management, and emergency telecommunications, including assistance to enable Member States to address all phases of disaster management, such as early warning, response, relief, and restoration of telecommunication networks.	

Structure of the Operational Plan

The 2019-2022 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 2019-2022 Operational Plan.

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

- Description of the objective
- Human resources allocation for the entire period (2019-2022)
- 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 2019-2022 period

Part 4 presents a set of tables and charts on resource allocations for the 2019-2022 timeframe.

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

Objectives	D.1 Coordination: Foster international cooperation and agreement on telecommunication/ICT development issues	D.2 Modern and secure telecommunication/ICT infrastructure: Foster the development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs	D.3 Enabling environment: Foster an enabling policy and regulatory environment conducive to sustainable telecommunication/ICT development	D.4 Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development
Outcomes	D.1-1: Enhanced review and increased level of agreement on the draft ITU-D contribution to the draft ITU strategic plan, the World Telecommunication Development Conference (WTDC) Declaration, and the WTDC Action Plan. D.1-2: Assessment of the implementation of the Action Plan and of the WSIS Plan of Action. D.1-3: Enhanced knowledge-sharing, dialogue and partnership among the ITU membership on telecommunication/ICT issues. D.1-4: Enhanced process and implementation of telecommunication/ICT development projects and regional initiatives. D.1.5: Facilitation of agreement to cooperate on telecommunication/ICT development programmes between Member States, and between Member States and other stakeholders in the ICT ecosystem, based on requests from ITU Member States involved.	D.2-1: Enhanced capacity of the ITU membership to make available resilient telecommunication/ICT infrastructure and services. D.2-2: Strengthened capacity of Member States to effectively share information, find solutions, and respond to threats to cybersecurity, and to develop and implement national strategies and capabilities, including capacity building, encourage national, regional and international cooperation towards enhanced engagement among Member States and relevant players. D.2-3: Strengthened capacity of Member States to use telecommunications/ICTs for disaster risk reduction and management, to ensure availability of emergency telecommunications, and support cooperation in this area.	D.3-1: Strengthened capacity of Member States to enhance their policy, legal and regulatory frameworks conducive to development of telecommunications/ICTs. D.3-2: Strengthened capacity of Member States to produce high-quality, internationally comparable telecommunication/ICT statistics which reflect developments and trends in telecommunications/ICTs, based on agreed standards and methodologies. D.3-3: Improved human and institutional capacity of the ITU membership to tap into the full potential of telecommunications/ICTs. D.3-4: Strengthened capacity of the ITU membership to integrate telecommunication/ICT innovation in national development agendas and to develop strategies to promote innovation initiatives, including through public, private, and public-private partnerships.	D-4-1: Improved access to and use of telecommunication/ICT in least developed countries (LDCs), small island developing states (SIDS) and landlocked developing countries (LLDCs), and countries with economies in transition. D.4-2: Improved capacity of the ITU membership to accelerate economic and social development by leveraging and using new technologies and telecommunication/ICT services and applications. D.4-3: Strengthened capacity of the ITU membership to develop strategies, policies and practices for digital inclusion, in particular for the empowerment of women and girls, persons with disabilities and other persons with specific needs. D.4-4: Enhanced capacity of the ITU membership to develop telecommunication/ICT strategies and solutions on climate-change adaptation and mitigation and the use of green/renewable energy.

Objectives	D.1 Coordination: Foster international cooperation and agreement on telecommunication/ICT development issues	D.2 Modern and secure telecommunication/ICT infrastructure: Foster the development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs	D.3 Enabling environment: Foster an enabling policy and regulatory environment conducive to sustainable telecommunication/ICT development	D.4 Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development
Outputs	D.1-1 World Telecommunication Development Conference (WTDC) and WTDC Final Report D.1-2 Regional preparatory meetings (RPMs) and final reports of the RPMs D.1-3 Telecommunication Development Advisory Group (TDAG) and reports of TDAG for the Director of BDT and for WTDC D.1-4 Study groups and guidelines, recommendations and reports of study groups D.1-5 Platforms for regional coordination, including regional development forums (RDFs) D.1-6: Implemented telecommunication/ICT development projects and services related to regional initiatives.	D.2-1 Products and services on telecommunication/ICT infrastructure and services, wireless and fixed broadband, connecting rural and remote areas, improving international connectivity, bridging the digital standardization gap, conformance and interoperability, spectrum management and monitoring, the effective and efficient management and proper use of telecommunication resources within the mandate of ITU, and the transition to digital broadcasting, such as assessment studies, publications, workshops, guidelines, and best practices. D.2-2 Products and services in building confidence and security in the use of telecommunications/ICTs, such as reports and publications, and to contribute to the implementation of national and global initiatives. D.2-3 Products and services on disaster risk reduction and management, and emergency telecommunications, including assistance to enable Member States to address all phases of disaster management, such as early warning, response, relief, and restoration of telecommunication networks.	D.3-1 Products and services on telecommunication/ICT policy and regulation for better international coordination and coherence, such as assessment studies and other publications, and other platforms to exchange information. D.3-2 Products and services on telecommunication/ICT statistics and data analysis, such as research reports, collection, harmonization and dissemination of high-quality, internationally comparable statistical data, and forums of discussion. D.3-3 Products and services on capacity building and human skills development, including those on international Internet governance, such as online platforms, distance and face-to-face training programmes to enhance practical skills and shared material, taking into account partnerships with telecommunication/ICT education stakeholders. D.3-4 Products and services on telecommunication/ICT innovation, such as knowledge-sharing and assistance, upon request, on developing a national innovation agenda; mechanisms for partnerships; development of projects, studies and telecommunication/ICT innovation policies.	D.4-1 Products and services on concentrated assistance to LDCs, SIDS and LLDCs and countries with economies in transition, to foster availability and affordability of telecommunications/ICTs. D.4-2 Products and services on telecommunication/ICT policies supporting the development of the digital economy, ICT applications and new technologies, such as information sharing and support for their deployment, assessment studies, and toolkits. D.4-3 Products and services on digital inclusion for girls and women and people with specific needs (elderly, youth, children and indigenous people, among others), such as awareness-raising on digital inclusion strategies, policies and practices, development of digital skills, toolkits and guidelines and forums of discussion to share practices and strategies. D.4-4 Products and services on ICT climate-change adaptation and mitigation, such as promotion of strategies and dissemination of best practices on mapping vulnerable areas and developing information systems, metrics, and e-waste management.

01 EXECUTIVE SUMMARY

PART **02** **THE FOUR OBJECTIVES OF THE TELECOMMUNICATION DEVELOPMENT BUREAU**

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PART 2

THE FOUR OBJECTIVES OF THE TELECOMMUNICATION DEVELOPMENT BUREAU

OBJECTIVE 1

Coordination: Foster international cooperation and agreement 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. In addition, activities under Objective 1 are aimed at enhancing the process and implementation of telecommunication/ICT development projects and regional initiatives.

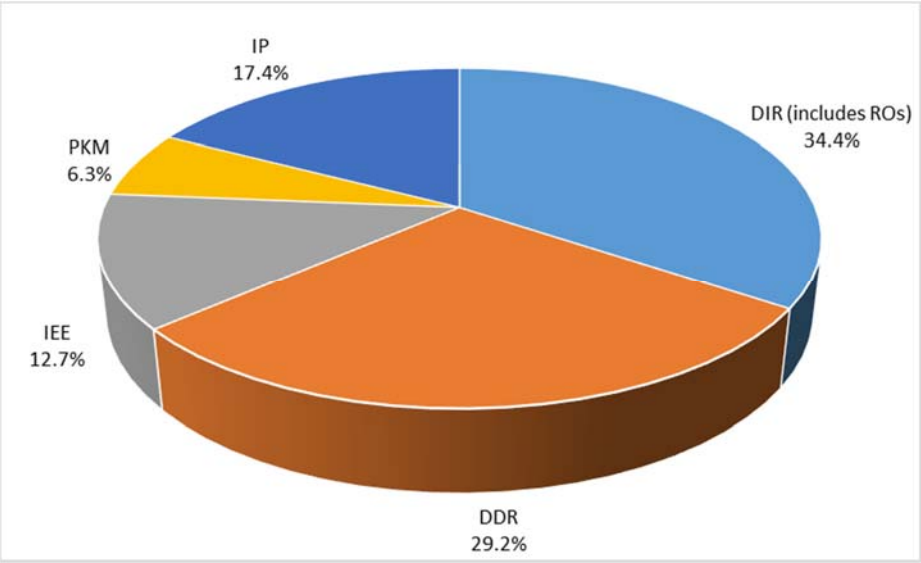
Objective 1 includes the following outputs:

- World telecommunication development conference (WTDC) and WTDC final report
- Regional preparatory meetings (RPMS) and final report of the RPMS
- Telecommunication Development Advisory Group (TDAG) and reports of the TDAG for the BDT Director and for WTDC
- Study groups and guidelines, recommendations and reports of study groups
- Platforms for regional coordination, including regional development forums (RDFs)
- Implemented telecommunication/ICT development projects and services related to regional initiatives

For the years 2019 to 2022, the estimated human resources to be allocated to objective 1 represent **29.2 %** 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) and WTDC final report

Description

Held every four years, the World Telecommunication Development Conference (WTDC) is a high-level platform for Member States to development 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. A final report is produced by each WTDC. It includes the following items:

- Declaration;
- Contribution to the draft ITU strategic plan for the forthcoming relevant timeframe;
- Action plan;
- Regional Initiatives;
- Study Groups.

Result-based analysis

Outcomes	Outcome indicators
· Enhanced review and increased level of agreement on the draft ITU-D contribution to the draft ITU strategic plan, the World Telecommunication Development Conference (WTDC) Declaration, and the WTDC Action Plan	· Membership level of understanding and sharing of the ITU-D objectives and outputs · Declaration approved - level of support/ agreement

Annual expected results		Performance indicators (PIs)
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
2022	• 30% 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
	· 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) and final reports of the RPMs

Description

WTDC, through Resolution 31 (Rev. Dubai, 2014), 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.

Regional Preparatory Meetings are direct services to Members and are organized to achieve greater regional coordination and engage early on Members 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 telecommunication/information and communication technologies (ICTs), taking into account the expression of pressing needs facing Member States and Sector Members of the region. The RPMs are expected to identify top priority areas, which are essential for the telecommunication/ICT development of countries of the region. A final report is produced by each RPM. It covers the following items:

- Identification of priority areas, including the draft WTDC Declaration, draft WTDC contribution to the ITU Strategic Plan, draft WTDC Action Plan and Study Groups
- Topics for ITU D future work (including working methods and Study Group questions) linked to the identified priority areas
- Priority setting for the Regional Initiatives
- Identification of Regional Initiatives for the Region

Result-based analysis

Outcomes	Outcome indicators
• Enhanced review and increased level of agreement on the draft ITU-D contribution to the draft ITU strategic plan, the World Telecommunication Development Conference (WTDC) Declaration, and the WTDC Action Plan	• Membership level of understanding and sharing of the ITU-D objectives and outputs • Declaration approved - level of support/ agreement

Annual expected results		Performance indicators (PIs)
2019	• 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
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 2020-2021 RPMs to WTDC-21	• Timely preparation of the reports (percentage of reports prepared and made available on time)
2022	• Implementation of WTDC-21 decisions linked to RPMs outcomes for the 2022-2025 period	• Percentage of regional initiatives implemented in a timely manner and within available resources

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) and reports of the TDAG for the BDT Director and for WTDC

Description

TDAG prepares a report for the Director of the Telecommunication Development Bureau indicating action in respect of the following items:

- Working procedures;
- Cooperation and coordination with the Radiocommunication Sector, the Telecommunication Standardization Sector and the General Secretariat;
- Guidelines for the work of study groups;
- Progress in the implementation of the programme of work;
- Implementation of the operational plan of the preceding period.

Furthermore, TDAG prepares a report for the world telecommunication development conference on the matters assigned to it in accordance with No. 213A of the ITU Convention and transmits it to the Director for submission to the conference.
Additionally, TDAG may identify priority areas, including the draft WTDC Declaration, draft WTDC contribution to the ITU Strategic Plan, draft WTDC Action Plan and Study Groups.

Result-based analysis

Outcome	Outcome Indicators
· Assessment of the implementation of the Action Plan and of the WSIS Plan of Action	· Indicators of regional cooperation -Level of consensus

Annual expected results		Performance indicators (PIs)
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
2022	• Preparation and organization of the 27th 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 and guidelines, recommendations and reports of Study Groups

Description

ITU-D study groups enable all Member States, Sector Members, Associates and Academia to share experiences, present ideas, exchange views and achieve consensus on strategies to address ICT priorities. ITU-D study groups study questions and 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.

Each ITU-D study group prepares a report indicating the progress of work and presents draft new or revised recommendations for consideration by the WTDC. Annual reports are presented by the Chairmen of each study group to TDAG.

WTDC-17 maintained two study groups (Study Group 1 and Study Group 2), determined the Questions to be studied by them, and appointed the chairmen and vice-chairmen of the ITU-D study groups. Pursuant to WTDC Resolution 2 (Rev. Buenos Aires, 2017), the mandate of Study Group 1 is to study the "Enabling environment for the development of telecommunications/ICTs", and of Study Group 2 to study "ICT services and applications for the promotion of sustainable development". The working procedures to be followed by the ITU-D study groups are set out in WTDC Resolution 1 (Rev. Buenos Aires, 2017).

Result-based analysis

Outcome	Outcome indicators
• Enhanced knowledge-sharing, dialogue and partnership among the ITU membership on telecommunication/ICT issues.	• Work programmes undertaken in response to: Resolution 2 (Rev. Buenos Aires 2017); work assigned by WTDC; ITU-D resolutions addressing specific areas of study through ITU-D study groups. • Meetings and documentation for meetings processed in accordance with Resolution 1 (and working guidelines) and in accordance with decisions of WTDC • Increased use of electronic tools to progress the work on the study group work programmes • Number of partnerships signed and resources mobilized

Annual expected results		Performance indicators (PIs)
2019	• Expertise shared at Study Group meetings and Rapporteur Group meetings • Every region represented by at least 10 members (including remote participation) • Increased use of electronic tools to progress the work • Work programmes prepared in response to Resolution 2 reviewed • Some proposals to new study period prepared • 40% – Draft deliverables available • Interim deliverables published (based on work plans) • Interim deliverables published (based on work plans)	• Number of relevant contribution submitted to Study Group meetings and Rapporteur Group meetings • Level of participation of members (all regions represented) • Number of downloads/remote participants/use of online discussion fora compared to previous period • Relevant and timely review of work programmes undertaken in response to Resolution 2 • Timely and efficient production of draft proposals
2020	• Expertise shared at Study Group meetings and Rapporteur Group meetings • Every region represented by at least 10 members (including remote participation) • Increased use of electronic tools to progress the work • Work programmes prepared in response to Resolution 2 reviewed • Some proposals to new study period prepared • 60% – Draft deliverables available. • Interim deliverables published (based on work plans)	• Number of relevant contribution submitted to Study Group meetings and Rapporteur Group meetings • Level of participation of members (all regions represented) • Number of downloads/remote participants/use of online discussion fora compared to previous period • Relevant and timely review of work programmes undertaken in response to Resolution 2 • Timely and efficient production of draft proposals
2021	• Expertise shared at Study Group meetings and Rapporteur Group meetings • Every region represented by at least 10 members (including remote participation) • Work programmes prepared in response to Resolution 2 reviewed • Increased use of electronic tools to progress the work • Reports, guidelines, Recommendations agreed on • 100% – Draft deliverables available. • Interim deliverables published (based on work plans) • Reports, guidelines, Recommendations published	• Number of relevant contributions submitted to Study Group meetings and Rapporteur Group meetings • Level of participation of members (all regions represented) • Relevant and timely review of work programmes undertaken in response to Resolution 2 • Number of downloads/remote participants/use of online discussion fora compared to previous period • Timely and efficient production of deliverables with appropriate quality • Timely and efficient preparation of proposals to the new study period
2022	• In accordance with WTDC-21 decisions	• In accordance with WTDC-21 decisions

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1-Finance	• Insufficient financial resources	High	Low	• 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
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	• Improve communication with the members • 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	• Improve communication with the members • Raise further awareness of the planned and ongoing work of the study groups and their value to the membership

Output 1.5 Platforms for regional coordination, including Regional Development Forums (RDFs)

Description

Regional Development Forums provide high-level dialogue between the BDT and decision-makers of ITU Member States and Sector Members. They serve as a platform for assessing strategic orientations that may have an impact on BDT's regional work plan in between world telecommunication development conferences (WTDCs). In this context, these forums will report on the activities of the Buenos Aires Action Plan, with particular emphasis on regional initiatives in order to get feedback from membership to adjust BDT's work in each region of the world.

