

First Session of the Asia-Pacific Information Superhighway Steering Committee, 1-2 November 2017, Dhaka, Bangladesh.

**DRAFT SUBMISSION OF THE WORLD BANK, TRANSPORT AND ICT GLOBAL PRACTICE, ICT UNIT
PROJECTS/ACTIVITIES/STUDIES
20 October 2017**

Objective: This form is sent to the representative of each organization in order to prioritise activities and better align broadband connectivity gaps with solutions. All organization submissions will be consolidated as per AP-IS Pillar and subregion to develop an implementation plan for 2018 and will be presented by the Secretariat during the First Session of the Asia-Pacific Information Superhighway (AP-IS) Steering Committee, 1-2 November 2017, Dhaka, Bangladesh. A similar template is sent to ESCAP member countries to identify their planned activities.

Please complete this form and submit to ESCAP (escap-ids@un.org) by **no later than 25 October 2017**.

(a). Background Information

(i). Organization:

The World Bank
1818 H Street, NW Washington, DC 20433 USA. Tel : (202) 473-1000

(ii). Organization's Focus: [Brief description of organization's objectives and focus]

The World Bank is an international financial institution and a source of financial and technical assistance to developing countries around the world. The World Bank Group's twin goals are ending extreme poverty and promoting shared prosperity. The ICT unit of Transport and ICT Global Practice provides knowledge and financing to help close the global digital divide, and assure countries can take full advantage of the ongoing ICT revolution. Access to affordable and reliable Internet will have significant impact on achieving inclusive economic growth for addressing poverty. Access to the Internet also contributes to empowering the poor. There are several ways that digital technologies can help reduce poverty. This includes indirect impacts from businesses in all sectors using ICT to boost productivity, filtering through the economy to increase GDP growth. There are also direct impacts such as interventions to increase competition to lower costs, thus reducing communication expenditures for consumers. Improved ICT connectivity enhances the availability of electronic information allowing workers and businesses to quickly access knowledge relevant to their livelihoods such as prices, weather information, production techniques, and so on. Direct impacts also accrue from digital businesses leveraging ICT and generating employment. The World Development Report 2016 (WDR 2016) 'Digital Dividends' outlines a framework of how ICT promotes inclusion, efficiency, and innovation for people and businesses.

(b). Challenges and Opportunities on promoting broadband connectivity:

Within the scope of the AP-IS four pillars

- (1). Connectivity;
- (2). Internet Traffic & Network Management;
- (3). E-resilience; and
- (4). Broadband for all,

ESCAP member countries and partners outlined seven strategic initiatives in the AP-IS Master Plan (http://www.unescap.org/sites/default/files/pre-ods/CICTSTI1_2E_rev1.pdf) to be implemented between 2016-2018 (please refer to attached chart of AP-IS 4 Pillars and AP-IS Strategic Initiatives).

The AP-IS seven strategic initiatives are as follows:

1. Identification, coordination, deployment, expansion and integration of the regional backbone networks at the cross-border intra- and interregional levels, in collaboration with member countries and subregional organizations;
2. Establish a sufficient number of Internet exchange points at the national and subregional levels and set out common principles on Internet traffic exchange to prevent Internet traffic tromboning, decrease transit costs and improve service quality
3. Regional social and economic studies;
4. Enhancing ICT infrastructure resilience in the Asia-Pacific region;
5. Policy and regulations for leveraging existing infrastructure, technology and inclusive broadband initiatives;
6. Capacity-building; and
7. Asia-Pacific information superhighway project funding mechanism based on public-private partnerships

(c). AP-IS 7 Strategic Initiatives Implementation Plan 2016-2018: priority challenges and proposed activities

In order to match your organization’s current and planned activities with country’s/sub-region’s/region’s priorities within the scope of the AP-IS seven strategic initiatives, please complete the matrix below accordingly. Please add a row as deemed necessary.

Activity/Project/Study	Description
Description of the Activity/Project/Study (existing or planned)	<p>[List of Activity/Project/Study]</p> <p>(i) Digital CASA Regional Program, including:</p> <p>(1) Digital CASA Afghanistan Project</p> <p>(2) Digital CASA Kyrgyzstan Project</p>

(ii) Pacific Regional Connectivity Program, including

- (1) Tonga-Fiji Connectivity Project
- (2) Palau-FSM Connectivity Project
- (3) Samoa Connectivity Project
- (4) Fiji Connectivity Project
- (5) Kiribati Connectivity Project
- (6) Tuvalu Connectivity Project

(iii) Africa Regional Broadband Programs

- (1) Africa Region – Regional Communications Infrastructure Project
- (2) Central Africa Backbone Project
- (3) West Africa Regional Communications Infrastructure Project

(iv) Caribbean Regional Communications Infrastructure Program (CARCIP)

Description of the Projects:

(i) Digital CASA Regional Program. The proposed regional program is to increase access to more affordable Internet services, improve government's capacity to deliver digital public services and facilitate opportunities for digitally-enabled income generation. The ultimate goal of Digital CASA is to integrate the landlocked countries of Central Asia and South Asia into the global and regional digital economy. The Digital CASA Regional Program is designed to help target countries achieve higher-volume, more affordable Internet bandwidth, and position the region as a transit hub for routing Europe-to-Asia Internet traffic. The program intends to improve international and domestic connectivity throughout the region primarily through private sector investment, update and harmonize policy and regulatory frameworks at the national and regional levels to attract private sector and foster competitive and fair broadband markets of regional scale. This will generate revenues for participating countries that will accrue in much larger measure than if done individually.

The Digital CASA Regional Program is being designed as a series of projects that will achieve significant spillover benefits across the participating countries. Afghanistan and Kyrgyz Republic will be the first to be delivered in late 2017-2018. Uzbekistan, Tajikistan, Turkmenistan and Kazakhstan may join in subsequent phases depending on their interest and readiness.

(1) Digital CASA Afghanistan Project, 2017 – 2022.

Digital CASA Afghanistan is estimated at US\$ 70 million. The following is a summary description of the four components of the Project.

Component 1: Regional and Domestic Connectivity Infrastructure. The objective of this component is to expand and

	<p>improve regional and domestic connectivity infrastructure, connect public institutions and priority target groups to the Internet at affordable rates, and bring down overall cost of Internet services.</p> <p>Subcomponent 1.1. Regional and Domestic Connectivity Infrastructure and Pre-Purchase of International Bandwidth</p> <p>Subcomponent 1.2. Government Network Providing Broadband Connectivity to Public Institutions</p> <p>Subcomponent 1.3. Internet Exchange Points</p> <p>Component 2: e-Government. The objective of this component is to establish critical e-Government technology foundations such as cloud-based hosting solution of national scale and development of shared services, including the development of a national portal as a single window to access e-services, and implement prioritized electronic services and smart solutions to better serve citizens and businesses.</p> <p>Subcomponent 2.1. Establishment of a Shared e-Government Infrastructure and Services</p> <p>Subcomponent 2.2. National Portal and ‘Smart Solutions’</p> <p>Component 3: Enabling Environment and Digital Skills, Jobs, and Innovation. The component will provide TA for strengthening the enabling environment to support a fair and competitive ICT sector to encourage private sector investments and make broadband Internet services available to the majority of the population at more affordable prices. It will also support activities aimed at promoting digital inclusion with the focus on preparing the youth for the digitally enabled job market.</p> <p>Subcomponent 3.1. Policy, Regulatory, and Legal Frameworks</p> <p>Subcomponent 3.2. ICT Skills Development, Job Creation, and Innovation</p> <p>Component 4: Project Management and Institutional Strengthening</p> <p>This component will finance project management as well as institutional strengthening and capacity development activities to ensure different activities are implemented effectively and integrated with the overall regional program.</p> <p>Subcomponent 4.1. Project Management</p> <p>Subcomponent 4.2. Institutional Strengthening and Capacity Development</p> <p>(2) Digital CASA Kyrgyzstan Project, 2017 - 2023.</p> <p>Digital CASA Kyrgyzstan is estimated at US\$50 million. The following is a summary description of the four components of the Project.</p> <p>Component 1: Digital Infrastructure. This component will finance domestic and cross-border connectivity infrastructure needed to ensure greater access to more affordable and reliable high speed Internet services, both within the Kyrgyz Republic and in the neighbouring countries.</p> <p>Subcomponent 1.1. Completion of regional Backbone consisting of existing fiber optic networks and newly established cross-border fiber-optic nodes and support of regional ISPs</p>
--	--