Result-based analysis

Outcomes	Outcome indicators
• Enhanced review and increased level of agreement on the draft ITU-D contribution to the draft ITU strategic plan, the World Telecommunication Development Conference (WTDC) Declaration, and the WTDC Action Plan	• Membership level of understanding and sharing of the ITU-D objectives and outputs • Declaration approved - level of support/ agreement

Annual expected results		Performance indicators (PIs)
2019	• Regional priorities and expertise shared at the annual Regional Development Forums	• Number of participants Participants' level of satisfaction with regards to meeting organization, facilities and outcomes
2020	• Regional priorities and expertise shared at the annual Regional Development Forums	• Number of participants Participants' level of satisfaction with regards to meeting organization, facilities and outcomes
2021	• Regional priorities and expertise shared at the annual Regional Development Forums	• Number of participants Participants' level of satisfaction with regards to meeting organization, facilities and outcomes
2022	• Regional priorities and expertise shared at the annual Regional Development Forums	• Number of participants Participants' level of satisfaction with regards to meeting organization, facilities and outcomes

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 1.6 Implemented telecommunication/ICT development projects and services related to regional initiatives

Description

In order to implement the growing volume and variety of telecommunication/ICT development projects and services related to the regional initiatives, it is important for ITU-D to develop and strengthen partnerships to mobilize resources to promote sustainable telecommunication/ICT development.

To this end, partnerships and cooperation with diverse stakeholders, including other United Nations agencies, international and regional organizations, ITU Member States, ITU-D Sector Members, Associates, Academia and other relevant partners, from developed and developing countries , are necessary to enhance resource mobilization, to avoid duplication of efforts and support the ITU-D in the implementation of the outcomes of the WTDC.

Such cooperation will facilitate the development and promotion of the digital economy for all ITU Member States, through the organization of training sessions, workshop, sharing best practices, raising awareness and events with the involvement of stakeholders.

Result-based analysis

Outcome 1	Outcome indicators
• Enhanced process and implementation of telecommunication/ICT development projects and regional initiatives	• Number of development projects and projects related to regional initiatives implemented per region • Number of Member States assisted by BDT in implementing projects related to regional initiatives • Number of partnerships signed and resources mobilized

Annual expected results		Performance indicators (PIs)
2019	· Strengthen national response capacities and upgrading infrastructure of Emergency Rescue · Formulate and implement project on Digital Financial Inclusion in collaboration with interested stakeholders · Formulate and implement project on Big Data for Development with interested stakeholders · Assist countries on Digital Financial Inclusion policies · Assist countries on policies to create enabling environments for Big Data · Develop strategic plans and regulatory frameworks to keep up with the age of Internet of things and big data and develop a road map to shift to smart cities and communities	· Number of projects on Early Warning Systems implemented · Number of countries benefitted from Digital Financial Inclusion project · Number of stakeholders involved in the Big Data for Development Project. · Number of countries assisted on Digital Financial Inclusion Policies · Number of countries assisted in creating enabling environments for Big Data · Number of strategic plans and regulatory framework developed
2020	· Enhance regional capacities on e-waste statistics and analysis. · Assist countries on Digital Financial Inclusion policies. · Assist countries on policies to create enabling environments for Big Data · Exchange of experiences among countries in the field of internet of things, big data, and smart communities and cities, and study their resulting effects · Provide assistance to countries on policy guidelines, regulatory and technical frameworks in the area of child online protection and combatting all forms of cyber threat	· Number of regional projects on e-waste statistics and analysis implemented · Number of countries assisted on Digital Financial Inclusion Policies · Number of countries assisted in creating enabling environments for Big Data · Number of high level events and forum · Number of policy guidelines and regulatory frameworks developed
2021	· Formulate and implement a project on Digital Financial Inclusion formulated and implemented in collaboration with interested stakeholders · Assess and review EMF measurement · Formulate and implement project on Big Data for Development with interested stakeholders Assist countries on Digital Financial Inclusion policies	· Number of countries benefitted from Digital Financial Inclusion project · Number of regional projects on review and assess of health consequences from EMF exposure implemented · Number of stakeholders involved in the Big Data for Development Project Number of countries assisted on Digital Financial Inclusion Policies

Annual expected results (Ctn'd)		Performance indicators (PIs)
	· Assist countries on policies to create enabling environments for Big Data	· Number of countries assisted in creating enabling environments for Big Data · Number of studies
2022	· Assist countries on Digital Financial Inclusion policies · Strengthen national response capacities and upgrading infrastructure of Emergency Rescue Strengthen national response capacities and upgrading infrastructure of Emergency Rescue · Assist countries on policies to create enabling environments for Big Data · Build capacity with regard to the use of big data and Internet of things	· Number of countries assisted on Digital Financial Inclusion Policies · Number of projects on Early Warning Systems implemented Number of countries assisted in creating enabling environments for Big Data · Number of participants trained

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Government and ICT public Institution commitment at national level	· Half of the stakeholders who are in need of Emergency Telecoms, E-waste and EMF support if not more become not interested in these priority areas	Medium	Low	· Raise awareness of policy makers and political leaders at national level and collaborate, as much as possible, with all key partners
2- Finance	· Many difficulties in mobilizing enough resources for projects (Mobilized financial resources are insufficient)	Medium	High	· Coordinate with the members and non-members for fund raising to support projects implementations
3- Member state and sector member capabilities in formulating projects	· More projects are requested by Member states	Medium	High	· Assist Member states in project implementation
4- Security	· Security status in some Regions	Medium	high	· Working with same countries

Outcome 2	Outcome indicators
• Facilitation of agreement to cooperate on telecommunication/ICT development programmes between Member States, and between Member States and other stakeholders in the ICT ecosystem, based on requests from ITU Member States involved	• Number of requests of administrations to the ITU to facilitate agreements • Number of agreements facilitated by the ITU

Annual expected results		Performance indicators (PIs)
2019	• Assess the level of development of common programs and regimes in Regions	• Number of assessment reports
2020	• Strengthening the capacity of key regional stakeholders and encourage complementarity	• Number of stakeholders engaged
2021	• Building capacities with regard to the establishment of regional and sub-regional agreements	• Number of trained persons
2022	• Draft and facilitate agreements	• Number of agreements facilitated by the ITU

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1-Security	• Security status in some Regions	Medium	high	• Working with same countries
2-Finance	• Availability of financial resources	medium	medium	• Resources mobilization

OBJECTIVE 2

Modern and secure telecommunication/ICT Infrastructure: Foster the development of infrastructure and services, including building confidence and security in the use of telecommunications/ICTs

Summary

The purpose of Objective 2 is to assist the ITU membership by providing assistance to developing modern and secure telecommunication/ICT infrastructure and services, including building confidence and security in the use of telecommunications/ICTs. It will further support countries in all phases of disaster management and to help countries take advantage of ICTs to increase disaster resilience and reduce its impact.

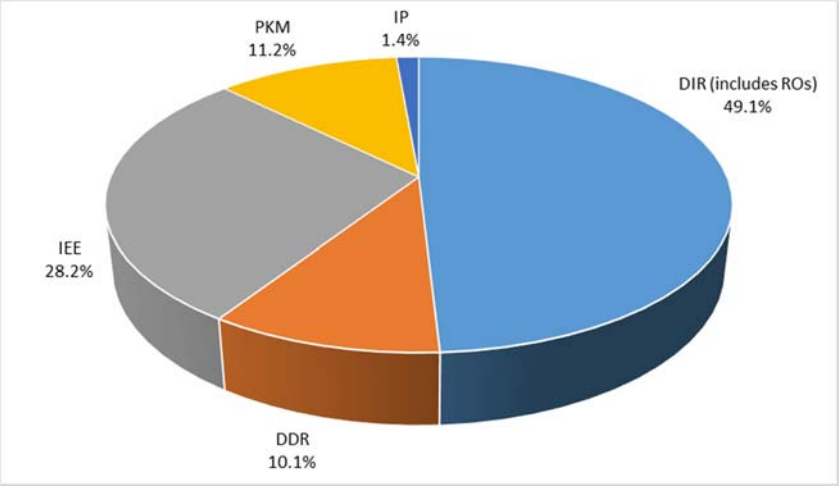
Objective 2 includes the following outputs:

- Products and services on telecommunication/ICT infrastructure and services, wireless and fixed broadband, connecting rural and remote areas, improving international connectivity, bridging the digital standardization gap, conformance and interoperability, spectrum management and monitoring, the effective and efficient management and proper use of telecommunication resources within the mandate of ITU, and the transition to digital broadcasting, such as assessment studies, publications, workshops, guidelines, and best practices.
- Products and services in building confidence and security in the use of telecommunications/ICTs, such as reports and publications, and to contribute to the implementation of national and global initiatives.
- Products and services on disaster risk reduction and management, and emergency telecommunications, including assistance to enable Member States to address all phases of disaster management, such as early warning, response, relief, and restoration of telecommunication networks.

For the years 2019 to 2022, the estimated human resources to be allocated to Objective 2 represent **20.2 %** 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 Products and services on telecommunication/ICT infrastructure and services, wireless and fixed broadband, connecting rural and remote areas, improving international connectivity, bridging the digital standardization gap, conformance and interoperability, spectrum management, monitoring, the effective and efficient management and proper use of telecommunication resources within the mandate of ITU, and the transition to digital broadcasting, such as assessment studies, publications, workshops, guidelines, and best practices.

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 which are key enablers for the digital economy. The deployment of common broadband, including through fixed and mobile, technology and network infrastructures for multiple telecommunication services and applications and the evolution to all IP-based wireless and wired future networks (NGNs) and their evolutions open up opportunities but also imply significant challenges for developing countries. When referring to communications we include people–to-people, people-to-things and things-to-things communications as well as new or emerging technologies. Also notable is the worldwide transition from analogue to digital broadcasting, enabling more efficient use of spectrum and higher quality audio and video delivery.

Result-based analysis

Outcomes	Outcome indicators
· Enhanced capacity of the ITU membership to make available resilient telecommunication/ICT infrastructure and services.	· Number of guidelines, handbooks, assessment studies and publications finalized on relevant subjects in countries that BDT contributed to developing · Number of users/subscribers accessing the tools on relevant subjects in countries that BDT contributed to developing · Number of experts participating in trainings, seminars and workshops for the relevant subjects in countries and their satisfaction that BDT contributed to developing

Annual expected results		Performance indicators (PIs)
2019	· 15 countries and 2 sub-regions improved Conformance and Interoperability (C&I) capacity · 15 % of the ITU Member States enhanced broadband and their international connectivity, with these values added to the ITU Interactive Transmission Maps · 15 Member States enhanced their capacity on Migration to NGN; new technology adoption; smart grid; management of telephone numbering resources · 10 countries enhanced their capacity of Members to implement Broadband networks: Wired and wireless technologies, including International Mobile Telecommunications (IMT), satellite communications, support for Internet of Things (IoT), IPv6 and IXPs · In 8 developing countries Rural Communication was improved for access, backhaul, power supply, satellite, and business models for financial and operational sustainabilityAt least 60 % of the ITU Member States have switched off analogue terrestrial television broadcasting · 70 % of the Member States have NTFA, have spectrum management strategy or masterplan or using SMS4DC and 40 % of the ITU Member States have regional cross-border frequency coordination agreement · Awareness increased and guidelines prepared on broadcasting and spectrum management topics · 15 countries supported on spectrum management and broadcasting topics	· Number of assessment studies conducted at national and regional level for assessing the status of C&I programmes · Number of Mutual Recognition Agreements or Technical collaboration on C&I · Number of publication, reports, and studies prepared on related C&I topics · Number of experts/countries trained on C&I programmes and test domains · Number of high-speed terrestrial networks (ICT backbones) added to the Map (km) · Number of network operators added to the ITU Map · Number of Reports produced on Mapping the Infrastructure in countries or regions · Number of Workshops provided on broadband, ICT Infrastructure Mapping, and international connectivity · Number of countries supported for migration to NGN · Number of publications and reports on NGN Migration Strategy · Number of Countries implementing Smart Grid Strategies · Number of countries supported for Broadband Network implementation · Number of IXPs implemented · Number of countries adopting the IPv6 implementation · Number of Communities and disadvantaged groups in developing countries connected to ICTs and broadband in rural areasNumber 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

Annual expected results (Ctn'd)		Performance indicators (PIs)
		· Percentage of Member States supported in spectrum management and broadcasting · Percentage of Member states using SMS4DC
2020	· 15 countries and 2 sub-regions improved Conformance and Interoperability (C&I) capacity · 20 % of the ITU Member States enhanced broadband and their international connectivity, with these values added to the ITU Interactive Transmission Maps · 15 Member States enhanced their capacity on Migration to NGN; new technology adoption; smart grid; management of telephone numbering resources · 10 countries enhanced their capacity of Members to implement Broadband networks: Wired and wireless technologies, including International Mobile Telecommunications (IMT), satellite communications, support for Internet of Things (IoT), IPv6 and IXPs · In 8 developing countries Rural Communication was improved for access, backhaul, power supply, satellite, and business models for financial and operational sustainability · At least 70 % of the ITU Member States have switched off analogue terrestrial television broadcasting · 75 % of the Member States have NTFA, have spectrum management strategy or masterplan or using SMS4DC and 45 % of the ITU Member States have regional cross-border frequency coordination agreement · Awareness increased and guidelines prepared on broadcasting and spectrum management topics · 15 countries supported on spectrum management and broadcasting topics	· Number of assessment studies conducted at national and regional level for assessing the status of C&I programmes · Number of Mutual Recognition Agreements or Technical collaboration on C&I · Number of publication, reports, and studies prepared on related C&I topics · Number of experts/countries trained on C&I programmes and test domains · Number of high-speed terrestrial networks (ICT backbones) added to the Map (km) · Number of network operators added to the ITU Map · Number of Reports produced on Mapping the Infrastructure in countries or regions · Number of Workshops provided on broadband, ICT Infrastructure Mapping, and international connectivity · Number of countries supported for migration to NGN · Number of publications and reports on NGN Migration Strategy · Number of Countries implementing Smart Grid Strategies · Number of countries supported for Broadband Network implementation · Number of IXPs implemented · Number of countries adopting the IPv6 implementation · Number of Communities and disadvantaged groups in developing countries connected to ICTs and broadband in rural areas

Annual expected results (Ctn'd)		Performance indicators (PIs)
		· 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 in spectrum management and broadcasting · Percentage of Member states using SMS4DC
2021	· 15 countries and 2 sub-regions improved Conformance and Interoperability (C&I) capacity · 25 % of the ITU Member States enhanced broadband and their international connectivity, with these values added to the ITU Interactive Transmission Maps · 15 Member States enhanced their capacity on Migration to NGN; new technology adoption; smart grid; management of telephone numbering resources · 10 countries enhanced their capacity of Members to implement Broadband networks: Wired and wireless technologies, including International Mobile Telecommunications (IMT), satellite communications, support for Internet of Things (IoT), IPv6 and IXPs · In 8 developing countries Rural Communication was improved for access, backhaul, power supply, satellite, and business models for financial and operational sustainability · At least 75 % of the ITU Member States have switched off analogue terrestrial television broadcasting · 80 % of the Member States have NTFA, have spectrum management strategy or masterplan or using SMS4DC and 50 % of the ITU Member States have regional	· Number of assessment studies conducted at national and regional level for assessing the status of C&I programmes · Number of Mutual Recognition Agreements or Technical collaboration on C&I · Number of publication, reports, and studies prepared on related C&I topics · Number of experts/countries trained on C&I programmes and test domains · Number of high-speed terrestrial networks (ICT backbones) added to the Map (km) · Number of network operators added to the ITU Map · Number of Reports produced on Mapping the Infrastructure in countries or regions · Number of Workshops provided on broadband, ICT Infrastructure Mapping, and international connectivity · Number of countries supported for migration to NGN · Number of publications and reports on NGN Migration Strategy · Number of Countries implementing Smart Grid Strategies · Number of National strategies for the relevant subjects

Annual expected results (Ctn'd)		Performance indicators (PIs)
	· cross-border frequency coordination agreement · Awareness increased and guidelines prepared on broadcasting and spectrum management topics · 15 countries supported on spectrum management and broadcasting topics	· Number of countries supported for Broadband Network implementation · Number of IXPs implemented · Number of countries adopting the IPv6 implementation · Number of Communities and disadvantaged groups in developing countries connected to ICTs and broadband in rural areas · 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 in spectrum management and broadcasting · Percentage of Member states using SMS4DC
2022	· 15 countries and 2 sub-regions improved Conformance and Interoperability (C&I) capacity · 30 % of the ITU Member States enhanced broadband and their international connectivity, with these values added to the ITU Interactive Transmission Maps · 15 Member States enhanced their capacity on Migration to NGN; new technology adoption; smart grid; management of telephone numbering resources · 10 countries enhanced their capacity of Members to implement Broadband networks: Wired and wireless technologies, including International Mobile Telecommunications (IMT), satellite communications, support for Internet of Things (IoT), IPv6 and IXPs · In 8 developing countries Rural Communication was improved for access, backhaul, power supply, satellite, and	· Number of assessment studies conducted at national and regional level for assessing the status of C&I programmes · Number of Mutual Recognition Agreements or Technical collaboration on C&I · Number of publication, reports, and studies prepared on related C&I topics · Number of experts/countries trained on C&I programmes and test domains · Number of high-speed terrestrial networks (ICT backbones) added to the Map (km) · Number of network operators added to the ITU Map · Number of Reports produced on Mapping the Infrastructure in countries or regions · Number of Workshops provided on broadband, ICT Infrastructure

Annual expected results (Ctn'd)	Performance indicators (PIs)
· business models for financial and operational sustainability · At least 80 % of the ITU Member States have switched off analogue terrestrial television broadcasting · 90 % of the Member States have NTFA, have spectrum management strategy or masterplan or using SMS4DC and 55 % of the ITU Member States have regional cross-border frequency coordination agreement · Awareness increased and guidelines prepared on broadcasting and spectrum management topics · 15 countries supported on spectrum management and broadcasting topics	· Mapping, and international connectivity · Number of countries supported for migration to NGN · Number of publications and reports on NGN Migration Strategy · Number of Countries implementing Smart Grid Strategies · Number of countries supported for Broadband Network implementation · Number of IXPs implemented · Number of countries adopting the IPv6 implementation · Number of Communities and disadvantaged groups in developing countries connected to ICTs and broadband in rural areas · 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 in spectrum management and broadcasting · Percentage of Member states using SMS4DC

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
2-Competency/ knowledge	· Lack of qualified experts in the field of activity	High	Medium	· Anticipate the resources requirements and initiate recruitment procedures as soon as possible · Create and keep up-to-date a roster for experts
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
4-Security	· Security status	Medium	high	· Working with same countries

Output 2.2 Products and services in building confidence and security in the use of telecommunications/ICTs, such as reports and publications, and to contribute to the implementation of national and global initiatives.