Subcomponent 1.2. Expanding the capacity of the government data transmission network (G-Net)

Component 2: Digital Platforms and Smart Solutions. This component will focus on establishing solid digital foundations and platforms that can be re-used at regional and national levels using “build once, re-use always” approach.

Subcomponent 2.1. The cloud infrastructure (G-Cloud) based on existing datacenters and development of Eurasia-Cloud for the region

Subcomponent 2.2. Digital Platforms, Shared Services and "smart solutions"

Component 3: Enabling environment for digital economy. This component is designed to strengthen at the regional and national levels the laws, regulations, institutional and human capacity and a variety of partnerships that will be needed to take full advantage of the digital future, improve market competitiveness, incentivize innovation and job creation.

Subcomponent 3.1. Creation of favourable Legal, Regulatory and institutional environment for digital transformation

Subcomponent 3.2. Partnerships for digital leadership, ICT skills development and innovations

Component 4: Project Management and Digital Leadership development.

Subcomponent 4.1 Program Management and Communications (including strategic communications, partnerships and citizen engagement).

(ii) Pacific Regional Connectivity Program

The development objective of the Regional Connectivity Program is to reduce the cost and increase the availability of international bandwidth for participating countries, and thereby facilitate the development of a wide range of Information and communication technologies applications to support social and economic development in the Pacific region.

(1) Tonga-Fiji Connectivity Project (US\$17.2 million), 2012 - 2018, cofinanced with ADB, Australia

The objective of the proposed Project is to improve the enabling environment for telecommunications and ICT in Tonga, including greater competition and increased access to infrastructure and services by reducing the costs of international connectivity and strengthening the telecommunications regulatory framework. Access to the capacity on this new infrastructure will be available on an open-access basis.

Next steps will be:

- Operationalizing the Communications Commission and new legal and regulatory framework;
- Extending connectivity to Vava’u and Ha’apai (outer islands)-ongoing.

(2) Palau-FSM Connectivity Project (US\$47.5 million), 2014 - 2022, cofinanced with ADB. Additional financing for Kosrae was approved in May 2017.

The development objective of the Project is to reduce the cost and increase the availability of ICT services needed to

support social and economic development in the Recipient's territory.

Project in FSM:

Component 1. Submarine cable system for Palau-Yap-Guam. The Government of FSM will also implement regulatory arrangements to ensure that the domestic market in FSM is guaranteed access to international capacity on an open and nondiscriminatory basis.

Component 2. Chuuk and Kosrae communications backbone subsidy will support the establishment of a universal access fund under the new Communications Law, to provide stimulus funding for backbone infrastructure for Chuuk and Kosrae.

Component 3. Technical Assistance includes technical assistance for: (a) Assessing options for improved connectivity for Chuuk and Kosrae and developing a universal access scheme; (b) Sector regulation and regulatory capacity development.

Component 4. Project management support will finance Project financial management, audit, general Project reporting, and monitoring and evaluation.

Project in Palau:

Component 1. Submarine cable system for Palau-Yap-Guam. The Government of Palau will implement arrangements to ensure that the domestic market in Palau is guaranteed access to international capacity on an open and non-discriminatory basis.

Component 2. Project management support includes support for Project financial management, audit, general Project reporting, and monitoring and evaluation.

Next steps will be:

- Ongoing market/regulatory reforms in FSM including establishment of regulator;
- Connecting Kosrae state to planned Kiribati-Nauru-Pohnpei cable (East Micronesia Cable).

(3) Samoa Connectivity Project (US\$16 million), 2015 – 2020, cofinanced with ADB.

The Project development objective is to reduce the cost and increase the availability of Internet services in the Independent State of Samoa.

Component 1. Submarine cable system. IDA financing will be provided through onlending? or an equity contribution to Government to finance its participation in the "Samoa Cable Co"/SCC. SCC will be responsible for procuring and managing the proposed submarine cable system, including commercial arrangements for backhaul and interconnection, as appropriate.

Component 2. Technical Assistance for sector regulation and regulatory capacity development. This will finance medium-term technical assistance for the Office of the Regulator to review, develop and implement effective regulation for the sector with a particular focus on wholesale markets. Such assistance will include provision of legal and regulatory expertise, especially for: competition and market regulation activities; review of existing legal regulatory framework

including drafting new instruments and reforms; and training and skills development. Additionally, funding will be provided for procurement of technical equipment that is needed to administer and plan effective arrangements for the sector.

Component 3. Project management support for a Project management unit to be established in the Ministry of Finance, consistent with arrangements for other IDA-financed operations. This Public Disclosure Copy component will finance overall Project coordination, financial management, audit, communications and outreach, and reporting, monitoring and evaluation.

Next steps will be:

- Cable supply and installation: to be operational by end 2017;
- Technical support to Office of the Regulator.

(4) Fiji Connectivity Project (US\$6.8 million), 2016 – 2021.

The objectives of the Pacific Regional Connectivity Program Project for Fiji are to reduce the cost and increase the availability of internet services in the Northern Division of the Borrower's territory.

Component 1. Submarine Cable System. This component comprising the following elements: design, supply and installation of a submarine optical fiber cable to connect Vanua Levu to the main SSCC cable, including a marine survey, a cable manufacture and cable deployment; and construction of a cable landing station and ancillary facilities in Savusavu, including acquisition and installation of onshore equipment.

Component 2. Regulatory Technical Assistance. This will finance the provision of technical assistance to the FCC in relation to interconnection and access agreements, including the negotiations and implementation of regulatory instruments to ensure cost based and nondiscriminatory access to the cable infrastructure, support for cost analysis, tariff-setting and carriers' rights and obligations.

Component 3. Project Management and Administration. This will finance the provision of support to the Project management unit in MOC, including with respect to technical, procurement, financial management and safeguards aspects.

Next steps will be:

- Arrangements for cable supply and installation, in coordination with Samoa SSCC;
- Onshore facilities construction in Savusavu;
- Institutional and regulatory arrangements with the Fiji Commerce Commission.

(5) Kiribati Connectivity Project (US\$20 million), 2017 – 2022, cofinanced with ADB.

The Project development objective is to reduce the cost and increase the availability of Internet services in Kiribati.

The project comprises of three components.

Component 1. Submarine cable system consists of following sub-components: (i) submarine cable system; and (ii) cable landing station (CLS) and ancillary equipment.

Component 2. Technical assistance (provision of legal, financial, technical, and transactional assistance).

Component 3. Capacity of the Recipient (component 3(a)) and related agencies involved in the implementation of the project, and the project implementing entity (component 3(b)) once established, to process project transactions, implementation, and management.

Next steps will be:

- Establishment of Kiribati Cable Co (open access entity);
- Establishment of similar entities in Nauru and FSM;
- Construction and Maintenance Agreement to be negotiated and signed by EMC parties;
- Procurement of cable system (ready for service 2019).