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 users are aware of risks factors and take appropriate action to ensure security in accordance with their specific role.
As the use of ICT continues to grow especially with the deployment of emerging technologies such as IoT, addressing cybersecurity challenges and combating the transmission of spam would including malware/spyware, continue to be a priority among members. During the last four years, the ITU-D continued to work in this area. BDT undertook many activities that offered development assistance to members and encouraged cooperation among members, while Q-3/2 developed products and materials 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

Outcomes	Outcome indicators
• Strengthened Member States' capacity to effectively share information, find solutions, and respond to threats to cybersecurity and to develop and implement national strategies and capabilities, including capacity building, encourage national, regional and international cooperation toward enhanced engagement among Member States and relevant players.	• Number of cybersecurity national strategies implemented in countries that BDT contributed to develop • Number of CERTs that BDT has contributed to establish • Number of countries where BDT provided technical assistance and improved cybersecurity capability and awareness • Number of cyber attacks repelled by CERTs established with the support of BDT

Annual expected results		Performance indicators (PIs)
2019	• 60% of Member States have cybersecurity strategies and policies in place • 70% of Member States have CIRT established • 50 % of Member States Cyber Threat Intelligence capabilities in place • Facilitated regional and subregional cooperation among CIRTs Needs assessment performed in 10 countries • 2019 edition of the GCI published	• Number of countries with national strategy in place • Number of countries with CSIRTS/CIRTs/CERTs in place • Number of cyberdrills organized • Number of countries participated in the GCI
2020	• 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 subregional cooperation among CIRTs • Needs assessment performed in 10 countries • 2020 edition of the GCI published	• Number of countries with CSIRTS/CIRTs/CERTs in place • Number of cyberdrills organized • Number of countries participated in the GCI
2021	• 70% of Member States have cybersecurity strategies and policies in place • 75% of Member States have CIRT established and cooperating with each other • 60 % of Member States Cyber Threat Intelligence capabilities in place • Needs assessment performed in 10 countries • 2021 edition of the GCI published	• Number of countries with national strategy in place • Number of countries with CSIRTS/CIRTs/CERTs in place • Number of cyberdrills organized • Number of countries participated in the GCI

2022	• 80% of Member States have cybersecurity strategies and policies in place • 90% of Member States have CIRT established and cooperating with each other • 70 % of Member States Cyber Threat Intelligence capabilities in place • Needs assessment performed in 10 countries • 2022 edition of the GCI published	• Number of countries with national strategy in place • Number of countries with CSIRTS/CIRTs/CERTs in place • Number of cyberdrills organized • Number of countries participated in the 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 • Raise awareness of political leaders at national level on the importance of investing in cybersecurity
	• Mobilization of financial resources not sufficient for project development	Medium	High	
2-Competence	• 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

3-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
4-Security	· Security status in some regions	Medium	High	· Working with same countries

Output 2.3 Products and services on disaster risk reduction, management, and emergency telecommunications, including assistance to enable Member States to address all phases of disaster management, such as early warning, response, relief, and restoration of telecommunication networks.

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 – preparedness, response, rehabilitation/recovery – 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.

In line with WTDC Resolution 34 (Rev. Buenos Aires, 2017) many countries have benefited from this outcome. In the preparedness phase, ITU partners with countries and sector members to implement early warning systems in the most affected areas.

Disasters often extend beyond the borders of a State, and effective disaster management may involve the deployment of efforts by more than one country in order to prevent loss of human lives and regional crisis. Prior coordination and collaboration among disaster-management experts, including governments, the private sector, international organizations, academia and non-governmental organizations, before disasters increases the probability of saving human lives when rescue operations are conducted and thereby mitigate 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, and by Machine to Machine (M2M)/Internet of Things (IoT) based technological solutions, taking into account persons with disabilities and specific needs.

Result-based analysis

Outcomes	Outcome indicators
• Strengthened capacity of Member States to use telecommunication/ICT for disaster risk reduction and management, to ensure availability of emergency telecommunications, and support cooperation in this area.	• Number of Member States where BDT assisted with disaster relief efforts both through provision of equipment and through infrastructure damage assessments in the aftermath of a disaster. • Number of Member States that received BDT assistance in the development and establishment of early warning systems. • Number of Member States that received BDT assistance in developing and establishing national emergency telecommunications plans.

Annual expected results		Performance indicators (PIs)
2019	• 100% of countries requesting ITU to deploy emergency telecommunication equipment in the aftermath of a disaster are assisted • At least one new Member State is assisted in developing and deploying an early warning system	• Number of Member States assisted in the case of disaster • Number of Member States assisted in developing and deploying an early warning system
2020	• 100% of countries requesting ITU to deploy emergency telecommunication equipment in the aftermath of a disaster are assisted • At least one new Member State is assisted in deploying an early warning system	• Number of Member States assisted in the case of disaster • Number of Member States assisted in developing and deploying an early warning system
2021	• 100% of countries requesting ITU to deploy emergency telecommunication equipment in the aftermath of a disaster are assisted • At least one new Member State is assisted in deploying an early warning system	• Number of Member States assisted in the case of disaster • Number of Member States assisted in developing and deploying an early warning system

2022	• 100% of countries requesting ITU to deploy emergency telecommunication equipment in the aftermath of a disaster are assisted • At least one new Member State is assisted in deploying an early warning system	• Number of Member States assisted in the case of disaster • Number of Member States assisted in developing and deploying an early warning system

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1-Finance	• Lack of financial resources to provide requested support to Member States	High	High	• Appropriate budget allocation, resource mobilization, and partnerships
2-Stakeholders/ partners	• Lack of support and cooperation from partners	Medium	Medium	• Reach out and develop close cooperation with other organizations to provide support together
3-Human resources	• Insufficient human resources to cope with demand when multiple disasters occur	High	Medium	• Perform capacity building activities for ITU field staff and ITU Member States
4- Government and Stakeholders commitments	• Less than 50 % of UN agencies, partners and key public administrations/institutions working on Emergency Telecom (ET) committed to support the expected results on ET	Medium	Low	• Raise awareness of importance of ET to members and stakeholders • Collaborate, as much as possible, with all key partners (concerned by the ET)

OBJECTIVE 3

Enabling environment: Foster an enabling policy, and regulatory environment conducive to sustainable telecommunication/ICT development

Summary

The purpose of Objective 3 is to support the ITU membership in establishing the enabling legal and regulatory environment to facilitate the development of and improve 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; to help countries navigate the fast changing telecommunication environment through innovation and accelerate digital transformation that fosters sustainable growth of the digital economy.

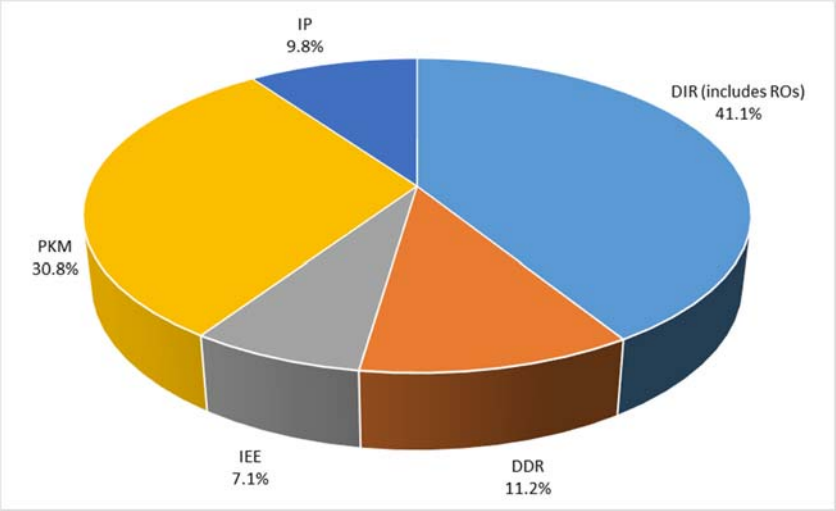
Objective 3 includes the following outputs:

- Products and services on telecommunication/ICT policy and regulation for better international coordination and coherence, such as assessment studies and other publications, and other platforms to exchange information.
- Products and services on telecommunication/ICT statistics and data analysis, such as research reports, collection, harmonization and dissemination of high-quality, internationally comparable statistical data, and forums of discussion.
- Products and services on capacity building and human skills development, including those on international Internet governance, such as online platforms, distance and face-to-face training programmes to enhance practical skills and shared material, taking into account partnerships with telecommunication/ICT education stakeholders.
- Products and services on telecommunication/ICT innovation, such as knowledge-sharing and assistance, upon request, on developing a national innovation agenda; mechanisms for partnerships; development of projects, studies and telecommunication/ICT innovation policies.

For the years 2019 to 2022, the estimated human resources to be allocated to Objective 3 represent **30.7%** 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 Products and services on telecommunication/ICT policy and regulation for better international coordination and coherence, such as assessment studies and other publications, and other platforms to exchange information.

Description

In evolving towards a digital economy, an enabling environment for ICTs is increasingly recognized as critical for social and economic growth and competitiveness of countries. The ICT sector and the surrounding ecosystem is evolving rapidly and there is an even greater need for inclusive dialogue, cooperation and collaboration, including with other sectors where ICTs are bringing value. A sound and clear policy and regulatory environment that also considers the needs of other sectors is needed to ensure that all can benefit from ICT services.

Result-based analysis

Outcome	Outcome indicators
· Strengthened capacity of Member States to enhance their policy, legal and regulatory frameworks conducive to development of telecommunications/ICTs.	· Timely release of the annual questionnaires to Members States (Regulatory, Economics and Finance) and of data on the PREF knowledge centre (Policy, Regulation, Economics & Finance) and the ICTEye database · Number of publications, best practice guidelines, online resources and toolkits developed and released on ICT policy and regulation as well as on economics and finance and number of website views/downloads of regulatory and policy data and publications and information on the ICT Eye online platform · Number of participants in Global Symposium for Regulators, in regional regulatory and economic forums and workshops; and in Strategic dialogues on topical regulatory and policy issues; satisfaction rates of participants

Annual expected results		Performance indicators (PIs)
2019	· Awareness raised on policy, legal and regulatory frameworks conducive to development of telecommunications/ICTs through enhanced availability for Membership of high-quality regulatory, economics and finance data, research and analysis for evidence-based decision making · Enhanced knowledge exchange achieved through successful implementation of regional and global forums and strategic dialogues including Global Symposium for Regulators · Improved availability and online access of high quality data, research and analysis on telecommunications/ICT policy, regulatory and economic issues, including through the adoption of GSR Best Practice Guidelines, and the availability of at least 10 publications, studies and papers	· Timely release of the annual questionnaires to Members States (Regulatory, Economics and Finance) · Completed data on the PREF knowledge center (Policy, Regulation, Economics & Finance), including the ICT Regulatory Tracker · Number of publications, best practice guidelines, and other online resources developed and released on ICT policy and regulation as well as on economics and finance · number of website views/downloads of regulatory and policy data and publications · Number of participants in Global Symposium for Regulators, and in strategic dialogues and forums on topical regulatory, economic and policy issues
2020	· Awareness raised on policy, legal and regulatory frameworks conducive to development of telecommunications/ICTs through enhanced availability for Membership of high-quality regulatory, economics and finance data, research and analysis for evidence-based decision making · Enhanced knowledge exchange through successful implementation of regional and global forums and strategic Dialogues including Global Symposium for Regulators, and active contribution by Membership to relevant study group questions · Improved availability and online access of high quality data, research and analysis on telecommunications/ICT policy, regulatory and economic issues, including through the adoption of GSR Best Practice Guidelines, and the availability of at least 10 publications, studies and papers	· Timely release of the annual questionnaires to Members States (Regulatory, Economics and Finance) · Completed data on the PREF knowledge center (Policy, Regulation, Economics & Finance), including the ICT Regulatory Tracker · Number of publications, best practice guidelines, and other online resources developed and released on ICT policy and regulation as well as on economics and finance · number of website views/downloads of regulatory and policy data and publications · Number of participants in Global Symposium for Regulators, and in strategic dialogues and forums on topical regulatory, economic and policy issues

Annual expected results (Ctn'd)		Performance indicators (PIs)
2021	· Awareness raised on policy, legal and regulatory frameworks conducive to development of telecommunications/ICTs through enhanced availability for Membership of high-quality regulatory, · economics and finance data, research and analysis for evidence-based decision making · Enhanced knowledge exchange through successful implementation of regional and global forums and strategic Dialogues including Global Symposium for Regulators · Improved availability and online access of high quality data, research and analysis on telecommunications/ICT policy, regulatory and economic issues, including through the adoption of GSR Best Practice Guidelines, and the availability of at least 10 publications, studies and papers	· Timely release of the annual questionnaires to Members States (Regulatory, Economics and Finance) · Completed data on the PREF knowledge center (Policy, Regulation, · Economics & Finance), including the ICT Regulatory Tracker · Number of publications, best practice guidelines, and other online resources developed and released on ICT policy and regulation as well as on economics and finance · number of website views/downloads of regulatory and policy data and publications · Number of participants in Global Symposium for Regulators, and in strategic dialogues and forums on topical regulatory, economic and policy issues
2022	· Awareness raised on policy, legal and regulatory frameworks conducive to development of telecommunications/ICTs through enhanced availability for Membership of high-quality regulatory, economics and finance data, research and analysis for evidence-based decision making · Enhanced knowledge exchange through successful implementation of regional and global forums and strategic Dialogues including Global Symposium for Regulators · Improved availability and online access of high quality data, research and analysis on telecommunications/ICT policy, regulatory and economic issues, including through the adoption of GSR Best Practice Guidelines, and the availability of at least 10 publications, studies and papers	· Timely release of the annual questionnaires to Members States (Regulatory, Economics and Finance) · Completed data on the PREF knowledge center (Policy, Regulation, Economics & Finance), including the ICT Regulatory Tracker · Number of publications, best practice guidelines, and other online resources developed and released on ICT policy and regulation as well as on economics and finance · number of website views/downloads of regulatory and policy data and publications · Number of participants in Global Symposium for Regulators, and in strategic dialogues and forums on topical regulatory, economic and policy issues

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Human resources	· Insufficient human resources to cope with demand. Lack of qualified experts in the domains concerned	medium	medium	· Resource requirements anticipated, and continuous updating of expert data base, including through experts in study groups, and recruitment procedures initiated as soon as possible
2- Finance	· Lack of resources to provide the appropriate support level in case of high demand for significant knowledge exchange mechanisms or forums requested by membership	medium	medium	· Appropriate budget forecast prepared · Mobilize additional resources, if necessary · Appropriate host country agreement negotiated
3- Stake-holders/ Partners	· Insufficient commitment of countries and partners	medium	medium	· Cooperation with countries and partners leveraged to ensure appropriate level of involvement
4-Security	· Security situation in the regions	Medium	high	· Working with same countries

Output 3.2 Products and services on telecommunication/ICT statistics and data analysis, such as research reports, collection, harmonization and dissemination of high-quality, internationally comparable statistical data, and forums of discussion.