(6) Tuvalu Connectivity Project (US\$10 million), from 2018 (planned)

(iii) Africa Regional Broadband Programs

(1) Africa Region – Regional Communications Infrastructure Project (RCIP) (up to US\$424 million)

The proposed objective of the Regional Communications Infrastructure Project is to support populations and businesses across the Eastern & Southern Africa region to have access to quality and affordable ICT services. This can be an engine of shared growth, as in most parts of the world and will be achieved by (i) accelerating the physical rollout of backbone infrastructure (investment intervention based on public-private partnership to leverage private sector investment in infrastructure) and (ii) removing monopoly regimes through policy and regulatory support to ensure that once in place, the infrastructure is accessible to all operators on open, transparent and non-discriminatory terms.

The project comprises of the following components:

- Component 1. Enabling Environment Component.** This component will provide technical assistance to and training of staff of relevant National Regulatory Agencies and regional organizations to accelerate market liberalization, especially in those countries which are lagging on the reform agenda. This will include updating legal and regulatory frameworks, ensuring competitively priced wholesale network access, simplifying licensing procedures and increasing transparency.
- Component 2. Connectivity.** This component includes: regional backhaul and national backbone networks; government pre-purchase of capacity – wholesale services for use in schools, hospitals, targeted user groups; landing stations; rural ICT development.
- Component 3. Transparency / Traffic Stimulation Component (e-government)**

Component 4. IT industry development (connectivity for business process outsourcing industry).

(2) Central Africa Backbone Project (upwards of US\$100 million)

The development objective of the Central Africa Backbone (CAB) Program is to support population, businesses and governments across the Central Africa region to have access to quality and affordable ICT services on open, transparent and non-discriminatory terms. The benefits accrued in the targeted countries spill over the Central Africa region by: (i) lower cost of international broadband capacity and extend reach of backbone networks across the region and (ii) improve Government efficiency and transparency through eGovernment applications; and (iii) increase country and regional competitiveness.

Component 1. Enabling environment at the regional and national levels. Component's goals are: (i) Modernize and harmonize legal and regulatory framework the Information Communication Technology (ICT) sector and the Information Society. (ii) Strengthen capacity of public key stakeholders (i.e. Ministry and independent regulatory agency). (iii) Promote a pro-competitive environment (i.e. develop regulatory tools, liberalize the telecom sector, restructure and privatize public incumbent operators, PPP promotion) to maximize benefit from the regional backbone. (iv) Strengthen M&E capacity.

Component 2. Connectivity. (i) Finance the national infrastructure for the CAB including fiber-optic cables, terminal equipment, switches, to guarantee the establishment of an open access networks (to all operators) on the basis of PPPs, leveraging private sector investment (ii) Finance the purchase of capacity on the CAB to assist rural and underserved areas, as well as targeted users (schools, universities, hospitals eGovernment use with discounted capacity prices (ii) Finance the establishment of government Virtual Private Networks (VPNs) to collect all the government communication needs (voice and data) to be routed via the CAB and the establishment of national and regional Internet Exchange Point (IXP) (iv) Support to extend ICT in rural areas on the basis of PPPs with competitive award of subsidies (including country-specific innovative demand stimulation programs such as Digital Villages and the SMS eService programs.

Component 3. Good Governance and Transparency - Flagship IT applications. Deploy flagship applications for which country champion and commitment have been identified to improve internal systems, deliver services more efficiently and effectively, and make information & services more accessible to the population. Applications that could be targeted are: customs systems, income taxes, social security benefits, personal documents (passport, driving license), car registration, building license, birth and marriage certificates, electronic payment (for utilities).

(3) West Africa Regional Communications Infrastructure Project (US\$60 million)

West Africa Regional Communications Infrastructure Project seeks to increase the geographical reach of broadband networks and reducing the costs of communications services in West Africa.

Component 1. Creating an Enabling Environment for regional Connectivity and applications

This component focuses on creating an enabling environment to (i) address policy and regulatory bottlenecks at both regional and national levels to maximize the benefits of the proposed connectivity agenda, and (ii) to enable regional e-government application

Component 2. Designing regional PPP framework and Institutional strengthening

This component focuses on transaction design for the commercialization of the excess fiber. Based on detailed demand studies and detailed financial analysis, a PPP framework will be designed dealing with structural and ownership questions, management of the network, rights and obligation of different players including electricity providers, telecom operators, the private sector and different national governments. The PPP framework would focus on principles of open access while maximizing the role of the private sector.

Component 3. Infrastructure. Supporting Connectivity for ECOWAS countries: focus mainly on creating a regional backhaul link leveraging the excess fiber of the West Africa Power Pool project. In addition to regional connectivity, and in order to maximize flexibility, client-responsiveness and address specific national needs, the ECOWAS Connectivity Program will include activities related to international connectivity, especially for countries without access to international submarine cable (landlocked countries and fragile/post conflict countries) as well as activities to address terrestrial networks (backbones) in selected countries. The approach that will be used for the infrastructure component will focus on minimizing Government funding and leveraging private sector investment.

(4) Caribbean Regional Communications Infrastructure Program (CARCIP) (US\$20 million)

CARCIP promotes regional economic integration, supports the updating of related policies and regulations, while at the same time implements programs that build capacity, and strengthen the institutions involved. CARCIP will deliver important economies of scale and overall economic benefits, as it will support major public goods, such as (i) a highly interconnected broadband infrastructure; (ii) ICT capacity building; (iii) development of ICT-enabled services; and (iv) institutional capacity building to ensure sustainability. The Project will consist of the following five components:

Component 1. Connectivity Infrastructure (the reduction of broadband connectivity gaps in the Caribbean Coast of Nicaragua, through the deployment of broadband access to communities, schools, health centers and cooperatives)

Component 2. IT/ITES Skills and Certifications. The Project is designed to create rapid middle income jobs by boosting IT-ITES job creation in the Region, starting with those that require a medium level of education (i.e. BPO and Animation), while the final scope considers to include more complex jobs such as ITO and KPO jobs. This component is designed to help minimize the barriers of entry to the job market for challenged students, dropouts and unemployed population. It will lead to new and better, inclusive jobs, especially for women and youth, making jobs available to a larger share of the bottom 40% of the population, fostering income, promoting shared prosperity and reducing poverty.

Component 3. ICT-enabled innovation. This component will support activities that: (i) facilitate the implementation of a

	<p>university- entrepreneurship platform in the Caribbean and Central America, based on a co-creation and open innovation approach; and (ii) enable the setup and development of an Innovation Laboratories (InnovaLabs) Network</p> <p>Component 4. Enabling Environment. Technical assistance and capacity building for: (i) development of the ICT capabilities for the country; (ii) identifying gaps and niches on IT and IT enabled services, and designing a roadmap to support country and regional actions and activities; (iii) identifying and supporting activities for the global positioning of the Region and Nicaraguan IT-ITES industry through the increase of their exports and the attraction of foreign investment; (iv) supporting regional coordination activities under the CARCIP program; (v) designing of detailed environmental and social impact assessments and management plans, while monitoring of their effective implementation; and (vi) evaluating after two years of the project implementation its impact, and possible measures that will need to be taken for project sustainability.</p> <p>Component 5. Implementation Support. This component will provide resources for the establishment and logistic support for a core Project Coordinating Unit (PCU) staff to administer and coordinate project implementation. It will also support oversight arrangements and capacity building for key policy and regulatory institutions</p>
<p>Link of the activity/project/study to the AP-IS Strategic Initiatives (1-7)</p>	<p>[Identify the appropriate AP-IS Strategic Initiative. Please refer to attached AP-IS Initiatives chart for potential linkages to the AP-IS four pillars]</p> <p>(i) Digital CASA Regional Program, including Digital CASA Afghanistan Project and Digital CASA Kyrgyzstan Project are linked to the following AP-IS Strategic Initiatives:</p> <ol style="list-style-type: none"> (1.) Identification, coordination, deployment, expansion and integration of the regional backbone networks at the cross-border intra- and interregional levels, in collaboration with member countries and subregional organizations; (2.) Establish a sufficient number of Internet exchange points at the national and subregional levels and set out common principles on Internet traffic exchange to prevent Internet traffic tromboning, decrease transit costs and improve service quality (4.) Enhancing ICT infrastructure resilience in the Asia-Pacific region; (5.) Policy and regulations for leveraging existing infrastructure, technology and inclusive broadband initiatives; (6.) Capacity-building <p>(ii) Pacific Regional Connectivity Program, including Tonga-Fiji Connectivity Project, Palau-FSM Connectivity Project, Samoa Connectivity Project, Fiji Connectivity Project, Kiribati Connectivity Project, Tuvalu Connectivity Project, is linked to the following AP-IS Strategic Initiatives:</p> <ol style="list-style-type: none"> (1.) Identification, coordination, deployment, expansion and integration of the regional backbone networks at the cross-border intra- and interregional levels, in collaboration with member countries and subregional organizations; (4.) Enhancing ICT infrastructure resilience in the Asia-Pacific region;