Description

With the growing recognition of ICTs as a driver for sustainable development, 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. 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. They are indispensable for monitoring progress towards achievement of global development goals, such as the SDGs, the WSIS Action Lines, and the ITU Strategic Goals included in the Connect 2020 Agenda.

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 young and old people and by persons with disabilities. Countries are therefore encouraged to produce high quality data based on internationally agreed standards, definitions and methodologies, including in those areas where there remain data gaps and which amongst others 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	Outcome indicators
· Strengthened capacity of Member States to produce high-quality, internationally comparable telecommunication/ICT statistics which reflect developments and trends in telecommunications/ICTs, based on agreed standards and methodologies.	· Timely release of ITU World Telecommunication/ICT Indicators (WTI) Database. · Number of data points and indicators available in WTI Database.

Annual expected results		Performance indicators (PIs)
2019	· Enhanced availability of high-quality, internationally comparable telecommunication/ICT statistics · Accurate analysis of information society developments · World Telecommunication/ICT Indicators Symposium · Work of the statistical Expert Groups implemented successfully	· Timely release of ITU World Telecommunication/ICT Indicators (WTI) Database · Number of data points and indicators available in WTI Database · Number of downloads, citations, website hits and/or purchases of BDT statistical and research products and online resources · Number of countries trained or advised on telecommunication/ICT statistics by BDT · Number of participants in the ITU World Telecommunication/ICT Indicators Symposium and in statistical expert groups
2020	· Enhanced availability of high-quality, internationally comparable telecommunication/ICT statistics · Accurate analysis of information society developments · World Telecommunication/ICT Indicators Symposium · Work of the statistical Expert Groups implemented successfully	· Timely release of ITU World Telecommunication/ICT Indicators (WTI) Database · Number of data points and indicators available in WTI Database · Number of downloads, citations, website hits and/or purchases of BDT statistical and research products and online resources · Number of countries trained or advised on telecommunication/ICT statistics by BDT · Number of participants in the ITU World Telecommunication/ICT Indicators Symposium and in statistical expert groups
2021	· Enhanced availability of high-quality, internationally comparable telecommunication/ICT statistics · Accurate analysis of information society developments · World Telecommunication/ICT Indicators Symposium · Work of the statistical Expert Groups implemented successfully	· Timely release of ITU World Telecommunication/ICT Indicators (WTI) Database · Number of data points and indicators available in WTI Database · Number of downloads, citations, website hits and/or purchases of BDT statistical and research products and online resources · Number of countries trained or advised on telecommunication/ICT statistics by BDT

Annual expected results (Ctn'd)		Performance indicators (PIs)
		· Number of participants in the ITU World Telecommunication/ICT Indicators Symposium and in statistical expert groups
2022	· Enhanced availability of high-quality, internationally comparable telecommunication/ICT statistics · Accurate analysis of information society developments · World Telecommunication/ICT Indicators Symposium · Work of the statistical Expert Groups implemented successfully	· Timely release of ITU World Telecommunication/ICT Indicators (WTI) Database · Number of data points and indicators available in WTI Database · Number of downloads, citations, website hits and/or purchases of BDT statistical and research products and online resources · Number of countries trained or advised on telecommunication/ICT statistics by BDT · 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	Medium	· Appropriate budget forecast prepared · Mobilize additional resources, if necessary · Appropriate host country agreement negotiated
2-Human resources	· Insufficient human resources to cope with demand. Lack of qualified experts in the domains concerned	Medium		· Resource requirements anticipated and recruitment procedures initiated as soon as possible
3-Stake-holders/ Partners	· Insufficient commitment of countries and partners	High		· Cooperation with countries and partners ensured to guarantee appropriate level of involvement
4-Security	· Security situation in the regions	Medium	high	· Working with same countries

Output 3.3 Products and services on capacity building and human skills development, including those on international Internet governance, such as online platforms, distance and face-to-face training programmes to enhance practical skills and shared material, taking into account partnerships with telecommunication/ICT education stakeholders.

Description

Capacity building continues to be a cross-cutting issue that informs and augments the ITU-D's overall mission. ICT-based education and training aimed at enhancing human potential to leverage ICTs and improve individual livelihoods is particularly fundamental for developing countries. This will help them to improve skills and enable them to establish and develop their national digital strategies for sustainable development. Therefore, research undertakings and development of specialized training programmes in priority areas for the membership are required. Furthermore, telecommunications/ICTs need to be incorporated into education and human resources development for all groups is needed. This requires cooperation and partnerships between countries and broad stakeholders' participation. The partnerships should bring together, among others, academia, experienced professionals and experts as well as organizations and other stakeholders with relevant expertise in human skills development and digital literacy activities.

Result-based analysis

Outcome	Outcome indicators
• Improved human and institutional capacity of ITU Membership to tap into the full potential of telecommunications/ICTs.	• Number and level of individuals trained • Number of participants who pass the training assessment • Number of participants who are satisfied with the training • Number of high-level training programmes developed • Number of trainings carried out that relate to Regional Initiatives.

Annual expected results		Performance indicators (PIs)
2019	· Training courses effectively delivered through the ITU Centers of Excellence network · Awareness on the role of capacity building and skills development increased in ITU membership · Successful holding of global and regional capacity building events · ITU Academy platform successfully implemented	· Number of training courses delivered through the CoE network · Number of participants in training courses · Number of global and regional capacity building events organized · Number of countries and participants that attended global and regional events · Number of users of ITU Academy
2020	· Training courses effectively delivered through the ITU Centers of Excellence network · Awareness on the role of capacity building and skills development increased in ITU membership · Successful holding of global and regional capacity building events · ITU Academy platform successfully implemented	· Number of training courses delivered through the CoE network · Number of participants in training courses · Number of global and regional capacity building events organized · Number of countries and participants that attended global and regional events · Number of users of ITU Academy
2021	· Training courses effectively delivered through the ITU Centers of Excellence network · Awareness on the role of capacity building and skills development increased in ITU membership · Successful holding of global and regional capacity building events · ITU Academy platform successfully implemented	· Number of training courses delivered through the CoE network · Number of participants in training courses · Number of global and regional capacity building events organized · Number of countries and participants that attended global and regional events · Number of users of ITU Academy
2022	· Training courses effectively delivered through the ITU Centers of Excellence network · Awareness on the role of capacity building and skills development increased in ITU membership · Successful holding of global and regional capacity building events · ITU Academy platform successfully implemented	· Number of training courses delivered through the CoE network · Number of participants in training courses · Number of global and regional capacity building events organized · Number of countries and participants that attended global and regional events · Number of users of ITU Academy10 capacity building activities implemented and 250 participants trained on different aspects of ICTs related issues and on priority areas identified by Arab states

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1-Stakeholders/ Partners	· Low level of partnerships in capacity building · Low level of participation by partners in capacity-building activities · Low partner resource allocation	High	Medium	· Stakeholder involvement in capacity building programme design · Increased partner value proposition in capacity-building programmes
2-Finance	· Inadequate budget for desired actions	Medium	Low	· Actions consolidated and focus on those with the highest impact · Mobilization of extra-budgetary funding from projects and partnership contributions
3-Human resources	· Inadequate staff against expected deliverables	High	High	· Focus on strategic outputs with high impact
4-Environment	· Delays in country activities due to unforeseen local events	Medium	Medium	· Enhancement of a responsive implementation mechanism and improved communication with partners
5-Security	· Security situation in the regions	Medium	high	· Working with same countries

Output 3.4 Products and services on telecommunication/ICT innovation, such as knowledge sharing and assistance, upon request, on developing a national innovation agenda; mechanisms for partnerships; development of projects, studies and telecommunication/ICT innovation policies.

Description

Innovation has been recognized as a powerful engine for development to address social and economic challenges and navigate global challenges for policy makers and citizens alike. Innovation is also essential to accelerating digital transformation and fosters the sustainable growth for the digital economy.

To help countries navigate the fast changing telecommunication environment and accelerate digital transformation that fosters sustainable growth of the digital economy, ITU will offer an innovation platform for membership. The ITU Innovation platform will provide assistance in the form of products, services to support membership to actively shape vibrant ICT innovation ecosystems.

The main benefits of this platform will foster innovation capabilities and digital entrepreneurship which accelerate public service transformation, development of small and medium firms in various sectors, and create positive externalities (jobs, growth, and competitiveness) in the economy. To achieve impact, several actions will be undertaken to ensure sustainability, scalability, advocacy, and successful outcome through development of competitive innovation ecosystem and multistakeholder & multisector approaches as well as partnerships.

Result-based analysis

Outcome	Outcome indicators
• Strengthened ITU Membership capacity to integrate telecommunication/ICT innovation in national development agendas and to develop strategies to promote innovation initiatives, including through public, private, and public-private partnerships.	• Number of initiatives (e.g. with guidelines and recommendations, DIY toolkits, etc.) and grassroots projects strengthening the innovations ecosystems for member states. • Number of new partnerships that foster innovation ecosystems key stakeholders • Number of partnership, initiative and projects translated into action for membership

Annual expected results		Performance indicators (PIs)
2019	· Number of toolkits/scalable frameworks fostering ICT centric innovation · Number of countries and organizations with certified experts on ICT centric innovation · Number of customized assessments on ICT centric innovation · Number of advocacy initiatives raising awareness on the digital innovation divide · Number of projects undertaken or implemented on innovation	· Number of initiatives and grassroots projects strengthening the innovations ecosystems for member states (number of: toolkits/scalable frameworks , countries and organizations with certified experts on ICT centric innovation, customized assessments , advocacy initiatives raising awareness, and project developed) · Number of new partnerships that foster innovation ecosystems key stakeholders · Number of partnership, initiative and projects translated into action for membership · At least 20 countries or organizations will have 150 certified experts , 10 assessments completed, 4 advocacy initiatives raising awareness, and 2 projects implemented
2020	· Number of toolkits/scalable frameworks fostering ICT centric innovation · Number of countries and organizations with certified experts on ICT centric innovation · Number of customized assessments on ICT centric innovation · Number of advocacy initiatives raising awareness on the digital innovation divide · Number of projects undertaken or implemented on innovation	· Number of initiatives and grassroots projects strengthening the innovations ecosystems for member states (number of: toolkits/scalable frameworks , countries and organizations with certified experts on ICT centric innovation, customized assessments , advocacy initiatives raising awareness, and project developed) · Number of new partnerships that foster innovation ecosystems key stakeholders · Number of partnership, initiative and projects translated into action for membership · At least 25% increase from the previous year's indicators
2021	· Number of toolkits/scalable frameworks fostering ICT centric innovation · Number of countries and organizations with certified experts on ICT centric innovation · Number of customized assessments on ICT centric innovation · Number of advocacy initiatives raising awareness on the digital innovation divide · Number of projects undertaken or implemented on innovation	· Number of initiatives and grassroots projects strengthening the innovations ecosystems for member states (number of toolkits/scalable frameworks, countries and organizations with certified experts · on ICT centric innovation, customized assessments , advocacy initiatives raising awareness, and project developed) · Number of new partnerships that foster innovation ecosystems key stakeholders · Number of partnership, initiative and projects translated into action for membership · At least 25% increase from the previous year's indicators

Annual expected results (Ctn'd)		Performance indicators (PIs)
2022	· Number of toolkits/scalable frameworks fostering ICT centric innovation · Number of countries and organizations with certified experts on ICT centric innovation · Number of customized assessments on ICT centric innovation · Number of advocacy initiatives raising awareness on the digital innovation divide · Number of projects undertaken or implemented on innovation	· Number of initiatives and grassroots projects strengthening the innovations ecosystems for member states (number of: toolkits/scalable frameworks , countries and organizations with certified experts on ICT centric innovation, customized assessments , advocacy initiatives raising awareness, and project developed) · Number of new partnerships that foster innovation ecosystems key stakeholders · Number of partnership, initiative and projects translated into action for membership · At least 25% increase from the previous year's indicators

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- Stakeholders	· Lack of engagement of stakeholders at local level for implementation	Medium	Low	· Consultation with stakeholders to achieve outcome
2- Experts	· Lack of participation certified expert to engage in ecosystem analysis	Medium	Medium	· Target group with dedicated focus · Recruit from regional expert group · Address incentives for participation and country relevance
3- Resources	· Inadequate resource availability	Medium	High	· Establish selection and priorities based on feasibility and resource accessibility criteria
4. Environment	· Delays in country activities due to unforeseen local events	Medium	Medium	· Enhancement of a responsive implementation mechanism and improved communication with partners

OBJECTIVE 4

Inclusive digital society: Foster the development and use of telecommunications/ICTs and applications to empower people and societies for sustainable development

Summary

The purpose of Objective 4 is to ensure that all people, including the world's most vulnerable countries and population groups, can benefit from the opportunities of ICTs for sustainable development; to make ICTs affordable and accessible, and to identify and use telecommunication/ICT products and services that promote social inclusion, economic –development and environmental sustainability.

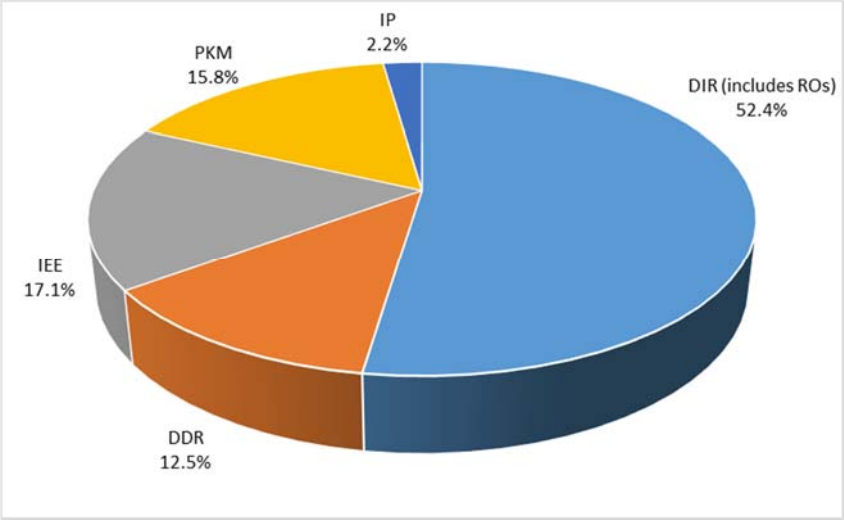
Objective 4 includes the following outputs:

- Products and services on concentrated assistance to LDCs, SIDS and LLDCs and countries with economies in transition, to foster availability and affordability of telecommunications/ICTs.
- Products and services on telecommunication/ICT policies supporting the development of the digital economy, ICT applications and new technologies, such as information sharing and support for their deployment, assessment studies, and toolkits.
- Products and services on digital inclusion for girls and women and people with specific needs (elderly, youth, children and indigenous people, among others), such as awareness-raising on digital inclusion strategies, policies and practices, development of digital skills, toolkits and guidelines and forums of discussion to share practices and strategies.
- Products and services on ICT climate-change adaptation and mitigation, such as promotion of strategies and dissemination of best practices on mapping vulnerable areas and developing information systems, metrics, and e-waste management.

For the years 2019 to 2022, the estimated human resources to be allocated to Objective 4 represent **19.9 %** 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 Products and services on concentrated assistance to LDCs, SIDS and LLDCs and countries with economies in transition, to foster availability and affordability of telecommunications/ICTs.

Description

WTDC Resolution 16 (Rev. Dubai, 2014) and Resolution 30 (Busan, 2014) of the Plenipotentiary Conference, on special measures for LDCs, SIDS, LLDCs and countries with economies in transition highlight the role of telecommunication/ICTs as enablers of national socio-economic development and provides BDT with a mandate to pay special attention to these categories of countries through concentrated assistance. Resolution 200 (Busan, 2014) of the Plenipotentiary Conference on "Connect 2020 Agenda includes special targets for the LDCs and calls for "15% of households in the LDCs to have access to the Internet by 2020 and 20% of people in LDCs using the Internet by 2020." Through its work, BDT supports the LDCs in their graduation. ITU assistance to the 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 through Output 4.1 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.