- (5.) Policy and regulations for leveraging existing infrastructure, technology and inclusive broadband initiatives;
- (6.) Capacity-building

(iii) Africa Region – Regional Communications Infrastructure Project

- (1.) Identification, coordination, deployment, expansion and integration of the regional backbone networks at the cross-border intra- and interregional levels, in collaboration with member countries and subregional organizations;
- (4.) Enhancing ICT infrastructure resilience in the Asia-Pacific region;
- (5.) Policy and regulations for leveraging existing infrastructure, technology and inclusive broadband initiatives;
- (6.) Capacity-building

(iv) Central Africa Backbone Project

- (1.) Identification, coordination, deployment, expansion and integration of the regional backbone networks at the cross-border intra- and interregional levels, in collaboration with member countries and subregional organizations;
- (4.) Enhancing ICT infrastructure resilience in the Asia-Pacific region;
- (5.) Policy and regulations for leveraging existing infrastructure, technology and inclusive broadband initiatives;
- (6.) Capacity-building

(v) West Africa Regional Communications Infrastructure Project

- (1.) Identification, coordination, deployment, expansion and integration of the regional backbone networks at the cross-border intra- and interregional levels, in collaboration with member countries and subregional organizations;
- (4.) Enhancing ICT infrastructure resilience in the Asia-Pacific region;
- (5.) Policy and regulations for leveraging existing infrastructure, technology and inclusive broadband initiatives;
- (6.) Capacity-building

(vi) Caribbean Regional Communications Infrastructure Program (CARCIP)

- (1.) Identification, coordination, deployment, expansion and integration of the regional backbone networks at the cross-border intra- and interregional levels, in collaboration with member countries and subregional organizations;
- (4.) Enhancing ICT infrastructure resilience in the Asia-Pacific region;
- (5.) Policy and regulations for leveraging existing infrastructure, technology and inclusive broadband initiatives;
- (6.) Capacity-building

<p>Link of the activity/project/study to the AP-IS Pillars (1-4)</p>	<p>[Please include relevant AP-IS pillar for this activity/project/study. Please refer to attached AP-IS Initiatives chart for potential linkages to the AP-IS four pillars]</p> <p>(i) Digital CASA Regional Program, including Digital CASA Afghanistan Project and Digital CASA Kyrgyzstan Project, is linked to the following AP-IS pillars:</p> <ol style="list-style-type: none"> (1). Connectivity; (2). Internet Traffic & Network Management; (3). E-resilience; and (4). Broadband for all <p>(ii) Pacific Regional Connectivity Program, including Tonga-Fiji Connectivity Project, Palau-FSM Connectivity Project, Samoa Connectivity Project, Fiji Connectivity Project, Kiribati Connectivity Project, Tuvalu Connectivity Project, is linked to the following AP-IS pillars:</p> <ol style="list-style-type: none"> (1). Connectivity; (2). Internet Traffic & Network Management; (3). E-resilience; and (4). Broadband for all <p>(iii) Africa Region – Regional Communications Infrastructure Project</p> <ol style="list-style-type: none"> (1). Connectivity; (2). Internet Traffic & Network Management; (3). E-resilience; and (4). Broadband for all <p>Central Africa Backbone Project</p> <ol style="list-style-type: none"> (1). Connectivity; (2). Internet Traffic & Network Management; (3). E-resilience; and (4). Broadband for all <p>(iv) West Africa Regional Communications Infrastructure Project</p> <ol style="list-style-type: none"> (1). Connectivity; (2). Internet Traffic & Network Management;
---	--