Result-based analysis

Outcome	Outcome indicators
• Improved access to and use of telecommunication/ICT in Least Developed Countries (LDCs), small island developing states (SIDS) and landlocked developing countries (LLDCs) and countries with economies in transition.	• Number of countries receiving concentrated assistance following BDT actions, with improved telecommunications/ICTs connectivity connectivity, availability and affordability • Number of countries receiving assistance following BDT actions, including number of fellowships requested and number of fellowships awarded

Annual expected results		Performance indicators (PIs)
2019	· At least 15% of LDCs, SIDS, LLDCs and countries with economies in transition received concentrated assistance for improved access to and use of ICTs · At least 80% of LDCs received fellowships to attend ITU meetings	· Number of Member States that received concentrated assistance on their priority needs · Number of Member States that received fellowships to attend ITU meetings
2020	· At least 15% of LDCs, SIDS, LLDCs and countries with economies in transition received concentrated assistance for improved access to and use of ICTs · At least 80% of LDCs received fellowships to attend ITU meetings	· Number of Member States that received concentrated assistance on their priority needs · Number of Member States that received fellowships to attend ITU meetings
2021	· At least 15% of LDCs, SIDS, LLDCs and countries with economies in transition received concentrated assistance for improved access to and use of ICTs · At least 80% of LDCs received fellowships to attend ITU meetings	· Number of Member States that received concentrated assistance on their priority needs · Number of Member States that received fellowships to attend ITU meetings
2022	· At least 15% of LDCs, SIDS, LLDCs and countries with economies in transition received concentrated assistance for improved access to and use of ICTs · At least 80% of LDCs received fellowships to attend ITU meetings	· Number of Member States that received concentrated assistance on their priority needs · Number of Member States that received fellowships to attend ITU meetings

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 search for possible resource mobilization and partnerships
2-Stakeholders /partners	• Lack of support and cooperation from partners	Medium	Medium	• Develop close cooperation with other organizations and work with regional offices and Member States to provide necessary support
3-Human resources	• Lack of expertise of staff	High	Medium	• Support staff training and participation in events and discussions

4.2 Products and services on telecommunication/ICT policies supporting the development of the digital economy, ICT applications and new technologies, such as information sharing and support for their deployment, assessment studies, and toolkits

Description

Telecommunication/ICT and particularly mobile technology hold the most transformative power of our time. It has the capacity to connect even the most isolated communities to sources of information and services that can have direct impact on their livelihoods and quality of life. Services delivered via telecommunication/ICT networks, phones and Internet are critical to generating social impact in different life aspects.

Despite the rapid expansion of telecommunication and mobile technologies, many people around the world still remain away from the reach of the digital revolution. Many of the digital innovations have not yet achieved economically sustainable scale and are accessible only to a fragment of those who need them most.

In light of the continued relevance of the WSIS Action lines, as well as the adoption of the new Sustainable Development Goals, mainstreaming digital innovations in all sectors is unavoidable if we are to achieve those goals by 2030. All people should have affordable access through smart devices to key information and life-enhancing services critical for sustainable development. This would require much more than just infrastructure – extending access must be accompanied by the availability of relevant telecommunication/ICT applications and services to extend access to, in particular, digital education, healthcare, agriculture, energy and financial and commercial services.

Result-based analysis

Outcome	Outcome indicators
• Improved ITU Membership capacity to accelerate economic and social development by leveraging and using new technologies and telecommunication/ICT services and applications.	• Number of toolkits published and downloaded for national sectoral digital strategies development. • Number of telecommunications/ICT for Development Best Practices reports published. • Number of telecommunications/ICT for Development events/workshops/seminars assisting developing countries on challenges that these people and societies must overcome and respective number of participants.

Annual expected results		Performance indicators (PIs)
2019	• Formulate and implement projects on new technologies for Development with interested stakeholders • Assist countries on policies to create enabling environments for new technologies • Organize forums and workshops on emerging new technologies. • Develop key studies on the IoT and smart cities.	• Number of Projects implemented • Number of countries assisted in creating enabling environments • Number of Forums and Workshops organized • Number of studies developed
2020	• Formulate and implement projects on new technologies for Development with interested stakeholders • Assist countries on policies to create enabling environments for new technologies • Organize Forums and Workshops on emerging new technologies • Develop key studies on the IoT and smart cities, including big data	• Number of projects implemented • Number of countries assisted in creating enabling environments • Number of Forums and Workshops organized • Number of studies developed
2021	• Formulate and implement projects on new technologies for Development with interested stakeholders • Assist countries on policies to create enabling environments for new technologies • Organize forums and workshops on emerging new technologies • Develop key studies on the IoT and smart cities, including big data	• Number of Projects implemented • Number of countries assisted in creating enabling environments • Number of Forums and Workshops organized • Number of studies developed
2022	• Formulate and implement projects on new technologies for Development with interested stakeholders • Assist countries on policies to create enabling environments for new technologies • Organize forums and workshops on emerging new technologies for Development • Develop key studies on the IoT and smart cities, including big data	• Number of Projects implemented • Number of countries assisted in creating enabling environments • Number of Forums and Workshops organized • Number of studies developed

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1- security and stability	• Security situation in some countries may affect the level of activities in that country and the region at large	high	medium	• Work to engage multiple countries and stakeholders in each activity

4.3 Products and services on digital inclusion for girls and women and people with specific needs (elderly, youth, children and indigenous people, among others), such as awareness-raising on digital inclusion strategies, policies and practices, development of digital skills, toolkits and guidelines and forums of discussion to share practices and strategies.

Description

Digital inclusion means ensuring the accessibility of telecommunications/ICTs and the use of telecommunications/ICTs for social and economic development, especially for people with specific needs. Despite the increasing deployment of telecommunication/ICT networks, equipment, services and applications, many people remain excluded from the information society. In particular, there is a gender digital divide. Fewer women and girls have access to and use telecommunications/ICT than men and boys, and even fewer women and girls are ICT creators and leaders. 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 and leverage telecommunications/ICTs.

Result-based analysis

Outcome	Outcome indicators
• Strengthened capacity of ITU Membership to develop strategies, policies and practices for digital inclusion, in particular for the empowerment of women and girls, persons with disabilities and other persons with specific needs.	• Number of digital inclusion resources developed and/or made available to members, including publications, policies, strategies, guidelines, good practices, case studies, training materials, online resources and toolkits, and number of website views of ITU-D digital inclusion websites • Number of members aware of, trained or advised on digital inclusion policies, strategies and guidelines

Annual expected results		Performance indicators (PIs)	
2019	• Digital inclusion resources developed and/or made available to members • Members aware of, trained or advised on digital inclusion policies, strategies, guidelines and resources	• Number of digital inclusion resources developed and/or made available to members • Number of members aware of, trained or advised on digital inclusion policies, strategies and guidelines	
2020	• Digital inclusion resources developed and/or made available to members • Members aware of, trained or advised on digital inclusion policies, strategies, guidelines and resources	• Number of digital inclusion resources developed and/or made available to members • Number of members aware of, trained or advised on digital inclusion policies, strategies and guidelines	
2021	• Digital inclusion resources developed and/or made available to members • Members aware of, trained or advised on digital inclusion policies, strategies, guidelines and resources	• Number of digital inclusion resources developed and/or made available to members • Number of members aware of, trained or advised on digital inclusion policies, strategies and guidelines	
2022	• Digital inclusion resources developed and/or made available to members • Members aware of, trained or advised on digital inclusion policies, strategies, guidelines and resources	• Number of digital inclusion resources developed and/or made available to members • Number of members aware of, trained or advised on digital inclusion policies, strategies and guidelines	

Risk analysis

Perspective	Key Risk Indicator (KRI)	Impact	Likelihood	Mitigation
1-Human resources	• Insufficient human resources/staff to meet all expected outcomes and outputs	High	High	• Foresee adequate budget for required human resources/staff • Focus on strategic outputs with high impact
2-Finance	• Inadequate budget to meet expected outcomes and outputs	Medium	Medium	• Focus on strategic outputs with high impact
3-Stakeholders /partners	• Competing priorities among partners and stakeholders	Medium	Medium	• Incentivize partners and stakeholders including by developing initiatives and campaigns with other UN agencies which are attractive to partners and stakeholders
4-security and stability	• Security situation in some countries may affect the level of activities in that country and the region at large	high	medium	• Work to engage multiple countries and stakeholders in each activity

4.4 Products and services on ICT climate-change adaptation and mitigation, such as promotion of strategies and dissemination of best practices on mapping vulnerable areas and developing information systems, metrics, and e-waste management

Description

The process established by the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) and the ongoing related negotiations are important international actions aimed at addressing the threat of climate change, mitigating its adverse impacts and assisting all ITU Member States. Climate change impacts climate/weather related events and impacts water resources, land use and marine ecosystems, 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, including through the ITU Resolution 34 (Rev. Buenos Aires, 2017) on the role of telecommunications/ICTs in disaster preparedness, early warning, rescue, mitigation, relief and response and Resolution 182 (Rev. Busan, 2014) of the Plenipotentiary conference on the role of telecommunications/information and communication technologies in regard to climate change and the protection of the environment.

Result-based analysis

Outcome	Outcome indicators
• Enhanced capacity of the ITU Membership to develop telecommunication/ICT strategies and solutions on climate-change adaptation and mitigation and the use of green/renewable energy.	• Number of Member States assisted by BDT for increasing awareness of the impact of climate change and promoting the use of telecommunication/ICTs to mitigate negative effects. • Number of Member States assisted by BDT in developing their climate change strategies policy and legislative frameworks • Number of Member States assisted by BDT in developing e-waste strategy policy and regulatory frameworks

Annual expected results		Performance indicators (PIs)
2019	· 20% of all Member States with improved availability of information and solutions for Member States on climate changes adaptation and mitigation · At least 5 Member States that were assisted by BDT in developing an e-waste strategy, policy or monitoring framework	· Number of Member States assisted by BDT for increasing awareness of the impact of climate change and promoting the use of telecommunication/ICTs to mitigate its negative effects. · Number of Member States assisted by BDT in developing an e-waste strategy, policy and monitoring frameworks
2020	· 20% of all Member States with improved availability of information and solutions for Member States on climate changes adaptation and mitigation · At least 5 Member States that were assisted by BDT in developing an e-waste strategy, policy or monitoring framework	· Number of Member States assisted by BDT for increasing awareness of the impact of climate change and promoting the use of telecommunication/ICTs to mitigate its negative effects. · Number of Member States assisted by BDT in developing an e-waste strategy, policy and monitoring frameworks
2021	· 20% of all Member States with improved availability of information and solutions for Member States on climate changes adaptation and mitigation · At least 5 Member States that were assisted by BDT in developing an e-waste strategy, policy or monitoring framework	· Number of Member States assisted by BDT for increasing awareness of the impact of climate change and promoting the use of telecommunication/ICTs to mitigate its negative effects. · Number of Member States assisted by BDT in developing an e-waste strategy, policy and monitoring frameworks
2022	· 20% of all Member States with improved availability of information and solutions for Member States on climate changes adaptation and mitigation · At least 5 Member States that were assisted by BDT in developing an e-waste strategy, policy or monitoring framework	· Number of Member States assisted by BDT for increasing awareness of the impact of climate change and promoting the use of telecommunication/ICTs to mitigate its negative effects

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 search for possible resource mobilization and partnerships
2-Stakeholders/ partners	Lack of support and cooperation from partners	Medium	Medium	Develop close cooperation with other organizations, stakeholders and work with regional offices and Member States to provide necessary support
3-Human resources	Lack of expertise of staff	High	Medium	Support staff training and participation in events and discussions

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PART 3

THE TELECOMMUNICATION DEVELOPMENT BUREAU

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

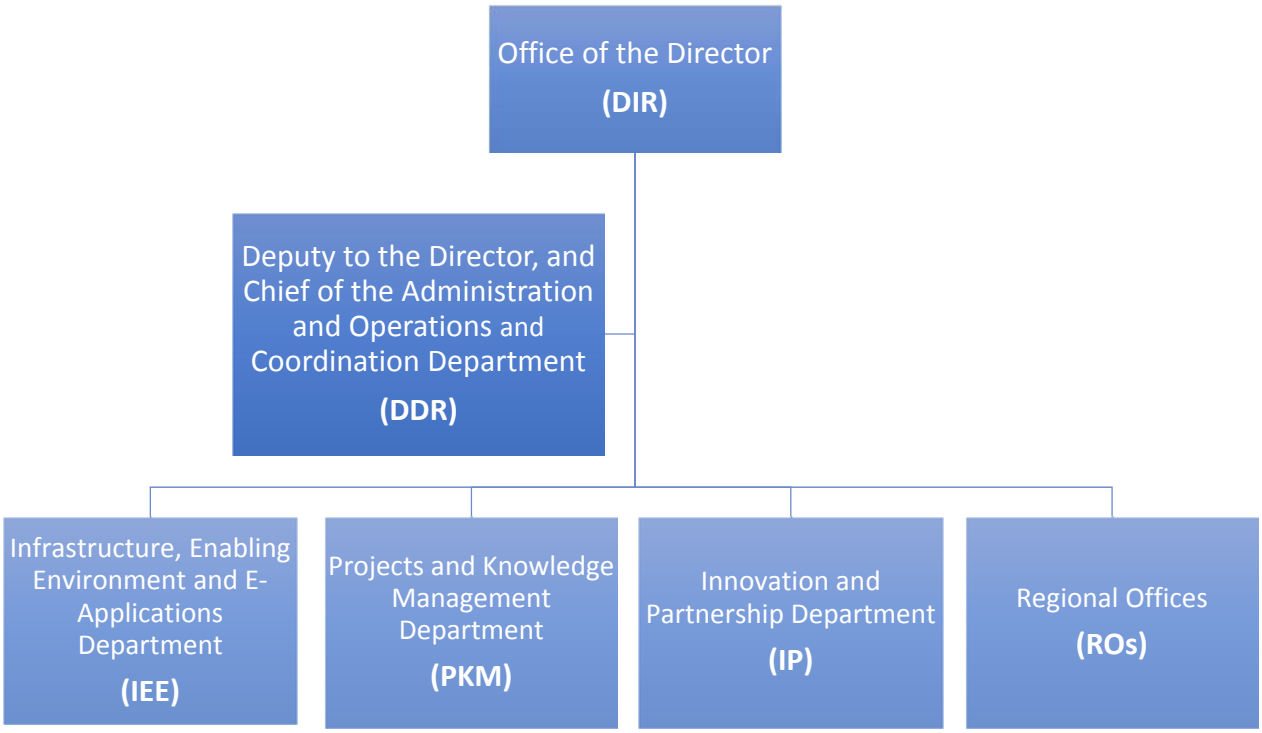
Summary

The mission of the BDT includes the organization and support of the outputs related to the four 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.



Key activities

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

- ssistance 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 2019-2022.

Table 1 – Planned Human Resources for DDR by Work/Months

Grade	2019	2020	2021	2022
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 2019-2022.

Table 2 – Planned Human Resources for IEE by Work/Months

Grade	2019	2020	2021	2022
D1	12	12	12	12
P5	48	48	48	48
P4	96	96	96	96
P3	12	12	12	12
P2	24	24	24	24
G6	12	12	12	12
G5	36	36	36	36

Projects and Knowledge Management Department (PKM)

The Projects 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 Projects and Knowledge Management Department (PKM) for the period 2019-2022.

Table 3 – Planned Human Resources for PKM by Work/Months

Grade	2019	2020	2021	2022
D1	12	12	12	12
P5	48	48	48	48
P4	84	84	84	84
P3	60	60	60	60
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 2019-2022.

Table 4 – Planned Human Resources for IP by Work/Months

Grade	2019	2020	2021	2022
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 2019-2022.

Table 5 – Planned Human Resources for Regional and area offices by Work/Months

Grade	2019	2020	2021	2022
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 – Planned Human Resources for AFR by Work/Months

Grade	2019	2020	2021	2022
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 – Planned Human Resources for AMS by Work/Months

Grade	2019	2020	2021	2022
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 – Planned Human Resources for ARB by Work/Months

Grade	2019	2020	2021	2022
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 – Planned Human Resources for ASP by Work/Months

Grade	2019	2020	2021	2022
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 – Planned Human Resources for CIS by Work/Months

Grade	2019	2020	2021	2022
P5	12	12	12	12
P3	12	12	12	12
G5	12	12	12	12

Table 11 – Planned Human Resources for EUR by Work/Months

Grade	2019	2020	2021	2022
P5	12	12	12	12
P3	12	12	12	12
G5	12	12	12	12

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THE RESOURCES SUMMARY

This section presents the planned human resources for the period 2019-2022 in the Telecommunication Development Bureau.

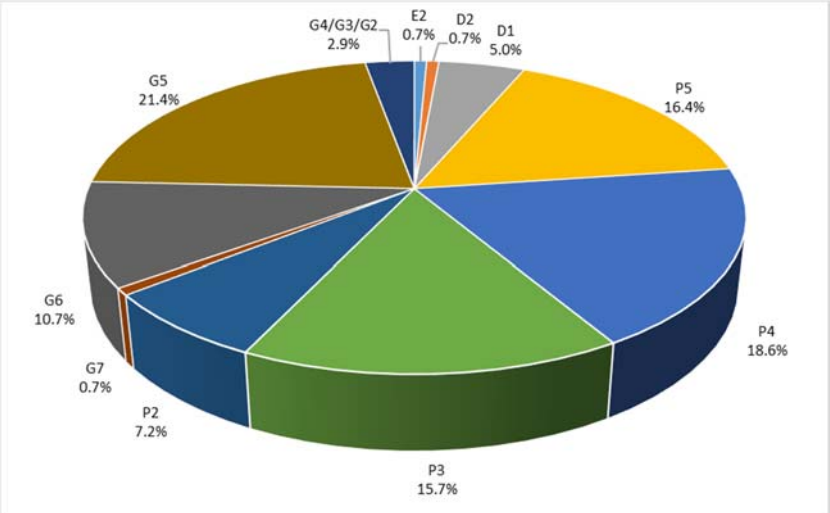
Human resources

Table 12 below shows planned human resources (Work Months) for the period 2019-2022.

Table 12 – Planned Human Resources by Work/Months

Grade	2019	2020	2021	2022
E2	12	12	12	12
D2	12	12	12	12
D1	84	84	84	84
P5	276	276	276	276
P4	312	312	312	312
P3	264	264	264	264
P2	120	120	120	120
G7	12	12	12	12
G6	180	180	180	180
G5	360	360	360	360
G4/G3/G2	48	48	48	48

Chart 6 below shows the breakdown of total human resources by grade for the 2019-2022 timeframe

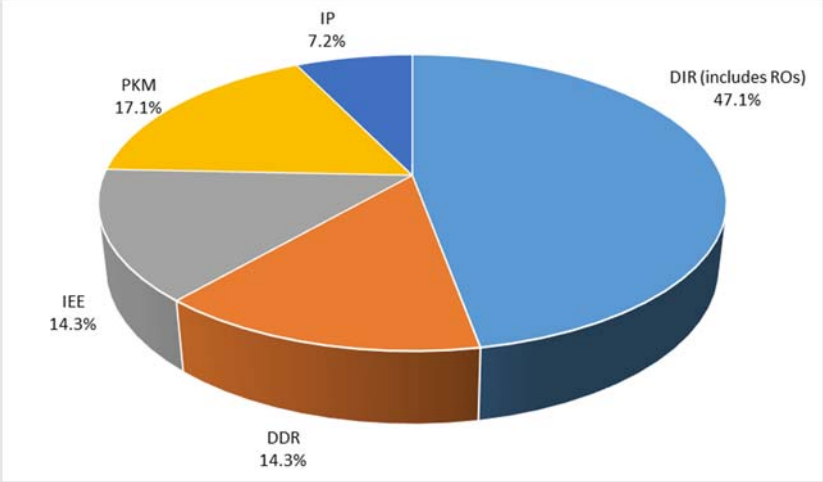


Breakdown of human resources by department for the 2019-2022 timeframe

Table 13 – Planned Human Resources by department by Work/Months

Departments	Work/month
DIR (includes ROs)	3,168
DDR	960
IEE	960
PKM	1,152
IP	480

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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PART 5

REGIONAL INITIATIVES

AFRICA REGIONAL INITIATIVES

AFR1: Building digital economies and fostering innovation in Africa

Regional Initiative objective: Countries in the Africa region are in need of interventions that would help them transform into digital economies. It is necessary that ITU assist Member States in the Africa region to reap the full benefits of the digital economy by addressing the emerging policy and regulatory challenges. In line with growing digital economies, ICT-based innovations, which have demonstrated their potential to contribute to the socio-economic development of countries, are also growing. ITU is called upon to support Member States in the Africa region to build more effective ICT-based innovation ecosystems.

Result-based analysis

Expected results	Key Performance indicators
• Assistance in the development of national digital economy strategies focusing on enabling policies and regulations that can enhance the use of digital technologies	• Assistance provided to at least one country. • At least one workshop organized for the region and/or sub-region, with attendance of at least 20 countries and 40 people
• Assistance in the development of digital inclusion strategies, policies, regulatory frameworks and guidelines specifically targeted at achieving social and financial inclusion through improving digital literacy and access	• At least one framework and guidelines for social and financial inclusion developed for the region
• Assistance in developing action plans with digital key performance indicators (KPIs) encompassing the adoption of e-applications geared to sustainable development in various aspects of African economies	• At least one action plan with digital KPI for the adoption of e-Application geared to sustainable development developed
• Assistance in the adoption and implementation of relevant standards that are targeted at addressing challenges of interoperability stemming from the disruptive and transformative spread of digital innovation	• At least one workshop on the adoption and implementation of relevant standards of interoperability organized for African countries

Expected results (Cont'd)	Key Performance indicators
• Support for improving Member States' capability to create effective innovation policy interventions in all stages of innovation	• Support provided to at least two countries
• Help in designing models for financing the ICT ecosystem in Africa, and identification of partnership opportunities to establish sustainable innovation frameworks	• A Model for financing the ICT ecosystem designed in cooperation with at least 2 relevant partners,(ATU and one REC)
• Support for capacity building, especially in the area of intellectual property protection as a fundamental pillar for innovation	• Assistance provided to at least one country
• Assistance in the development and operationalization of frameworks for manufacturing of ICT goods in Africa resulting from innovative works	• Assistance provided to at least one country

AFR2: Promotion of emerging broadband technologies

Regional Initiative objective: To promote emerging technologies to assist the Africa region in securing the full benefits of high-speed, high-quality broadband.

Result-based analysis

Expected results	Key Performance indicators
• Assistance in the development of national and regional strategic plans, focusing on enabling policies and regulations addressing high-speed, high-quality broadband networks in the region	• Assistance provided to at least one REC and one country in the respective sub-region
• Providing support that will enable the sharing of best practices on financing models as well as the identification of partnership opportunities to enhance high-speed, high-quality broadband	• At least one regional workshop organised, with at least 15 countries and 25 participants
• Assistance in promoting the harmonization of subregional broadband plans so as to ensure equitable access to high-speed, high-quality broadband by all	• At least one regional workshop organized, with at least 15 countries and 25 participants

Expected results (Cont'd)	Key Performance indicators
• Assistance with human capacity development resources, through training programmes, workshops and such like to exchange expertise and to provide persons with disabilities with the platform to participate in and benefit from the emergence of new broadband technologies	• At least two events organized
• Provision of support that will enable the promotion, coordination and establishment of Internet exchange points (IXPs) at the national, subregional and regional levels for better bandwidth control	• Support provided to at least one REC and two of its countries
• Assistance in extending the regional and continental backbone initiative to ensure the resilience of submarine cables	• N/A

AFR3: Building trust and security in the use of telecommunications/information and communication technology

Regional Initiative objective: To assist Member States in developing and implementing policies and strategies, standards and mechanisms to enhance the security of information systems and networks, ensure interoperability of digital technologies, protect data and people and guarantee digital trust. To protect the ICT infrastructure and build confidence in the use of ICT and its applications.

Result-based analysis

Expected results	Key Performance indicators
• Ensuring that the goal of the Connect 2020 Agenda to raise cybersecurity readiness by 40 per cent is achieved by 2020	• Assessment study on the cybersecurity redness in the region completed • At least one country assisted in raising its readiness
• Assistance to Member States in assessing and adapting legislative and regulatory frameworks making better use of the report on the ITU Global Cybersecurity Index (GCI)	• Assistance provided to at least two countries
• Encouraging the development of a global framework for collaboration and awareness at regional and subregional levels for the development of a global culture of cybersecurity and to help consumers better understand and protect against risks	• At least one event organized with minimum attendance of 15 countries and 30 participants
• Assistance in educating consumers on e-commerce and mobile transactions and informing them about the financial legislation governing electronic transactions and mobile-payment systems	• At least two events organized with minimum attendance of 15 countries and 30 participants with minimum attendance of 10 countries and 20 participants
• Promoting the establishment of institutional and organizational mechanisms at the national and regional levels to facilitate the effective implementation of cybersecurity strategies	• At least two events organized with attendance of 10 countries and 20 participants

Expected results (Cont'd)	Key Performance indicators
• Developing measures to protect consumers, children and other vulnerable persons when using ICTs	• At least two events organized with attendance of 10 countries and 20 participants
• Raising awareness of cyberthreats, cybersecurity measures and quality of service in the use of ICTs	• At least two events organized with attendance of 10 countries and 20 participants
• Adoption of measures for the protection of privacy and personal data • Assistance in the establishment of appropriate structures (data centres, Internet exchange points (IXPs), etc.) for the development of cybersecurity and the fight against cybercrime and promoting the setting up of computer incident response teams (CIRTs) at the national and regional levels	• At least two countries assisted to establish CIRTs • At least one country assisted in adopting measures for the protection of privacy and personal data
• Developing a harmonized strategy to enhance information security and combat spam and cyberthreats	• A model strategy developed for the region

AFR4: Strengthening human and institutional capacity building

Regional Initiative Objective: To strengthen human and institutional capacity building in the Africa region. Countries in the Africa region are in dire need of human and institutional capacity-building interventions that would help them transform society as a whole in preparation for the emerging digital socio-economic environment. The Africa region therefore seeks ITU's assistance in enhancing the region's capacity to effect this transformation. Although some training institutions in Africa that provide ICT-related training and capacity building to the membership already exist, there may be a need to enhance their capacities.

Result-based analysis

Expected results	Key Performance indicators
• Assistance in undertaking a comprehensive assessment on the institutional and human capacity development environment in the Africa region	• At least one assessment study report validated
• Assistance in the establishment of a long-term and responsive regional institutional and human capacity development strategy that takes into account relevant Sustainable Development Goals (SDGs) in respect of such areas as inclusiveness, emerging ICT issues, etc.	• At least one strategy report validated
• Possible assistance to enhance various institutional and human capacity development aspects, including: a) enhancing the existing centres of excellence and other capacity-building centres in the region; b) developing Member States' capability to promote accessibility in order to ensure improved specialized skills development to meet the ICT needs of persons with disabilities and thus enhance their use of Internet applications	• At least 3 Centre of Excellences assisted
• Continued provision of and increased access to training resources within ITU for Member States in the Africa region	• The use of ITU training resources for online or face to face increased by at least 20 percent

AFR5: Management and monitoring of the radio-frequency spectrum and transition to digital broadcasting

Regional Initiative Objective: To assist Member States in ensuring the transition to digital broadcasting and efficient and economical management of the radio spectrum and orbital resources.

Result-based analysis

Expected results	Key Performance indicators
• Assistance in the implementation of a post-migration action plan that supports the development of new services offering the best technical and economic conditions in terms of accessibility; the definition of conditions for the allocation and use of the "digital dividend" to support the development of broadband services; and capacity building, including sharing knowledge and experiences in satellite service regulation, with emphasis on satellite filing and coordination	• At least two events organised • At least 5 countries with digital dividend allocated
• Assistance in elaborating financing models to ensure the necessary investments for the transition from analogue to digital	• At least one financing model developed
• Assistance to countries for the establishment of a sustainable ecosystem for the production and monetization of local content and channels	• At least one country assisted to have a sustainable ecosystem established
• Support for the development of spectrum-management plans at national, regional and global levels, including for the transition to digital broadcasting	• At least 3 events organized

Expected results (Cont'd)	Key Performance indicators
• Assistance in the use of tools to assist developing countries in improving international frequency coordination of terrestrial services in border areas	• At least two countries assisted in the used of tools for frequency coordination of terrestrial services in border areas
• Conducting studies and developing comparative criteria and guidelines on the political and economic aspects of the assignment and use of the radio spectrum, taking into account Resolution 9 (Rev. Buenos Aires, 2017) of this conference	• At least one study conducted, recognizing peculiarities of the each sub region

AMERICAS REGIONAL INITIATIVES

AMS1: Disaster risk reduction and management communications

Regional Initiative Objective: To provide assistance to Member States during all phases of disaster risk reduction, i.e. early warning, disaster response and 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 disaster risk reduction communications, and development of implementation feasibility studies and studies on conformance and interoperability with other technologies and services based on IP technology for emergency telecommunications	• At least 1 study on suitable technologies to be used for disaster risk reduction considering the peculiarities of the Region
• Implementation of national and subregional early-warning systems, as well as emergency response and recovery, and identification of critical infrastructure, with special focus on SIDS and LDCs, considering the influence of climate change	• Support provided to at least 4 Member States
• Assistance for the development of appropriate policy, regulatory and legislative frameworks, as well as protocols and inter-agency procedures on communications for disaster risk reduction at the national and regional level	• Assistance provided to at least 4 Member States

Expected results (Cont'd)	Key Performance indicators
• Regional meetings and workshops to share experiences and best practices on telecommunications/ICTs for preventive measures for disaster risk reduction and emergency response, maximizing resources, creating more innovative and effective programmes and coordinating actions in border areas for the Americas region	• At least two events. Minimum attendance: 70 people, 10 Member States
• Temporary availability of equipment for emergency and recovery communications in the Americas region, at the initial stage of a disaster intervention, as part of ITU cooperation in cases of emergency	• Equipment provided to 100% of requests received

AMS2: Spectrum management and transition to digital broadcasting

Regional Initiative Objective: To provide assistance to Member States in the transition to digital broadcasting, the use of the digital-dividend frequencies and spectrum management.

Result-based analysis

Expected results	Key Performance indicators
• Capacity building in spectrum management, digital broadcasting technologies, and the use of the digital dividend and new broadcasting services and applications, providing assistance in using the tools to support developing countries in improving international coordination of terrestrial services in border areas	• Assistance provided to at least 8 Member States
• Support for the elaboration of spectrum-management plans at the national and regional levels, including the transition to digital broadcasting and the promotion of policies for the use of spectrum in underserved areas	• Assistance provided to at least 1 Member State
• Elaboration of studies, indicators and guidelines on aspects of the assignment and use of radio-frequency spectrum, with a view, inter alia, to facilitating the use of spectrum for International Mobile Telecommunications and the harmonization of spectrum use among countries in the region, taking into account Resolution 9 (Rev. Buenos Aires, 2017) of this conference	• At least one study recognizing peculiarities of the Region
• Assistance to countries in the promotion of inclusive strategies related to the digitization of broadcasting services, including the availability of affordable digital broadcast receivers, and communication strategies to educate and to promote consumer awareness	• Assistance provided to at least 1 Member State

Expected results (Cont'd)	Key Performance indicators
• Assistance in national and regional planning for the use of frequencies released by the transition to digital broadcasting and the deployment of new technologies for broadcasting services	• Assistance provided to at least 1 Member State

AMS3: Deployment of broadband infrastructure, especially in rural and neglected areas, and strengthening of broadband access to services and applications

Regional Initiative Objective: To provide assistance to Member States in identifying needs and in the development of policies, mechanisms and regulatory initiatives to reduce the digital divide by increasing broadband access and uptake, as a means of achieving the Sustainable Development Goals (SDGs).

Result-based analysis

Expected results	Key Performance indicators
• Assistance in the development of a situational study on the deployment of broadband infrastructure for fixed and mobile services and spectrum use that will enable administrations to identify needs and opportunities, especially of rural and neglected areas, taking into account specific subregional characteristics	• At least one study per sub region, recognizing peculiarities of the each sub region
• Assistance for the implementation or improvement of national broadband coverage plans, including support to educational institutions, advanced networks, research centres, cooperatives and non-profit organizations that provide telecommunication services, especially in rural, remote and underserved areas, taking into account mechanisms for access to spectrum and high-speed networks and fostering an enabling environment to promote investment in networks	• Assistance provided to at least one Member State
• Establishment of metrics and methodologies for measuring the condition of broadband services, leveraging public and private investments, public-private partnerships and the participation of small and non-profit operators, especially in landlocked developing countries (LLDCs) and small island developing states (SIDS)	• Metrics and/or methodologies adopted by at least one Member State

Expected results (Cont'd)	Key Performance indicators
• Assistance for the implementation of plans that promote access to ICTs in municipalities, through the concept of digital/smart cities, and in public social service institutions, as well as increased access to and use of ICTs by the public, especially in rural and underserved areas, to foster access to social services	• Assistance provided to at least one Member State
• Consolidation and dissemination of information, including through meetings and workshops, about standards and conformance and interoperability, and exchange of best practices related to the deployment and operation of broadband networks, especially in rural areas, and connectivity, with emphasis on least developed countries (LDCs), LLDCs and SIDS	• At least two events. Minimum attendance: 70 people, 10 Member States

AMS4: **Accessibility and affordability for an inclusive and sustainable Americas region**

Regional Initiative Objective: To provide assistance to Member States in ensuring the affordability of telecommunication/ICT services in order to build an information society for all and ensure the accessibility of telecommunications/ICTs for persons with disabilities and others in vulnerable situations.

Result-based analysis

Expected results	Key Performance indicators
• Assistance in developing guidelines and public policies to promote efficiency in the provision and accessibility of telecommunication/ICT services, especially mobile and emergency services, also considering, but not restricted to, the use of audiovisual accessibility tools	• Assistance provided to at least 4 Member States
• Assistance for the implementation of recommendations to help improve the affordability of broadband, analysing the different factors and recommendations on actions for promoting the development and management, as appropriate, of national, subregional and regional Internet exchange points (IXPs), subject to national decision, and related to policy and regulatory aspects for enabling the implementation of agreements and alliances on IXPs, in addition to recommendations to improve the availability of transport to international submarine fibre-optic network connection points, especially for landlocked developing countries (LLDCs) and small island developing states (SIDS)	• Assistance provided to at least one Member State

Expected results (Cont'd)	Key Performance indicators
• Studies monitoring affordability levels in countries, disaggregated by socio-economic variables and taking into account specific and vulnerable populations, for inclusion in the broadband plans, policies, strategies, actions and goals for these population groups, as well as recommendations based on studies of policies and initiatives that enable price reduction of telecommunication/ICT services, broadband deployment and efficient use of spectrum	• At least one study recognizing peculiarities of the Region
• Recommended policies that facilitate an enabling environment to ensure that everyone enjoys the full benefit of telecommunication/ICT access and use, through the implementation of local/national ICT projects to eliminate disparities in education at all levels and in professional training, the development of platforms to provide communication and relay services for persons with disabilities, the development of accessible websites for government programmes, services and information, and the implementation of e-government services and other services	• Assistance provided to at least one Member State
• Recommendations on actions for the promotion of cooperation and information, sharing on all topics related to public and regulatory policies that will serve to improve the affordability of telecommunication services and broadband	• Assistance provided to at least 2 Member States

AMS5: **Development of the digital economy, smart cities and communities and the Internet of things, promoting innovation**

Regional Initiative Objective: To assist Member States in developing national and regional policies to boost the digital economy, smart cities and communities (SCC) and the Internet of things (IoT).

Result-based analysis

Expected results	Key Performance indicators
• Provision of assistance to Member States in the elaboration of ICT policies to promote the development of the digital economy in the region, leveraging new technologies to foster development and promotion of appropriate solutions	• Assistance provided to at least one Member State
• Meetings and workshops on the impact of the digital economy in the region, in collaboration with other relevant organizations.	• At least one event. Minimum attendance: 70 people, 10 Member States
• Elaboration of recommendations to promote the creation of innovation centres, including educational innovation, and projects that contribute to the ICT industry, with emphasis on start-ups, small and medium-sized enterprises (SMEs) and young entrepreneurs, and with special focus on women, among others	• Assistance provided to at least one Member State
• Identification of partners/alliances to strengthen innovation based on ICT and the funding of projects and initiatives for the development of the digital economy, SCC and IoT, building coalitions and multistakeholder alliances prioritizing young entrepreneurs	• Cooperation activities organized with at least 3 relevant partners, in special Regional Telecommunications Entities (CITEL, COMTELCA, CTU)
• Promotion of strategies and dissemination of best practices on the appropriate management of e-waste	• Use of Regional Office website to disseminate of best practices on the appropriate management of e-waste

ARAB STATES REGIONAL INITIATIVES

ARB1: Environment, climate change and emergency telecommunications

Regional Initiative Objective: To raise awareness of and provide support in respect of major challenges in the field of environment, climate change and emergency telecommunications, establish regulatory frameworks, and take necessary measures to address the challenges in this field.

Result-based analysis

Expected results	Key Performance indicators
Assisting countries to	
• Issue policy guidelines, regulatory and technical frameworks and necessary measures, providing them with information to meet their needs pertaining to this initiative, specifically in the area of exposure to electromagnetic fields (EMF), emergency telecommunications and the management of electronic waste	• 1 model policy guidelines on ICTs and Climate Change developed • 1 model policy guidelines on EMF measurement developed • 1 model Emergency Telecommunications Plans developed • 6 countries assisted to developed their own national Emergency Telecommunications Plans
• Launch training programmes on emergency telecommunications and the adverse effects of exposure to EMF and e-waste, find appropriate solutions to deal with these issues and formulate a model for making use of e-waste in a manner that supports development	• Raised awareness of members and built capacities through implementation of 4 regional training programmes on emergency telecommunications, e-waste, EMF and climate changes
• Develop ICT applications on the basis of which awareness campaigns and programmes can be launched concerning the risks of exposure to EMF and the recycling and processing of e-waste	• Developed 2 awareness campaigns on the risks of exposure to EMF and E-waste statistics

ARB2: Confidence and security in the use of telecommunications/information and communication technologies

Regional Initiative Objective: To promote confidence and security in the use of telecommunications/ICTs, child online protection (COP) and combating all forms of cyberthreat, including the misuse of telecommunications/ICTs.

Result-based analysis

Expected results Assisting countries to	**Key Performance indicators**
• Issue policy guidelines, regulatory and technical frameworks and necessary measures, providing them with information to meet their needs pertaining to this initiative, specifically in the area of COP and combating all forms of cyberthreat	• Number of policy guidelines, regulatory and technical frameworks developed
• Continue to sharpen awareness of the strategies to be followed in regard to the technical research and educational materials that are to be provided to and used in teaching Arab university students, in order to build confidence and security in the use of telecommunications/ICTs	• Number of awareness organized
• Protect Arab children and young people from offensive and harmful content on the Internet, particularly by helping to enact laws, legislation and strategies in this area and by raising the awareness of children and young people of the risks through awareness campaigns, workshops and training programmes, and making use of the Arab Regional Cybersecurity Centre	• Number of laws, legislation and strategies developed and countries assisted
• Develop ICT applications to help protect children online and combat all forms of cyberthreat, in collaboration with relevant bodies	• Number of ICT applications on COP developed

Expected results (Cont'd)	Key Performance indicators
Assisting countries to	
• Organize training courses and seminars on protecting critical telecommunication/ICT infrastructure	• Number of capacity building activities on protecting critical telecommunication/ICT infrastructure organized
• Prepare training programmes and provide experts to specialized academic institutions to educate and instruct university students and academics in building confidence in the use of telecommunications/ICTs and exchanging experience in this regard	• Number of training programmes on Cybersecurity for academia developed and implemented
• Establish national computer incident response teams (CIRTs) in the Arab region with optimum coordination among them and between them and CIRTs in the other regions	• Number of national computer incident response teams (CIRTs) established

ARB3: Digital financial inclusion

Regional Initiative Objective: To support and enable access to and use of digital financial services, using telecommunications and information technology, and achieve high levels of digital financial inclusion.

Result-based analysis

Expected results Assisting countries to	Key Performance indicators
• Prepare studies to evaluate the status of digital financial inclusion and determine needs at national and regional levels, and to benefit from international experience and best practices, while clarifying the link between financial inclusion, financial stability, financial integration and consumer protection	• Number of studies completed
• Raise awareness of the concept, practice and benefits of digital financial inclusion, in addition to presenting the dimensions of digital financial services in terms of ensuring and facilitating access to all financial services, and how to use them, as well as the quality of services, confidence, security and reliability	• Number of workshops and events organized
• Provide advisory and technical support and the necessary training programmes to foster coordination between ICT service regulators and providers, on the one hand, and financial service regulators and providers, on the other, so as to achieve integration and convergence between the two sectors	• Number of countries assisted

Expected results (Cont'd) Assisting countries to	Key Performance indicators
• Develop guiding regulatory and legal frameworks to stimulate and encourage the adoption of digital financial inclusion and establish public-private sector partnerships to ensure the protection of user privacy and data confidentiality and promote confidence and security in digital financial services	• Number of guidelines developed
• Attract financial and technical support from donor and funding entities and regional and international stakeholders to help achieve the objective and results of this initiative, at the request of those Arab States that so wish	• Number of projects implemented

ARB4: Internet of things, smart cities and big data

Regional Initiative Objective: To raise and spread awareness of the importance of future challenges in the era of Internet of things (IoT) and big data, and how to address such challenges; establish regulatory frameworks and take measures to help cope with the rapid changes in the field of telecommunications and information technology; and work to ensure the transition to smart cities and communities (SCCs).

Result-based analysis

Expected results Assisting countries to:	Key Performance indicators
• Formulate strategic and operational plans and regulatory frameworks to cope with IoT and big data technology and formulate a road map for the Arab region for the transition to SCCs by developing the telecommunication infrastructure to deliver the broadband services to support their various applications and services	• 1 model strategic plans on leveraging ICTs for transition of Arab cities to smart cities developed • Number of countries assisted
• Promote technical cooperation and the exchange of expertise between the Arab countries in the area of IoT, big data and SCCs, study the impact thereof, whether positive or negative, and take advantage of global experience	• Number of seminars organized and visits conducted
• Organize a high-level forum on the IoT and big data to discuss the main challenges, such as security, privacy and system compatibility, and the most prominent solutions, including digital object architecture; invite experts from industry to address the forum, and hold a side meeting on the fringes of the forum with industry and the private sector	• 1 annual regional Forum on IoT related aspects organized • Number of workshops organized

Expected results (Cont'd) Assisting countries to	Key Performance indicators
• Get access to key studies, research and expertise on the IoT and smart cities, including big data for Arab States, on a page devoted to the initiative on the website of the Arab Regional Office, and to help those Arab States that so wish to obtain advice in this area	• Number of studies developed and posted on the ITU Arab Regional Office website
• Build Arab capacities in the use of big data as a supplementary or alternative method and low-cost resource for measuring Sustainable Development Goal (SDG) indicators, while enhancing the capacities of stakeholders to implement and analyse big data to measure key development indicators	• Organized an annual regional training on IoT for SDGs implementation. • Number of capacities built
• Construct secure infrastructures to store the enormous amounts of data needed to create a smart environment	• Number of national strategies developed and adopted in the Arab countries
• Identify and make use of existing centres of excellence and research and study centres in the Arab States to provide experts and expertise in the areas of the initiative; enter into cooperative partnerships and agreements to help raise the level of availability of broadband services in the Arab States; and use IoT and big data for development, formulate smart city indicators and measure progress on a regular basis	• Number of experts trained in the field of broadband services and use IoT and big data for development

ARB5: Innovation and entrepreneurship

Regional Initiative Objective: To build capacities and raise awareness concerning the culture of innovation and entrepreneurship, in particular for youth and women's empowerment, with the aim of harnessing telecommunication/ICT tools to launch projects and undertake economic activities that focus on job creation.

Result-based analysis

Expected results	Key Performance indicators
• Formulate national and regional mechanisms and strategies to stimulate and enrich the culture of innovation in telecommunications/ICT in the region, including relevant best practice	• Number of Assessment studies of ICT related innovation systems strategies Implemented
• While creating centres of creativity and new institutions, encourage and develop the role of existing institutions and incubator programmes that support micro, small and medium-sized enterprises (MSMEs) in the telecommunication/ICT field to enable young people to set up their own enterprises, and take advantage of best practice in this area	• Number of Arab regional institutions involved in supporting micro, small and medium-sized enterprises (MSMEs) in the telecommunication/ICT field
• Train young people of both genders to take advantage of ICTs to promote the culture of innovation and entrepreneurship	• Number of innovators and young entrepreneurs
• Stimulate young people and students to be creative and innovative in developing Arabic-language applications	• Number of new applications developed in Arabic-language
• Develop innovative ways of holding regional meetings, workshops and conferences electronically	• Number of events with new ways of electronic participation

Expected results (Cont'd) Assisting countries to	Key Performance indicators
• Strengthen and build the capacity of human resources and help to coordinate among training centres, research centres, incubators, institutions and institutes, while encouraging the exchange of expertise at regional and international levels	• Number of regional trainings organized and number of visits exchanged/startups hosted, between Arab incubators and entrepreneurship institutions

ASIA-PACIFIC REGIONAL INITIATIVES

ASP1: Addressing special needs of 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 telecommunication/ICT requirements.

Result-based analysis

Expected results	Key Performance indicators
• Development of policy and regulatory frameworks for broadband infrastructure, ICT applications and cybersecurity, taking into account the special needs of LDCs, SIDS and LLDCs, and strengthening of human capacity to address future policy and regulatory challenges	• Concentrated assistance provided to at least 5 countries annually, addressing review of policy and regulatory frameworks and development including ICT applications and Cybersecurity, with focus on improving connectivity, availability and affordability of telecommunications/ICTs • Four Key capacity building activities providing training to at least 50 persons on an annual basis
• Universal access to telecommunications/ICTs promoted in LDCs, SIDS, and LLDCs	• Assistance provided to eight member states, and raised awareness and skills of key personnel within these member states
• Assistance to LDCs, SIDS and LLDCs in adopting telecommunication/ICT applications in disaster management, relating to disaster prediction, preparedness, adaptation, monitoring, mitigation, response, rehabilitation and recovery of telecommunication/ICT networks based on their priority needs	• Assisted ten member states in the adoption of telecommunication/ICT applications in disaster risk reduction, mitigation and management • Provided assistance on a needs basis to at least 6 countries in the area of rehabilitation and recovery • Raised awareness and skills of at least 60 key personnel

Expected results (Cont'd)	Key Performance indicators
• Assistance to LDCs, SIDS and LLDCs in their efforts to achieve internationally agreed goals, such as the 2030 Agenda for Sustainable Development, the Sendai Framework for Disaster Risk • Reduction, the Istanbul Plan of Action for LDCs, the Samoa Pathway for SIDS and the Vienna Programme of Action for LLDCs	• Provided support to at least 6 member states • Raised awareness and skills of at least 20 persons per year

ASP2: Harnessing ICTs to support the digital economy and an inclusive digital society

Regional Initiative Objective: To assist Member States in utilizing ICTs to reap the benefits of the digital economy and in addressing the human and technical capacity challenges for bridging the digital divide.

Result-based analysis

Expected results	Key Performance indicators
• Planning and elaboration of strategic national frameworks on digital economy as well as associated toolkits for selected ICT applications and services	• Assisted 4 member states annually in the planning and elaboration of strategic national digital economy frameworks • Developed at least four toolkits / guidelines for selected ICT applications and services
• Establishment and annual updating of a repository of all work done within ITU relating to the digital economy since WTDC-14	• Establishment of repository • Number of resources created
• Development of policies, strategies and guidelines for practical implementation, including for Internet of Things (IoT) and smart cities	• Assistance provided to at least 8 member states • At least 4 toolkits / guidelines developed

Expected results (Cont'd)	Key Performance indicators
• Deployment of ICT/mobile applications to improve the delivery of value-added services in sectors such as health, education, agriculture, governance, energy, financial services and e-commerce	• Assistance provided to at least 8 member states in the development and deployment of ICT/mobile applications for VAS delivery • Engaging at least 6 cross sectoral partners in its implementation
• Identification, collation and sharing of knowledge, best practices and case studies on various telecommunication/ICT applications	• Two case studies / resources developed • Organized at least 4 trainings / events and built capacity of 60 persons
• Development of cross-sectoral national digital skills programmes for inclusiveness, especially for women, youth, the elderly and persons with specific needs	• Developed four skills development programs • Built skills and raised awareness of at least 50 persons per year in two member states annually

ASP3: Fostering development of infrastructure to enhance digital connectivity

Regional Initiative Objective: To assist Member States in the development of telecommunication/ICT infrastructure in order to facilitate provision of services and applications on that infrastructure.

Result-based analysis

Expected results	Key Performance indicators
• Migration/transition of analogue networks to digital networks, application of affordable wired and wireless technologies (including interoperability of ICT infrastructure), and optimized use of the digital dividend	• Stock take / Studies on migration from analogue to digital networks and/or network optimization • Number of participants trained and awareness raised
• Maximized use of new and emerging technologies for the development of telecommunication/ICT networks, including 5G and smart grid infrastructure and services	• Number of countries assisted • Number of events / workshops • Number of participants trained / raised awareness
• Strengthening of capacity to develop and implement national broadband plans in order to provide broadband access to unserved and underserved areas (including support for study of the status of national broadband networks and international connectivity), to promote affordable access, especially for youth, women, indigenous peoples and children, to select appropriate technologies, to develop and use universal service funds effectively, and to develop financially and operationally sustainable business models	• Number of countries assisted • Number of workshops • Number of participants trained / raised awareness
• Promotion of Internet exchange points (IXPs) as a long-term solution to advance connectivity, deployment of IPv6-based networks and applications, and progress in the transition from IPv4 to IPv6	• Number of countries assisted • Number of workshops • Number of participants trained / raised awareness

Expected results (Cont'd)	Key Performance indicators
• Strengthening of the capacity to implement conformance and interoperability (C&I) procedures and testing and to plan resources for C&I programmes, and facilitation of the establishment of common regional and subregional C&I regimes (including the adoption and implementation of mutual recognition arrangements)	• Number of countries assisted • Number of workshops including activities under CoEs • Number of participants trained / raised awareness
• Attention to spectrum-management issues, including radio-frequency planning, new spectrum-sharing approaches, harmonized spectrum allocation and spectrum monitoring systems, and support for preparations for world radiocommunication conferences (WRCs) and implementation of their outcomes	• Number of countries assisted • Number of workshops including activities under CoEs • Number of participants trained / raised awareness
• Building of skills for the development and use of satellite telecommunications	• Number of workshops • Number of participants trained / raised awareness
• Strengthening of cooperation with international/regional organizations to enhance regional ICT connectivity, such as the Asia-Pacific Information Superhighway (AP-IS)	• Number of joint activities / projects • Number of partners

ASP4: Enabling policy and regulatory environments

Regional Initiative Objective: To assist Member States in developing appropriate policy and regulatory frameworks, fostering innovation, enhancing skills, increasing information sharing and strengthening regulatory cooperation, thereby contributing to a supportive regulatory environment for all stakeholders.

Result-based analysis

Expected results	Key Performance indicators
• Sharing of information on developments in policy, legal and regulatory frameworks as well as market developments in the ICT sector and the digital economies it enables	• Number of countries assisted • Number of workshops • Number of participants trained / raised awareness • Number of studies
• Development, implementation and review of strategies, policies and legal and regulatory frameworks, including for next-generation universal service obligation (USO), consumer protection, transformation of small and medium-sized enterprises (SMEs) to digital enterprises, and innovation and entrepreneurship	• Number of workshops • Number of countries assisted • Number of participants trained and awareness raised
• Encouraging inclusive dialogues and strengthening cooperation among national and regional regulators, policy-makers and other telecommunication/ICT stakeholders as well as with other sectors of the economy on topical policy, legal, regulatory and market issues	• Number of countries assisted • Number of workshops • Number of participants trained / raised awareness
• Strengthening institutional, human and technical capacity on topical policy, legal and regulatory issues, as well as on economic and financial issues and market developments	• Number of workshops • Number of countries assisted • Number of participants trained/raised awareness
• Improved awareness of policy and regulatory frameworks relating to data privacy and cross-border data	• Number of workshops • Number of countries assisted • Number of participants trained / raised awareness
• Development of strategic frameworks to support research and development activities in ICT in developing countries	• Number of countries assisted

ASP5: Contributing to a secure and resilient environment

Regional Initiative Objectives: To assist Member States to develop and maintain secure, trusted and resilient networks and services, and to address challenges related to climate change and disaster management.

Result-based analysis

Expected results	Key Performance indicators
• Compilation of national and/or regional cybersecurity strategies, national cybersecurity capabilities such as computer incident response teams (CIRTs) established, and good practices, through the Global Cybersecurity Index shared to nurture a culture of cybersecurity	• Number of workshops • Number of countries assisted on establishment / enhancement of capabilities of CIRT • Number of participants trained / raised awareness
• Strengthening of institutional cooperation and coordination among the key actors and stakeholders at the national, regional and global level (including through organizing cyberdrills) and of the capacity to address issues related to cybersecurity	• Number of workshops / cyber drills • Number of countries / institutions assisted • Number of participants trained / raised awareness
• Development of national emergency telecommunication plans and ICT-based initiatives for providing medical (e-health) and humanitarian assistance in disasters and emergencies	• Number of national emergency telecommunication plans developed / supported • Number of ICT-based initiatives
• Incorporation of disaster-resilient features in telecommunication networks and infrastructure, and development of ICT-based solutions (including wireless and satellite-based technologies) to enhance network resilience	• Number of countries assisted • Number of participants trained / raised awareness
• Development of standards-based monitoring and early-warning systems linked to national and regional networks, and enhanced use of active and passive space-based sensing systems for disaster prediction, detection and mitigation	• N/A
• Formulation of Comprehensive strategies and measures to help mitigate and respond to the devastating effects of climate change, including e-waste policy	• Number of countries /institutions assisted

CIS REGIONAL INITIATIVES

CIS1: Development of e-health to ensure healthy lives and promote well-being for all, at all ages

Regional Initiative Objective: To assist the ITU Member States in the region with the development of regulatory texts, technical solutions and specialized training programmes in the field of e-health (including telemedicine), with the aim of providing the public with improved medical services through the use of infocommunications.

Result-based analysis

Expected results	Key Performance indicators
• Provision of more complete information to the representatives of telecommunication administrations, government healthcare authorities, medical institutions and the private sector regarding the current legal/regulatory and organizational/technical frameworks in the area of e-health	• Number of awareness campaigns and workshops • Cooperation partners involved
• Establishment of pilot telemedicine stations with a guaranteed electricity supply derived from solar energy	• Number of Member States with stations established
• Development of technical solutions in the field of e-health, including telemedicine, the processing of digital medical data, personalized medical-service records, the electronic outpatient card, the electronic patient health record, and so on	• Number of solutions developed
• Recommendations on the application of modern technical solutions in the design of e-health systems, including telemedicine networks	• Number of recommendations developed
• Courses focusing on the training of medical students, and on enhancing the skills of practicing medical staff, in the use of ICTs in healthcare, including telemedicine, as well as courses for IT specialists on the maintenance of medical information systems	• Number of Member States using developed courses • Number of people trained

CIS2: Use of telecommunications/information and communication technology to ensure inclusive, equitable, quality and safe education, including the enhancement of women's knowledge of ICTs and e-government

Regional Initiative Objective: To provide ITU Member States within the region with centralized consultative and technical assistance in the various aspects of the use of telecommunications/ICT in education, as well as in regard to raising the level of people's ICT literacy, in the interests of human capacity development and of ensuring gender and social equality.

Result-based analysis

Expected results	Key Performance indicators
• Provision of consultative and technical support to representatives of educational establishments with regard to current progress in the use of telecommunications/ICTs in education	• Number of educational establishments who received support
• Establishment of training centres for enhancing women's knowledge of ICTs and e-government	• Number of Member States with centres established
• Development of educational technologies and methods using telecommunications/ICTs	• Number of technologies developed
• Development of systems for providing pupils, parents and teachers with information on the safe use of Internet resources	• Number of systems developed
• Further training courses, training sessions and seminars on introducing telecommunications/ICTs into education and human capacity development, including in rural areas, and also for persons with disabilities	• Number of workshops and trainings

CIS3: Development and regulation of infocommunication infrastructure to make cities and human settlements inclusive, safe and resilient

Regional Initiative Objective: To assist ITU Member States in the region in developing regulatory instruments and technical solutions aimed at creating an enabling environment for the development of infocommunication infrastructure in cities and human settlements, including the use of smart devices.

Result-based analysis

Expected results	Key Performance indicators
• Recommendations on the development of infocommunication infrastructure, including the use of telecommunications and other connective media to support and facilitate the sustainable development of smart cities in developing countries	• Number of recommendations developed
• Recommendations on the development of the regulatory and legal framework governing the process of building and servicing infocommunication infrastructure in facilities of diverse ownership, including the use of smart devices for developing urban infrastructure	• Number of recommendations developed
• Implementation of pilot projects for the introduction of smart devices in the interests of road-traffic safety, control of street lighting, energy saving, water-supply management, etc.	• Number of Member States with pilot projects implemented
• Greater awareness on the part of telecommunication administrations, regulatory bodies and telecommunication equipment developers, manufacturers and suppliers as to the strategies to be adopted in regard to the construction, and implementation of the vision, of smart cities in the CIS countries	• Number of awareness campaigns and workshops
• Further training courses, training sessions and seminars on the infrastructure of cities and human settlements	• Number of participants of training courses, training sessions and seminars • Number of Member States involved

CIS4: Monitoring the ecological status and the presence and rational use of natural resources

Regional Initiative Objective: To assist ITU Member States within the region in monitoring the ecological status and the presence and rational use of natural resources.

Result-based analysis

Expected results	Key Performance indicators
• Development of information systems to support decision-making in regard to monitoring of the ecological status and the presence and rational use of natural resources, including the creation of a spatial data infrastructure	• Number of systems developed
• Creation of repositories of metadata relating to the results of studies on the ecological status of the region's natural resources	• Repository created
• Provision to the governmental authorities responsible for the conservation of natural resources of high-quality, well-organized and harmonized spatial information for use in analysing and forecasting the state of the environment	• Number of awareness campaigns and workshops
• Further training courses, training sessions and seminars on monitoring the ecological status and the presence and rational use of natural resources	• Number of participants of training courses, training sessions and • seminars • Number of Member States involved

CIS5: Fostering innovative solutions and partnership for the implementation of Internet of things technologies and their interaction in telecommunication networks, including 4G, IMT-2020 and next-generation networks, in the interests of sustainable development

Regional Initiative Objective: To assist ITU Member States within the region with harmonious transformation of the telecommunication market and transition of telecommunication operators to the provision of innovative services to users, ensuring the stability and enhanced performance of telecommunication networks, including 4G, IMT-2020 and next-generation networks (hereinafter "telecommunication networks") within a context of ubiquitous implementation of the Internet of things (IoT) concept and technologies.

Result-based analysis

Expected results	Key Performance indicators
• Development of recommendations on the use of modern technologies and advanced concepts for the operation of the telecommunication market, including principles for telecommunication network interworking, tariff-setting for services, numbering, addressing and identification, as well as issues relating to service quality, security and reliability and traffic management, including aspects of net neutrality	• Number of recommendations developed
• Increased interoperability among telecommunication networks, services and devices through implementation of the IoT concept, including the industrial IoT	• Number of workshops
• Help in ensuring the required level of confidence and security when implementing the large-scale transformation of telecommunication networks within the context of introduction of the IoT concept, including the industrial IoT	• Number of Member-States to whom assistance is provided
• Establishment of a single toolkit and a set of specifications for the testing of devices, telecommunication networks and their components within the framework of the IoT concept, including the industrial IoT, on the basis of regional laboratories	• Single toolkit established

Expected results (Cont'd)	Key Performance indicators
• Development of recommendations relating to the establishment and operation of regional IoT laboratories, in the interests of sustainable development	• Recommendations developed

EUROPE REGIONAL INITIATIVES

EUR1: Broadband infrastructure, broadcasting and spectrum management

Regional Initiative Objective: To facilitate high-speed connectivity with resilient and synergistic infrastructure development, deployment and sharing, whilst ensuring a trusted and quality user experience.

Result-based analysis

Expected results	Key Performance indicators
• Development of plans (national and regional) and feasibility studies for deployment of ubiquitous resilient high-speed connectivity, including 5G/IMT2020 and digital broadcasting deployment, with all relevant components including legislation, standards, organizational set-up, capacity building and cooperation mechanisms, as needed	• Number of plans/studies conducted • Number of countries assisted
• Sharing of guidelines on collaborative regulation between the telecommunication sector and other synergistic sectors such as energy, railway and transportation	• Number of guidelines shared • Number of countries assisted
• Assessment of dynamics, challenges and opportunities in respect of the roll-out of diverse broadband technologies across Europe in the context of the creation of ubiquitous resilient high-speed broadband infrastructure	• Number of assessments done • Number of countries assisted
• Sharing of best practices and case studies in cable TV, digital broadcasting, 5G experience, early use cases and trends in next-generation access network roll-out	• Number of best practices / case studies shared • Number of countries assisted

Expected results (Cont'd)	Key Performance indicators
• Mapping of the ubiquitous infrastructure and services, fostering harmonization of approaches across the region and taking into account infrastructure-sharing approaches applied by countries	• Number of mapping done • Number of countries assisted
• Establishment of quality-of-service systems and consumer-protection frameworks	• Number of frameworks established • Number of countries assisted
• Development of plans for ICT for sustainable energy covering different types of ICT applications and innovations	• Number of plans developed • Number of countries assisted

EUR-2: A citizen-centric approach to building services for national administrations

Regional Initiative Objective: To facilitate the development of transformative and paperless citizen-centric services that could be accessible and available to all members of society.

Result-based analysis

Expected results	Key Performance indicators
Assistance to the countries in the following:	
• Creation of an experience and knowledge exchange platform between countries	• Number of countries involved
• Development of technical and service infrastructure (data centres, networks, secure gateways, authentication, interoperability, standards and metadata) as well as capacity building within the national administrations and institutions	• Number of countries assisted
• Fostering the development and increase of types of online transactional services, including applications for administration-to-administration (A2A) and administration-to-customer (A2C) services	• Number of countries assisted
• Building the capacities necessary for accelerating the process of national and regional digitization	• Number of countries assisted • Number of professionals trained
• Raising public trust through security enhancements in e-government services, digitization processes and awareness-raising campaigns, including promotion of such application-based solutions for e-government by national administrations and other institutions	• Number of countries assisted • Number of awareness campaigns and workshops

Expected results (Cont'd)	erformance indicators
• Identification of key horizontal factors for successful implementation of e-government services and digitization, such as secure and accessible digital identification, tools for data analysis, integrating workflow solutions, approach to re-use of data, and fostering their development	• Number of countries assisted

EUR3: Accessibility, affordability and skills development for all to ensure digital inclusion and sustainable development

Regional Initiative Objective: To bridge the digital divide and equip all groups of society, including persons with disabilities and specific needs, to take advantage of ICT, by enabling capacity building in digital skills.

Result-based analysis

Expected results Assistance to the countries in need in the following:	Key Performance indicators
• Strengthening and support regional cooperation and engagement of all relevant stakeholders, in line with the European Accessibility Act, in the development and implementation of ICT accessibility policies and solutions in the European region	• Number of countries and stakeholders involved
• Raising awareness and promoting relevant guidelines on public policies, including exchanging knowledge and sharing good practices on ICT accessibility products and services for persons with disabilities and specific needs, through meetings and workshops, including a regional conference which could be called “Accessible Europe - Information and communication for all”	• Number of countries assisted and stakeholders involved • Number of workshops, trainings and conferences
• Developing regional and in-country capacity through relevant web accessibility training to ensure that government websites and related services are available and accessible to all citizens, including persons with disabilities and specific needs	• Number of countries assisted and stakeholders involved
• Developing regional and in-country capacity to promote and deliver to relevant stakeholders training courses in ICT accessibility, including training on public procurement, as a tool to improve inclusion of persons with disabilities and specific needs in education, employment, and economic and social life	• Number of countries assisted and stakeholders involved • Number of trainings provided

Expected results (Cont'd)	erformance indicators
• Encouraging regional cooperation between research centres and academia in speech technologies, in order to improve these technologies to overcome disabilities	• Number of institutions involved
• Raising awareness about accessibility possibilities of TV and video programming on digital platforms, and implementing appropriate solutions	• Number of stakeholders involved •
• Encouraging the implementation and related measurement of progress in regional and national ICT activities and projects aiming to eliminate disparities in the use of and access to ICTs for websites of public institutions and government education programmes, services and information	• Number of countries assisted
• Encouraging the implementation of digital content in education	• Number of countries assisted
• Developing regional and in-country capacity building on coding and computer programming tools that will be available to all, including persons with disabilities and specific needs	• Number of countries assisted and stakeholders involved
• Promoting digital literacy, digital skills and e-education, and implementing accessible ICTs in e-education	• Number of countries assisted and stakeholders involved

EUR4: Enhancing trust and confidence in the use of information and communication technologies

Regional Initiative Objective: To support the deployment of resilient infrastructure and secure services allowing all citizens, especially children, to use ICTs in their daily lives with confidence.

Result-based analysis

Expected results	Key Performance indicators
Assistance to the countries in need in the following:	
• Providing regional platforms and tools for building human capacities (awareness and expert training) to enhance trust and confidence in the use of ICTs	• Number of awareness and expert training conducted • Number of countries assisted
• Sharing country and regional best practices and case studies and conducting surveys on enhancing confidence and trust in the use of ICTs	• Number of best practices, case studies and surveys conducted • Number of countries involved
• Elaborating or review national cybersecurity strategies	• Number of countries assisted
• Setting up or improving the capabilities of national computer security incident response teams (CSIRTs) and the corresponding networks to support these CSIRTs in cooperating with each other	• Number of countries assisted
• Conducting simulation exercises such as cyberdrills at national and regional level in cooperation with international and regional organizations and assisting countries in developing tools through synergies and resource optimization	• Number of Cyberdrills conducted • Number of countries and stakeholders involved

EUR5: ICT-centric innovation ecosystems

Regional Initiative Objective: To enhance entrepreneurship and establish a sustainable culture of innovation through concrete strategic actions using ICT as an enabler, building on the existing regional initiative in Europe on entrepreneurship, innovation and youth.

Result-based analysis

Expected results	Key Performance indicators
Assistance to the countries in need in the following:	
• Initiating a review of the data collected, analyzing the current situation and proposing effective recommendations to use ICT as an innovation enabler	• Number of countries assisted
• Undertaking ecosystem mapping exercises to coordinate efforts and to create new projects and activities, by facilitating cooperation between existing actors and by highlighting gaps in the ecosystem which have a high impact on stakeholders	• Number of countries assisted
• Developing human capacity through the identification and provision of practical skills needed in order to support innovative industries	• Number of countries assisted and stakeholders involved
• Identifying sustainable funding models to support the innovation ecosystems	• Number of countries assisted
• Sharing country and regional best practices and case studies on all aspects of ICT as a driver for innovation	• Number of best practices/case studies • Number of countries involved
• Providing a regional platform for strengthening regional cooperation between ICT-centric innovation ecosystems, through the holding of regional innovation forums	• Number of countries and stakeholders involved in the regional platform (physical & digital)

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

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