	<p>(3). E-resilience; and (4). Broadband for all</p> <p>(v) Caribbean Regional Communications Infrastructure Program (CARCIP) (1). Connectivity; (2). Internet Traffic & Network Management; (3). E-resilience; and (4). Broadband for all</p>
<p>Beneficiary Organizations/Countries of the Activity/Project/Study</p>	<p>[List of organisations/ministries/departments benefitting from the activity/project/study]</p> <p>(i) The beneficiaries of Digital CASA Regional Program will benefit a wider range of households, businesses, and government institutions in the countries, with spillover effects in other landlocked countries in the region. Citizens, businesses, and the public sector at large will benefit through more affordable and accessible telecommunications services, enhanced public service delivery, and digital skills development opportunities. The project will also help position other landlocked countries in the region as part of the Europe-to-Asia regional data transit hub, and allow them to benefit from improved broadband services, broader ICT sector development, jobs and improved digital services. Underserved populations, including men and women in rural parts of the country, will specifically be targeted by the expansion of fiber-optic networks, and citizens will benefit more broadly from the Government’s improved capacity to deliver e-Government services and from the opportunities that will be facilitated to access digital skills and jobs opportunities, including for women and youth. Further, private sector ICT operators will benefit from an improved legal and regulatory environment and lower wholesale prices that will be enabled by open access to fiber-optic broadband networks and higher levels of competition in the market. Within the Government, nearly all ministries, departments, and agencies will benefit from improved quality and lower cost of connectivity. The Government will also benefit from improved efficiency of day-to-day operations through use of electronic platforms and communications, cost savings by leveraging shared infrastructure for data storage and service delivery, and enhanced ICT skills through training programs.</p> <p>(ii) The beneficiaries of Pacific Regional Connectivity Program, including Tonga-Fiji Connectivity Project, Palau-FSM Connectivity Project, Samoa Connectivity Project, Fiji Connectivity Project, Kiribati Connectivity Project, Tuvalu Connectivity Project, are: government, private sector, citizens.</p> <p>(iii) The direct beneficiaries of the Africa Region – Regional Communications Infrastructure Project, the Central Africa</p>

	<p>Backbone Project and the West Africa Regional Communications Infrastructure Project include people who are connected to the communications network in Burkina Faso and Benin (including telecommunication services and internet users, schools, hospitals, banks, corporations, government and public administrations). Indirect beneficiaries potentially include all of the country’s population, since increased communications capabilities at affordable rates for some of the population may eventually have externalities for all. However, the World Development Report 2016 on ‘Digital Dividends’ highlights that in many countries, gender gaps in technology remain vast. Barriers to access can be particularly salient in the case of the internet, especially in poor and remote localities.</p> <p>(v) The primary target beneficiaries of the Caribbean Regional Communications Infrastructure Program (CARCIP) are the actual and potential ICT services consumers (government, residential, and business). ICT consumers are expected to enjoy greater access to better quality and lower priced ICT services, while better IT/ITES skills of students, faculty, and industry professionals should help other CARCIP countries position themselves as global players.</p>
<p>Outcome of the Activity/Project/Study for Beneficiaries</p>	<p>[List outcome of the activity/project/study]</p> <p>(i) The activities of Digital CASA Regional Program will enhance regional public goods through the development of a highly interconnected regional broadband infrastructure which facilitates infrastructure sharing; joint deployment and transfer of experience in electronic services and content; and institution building at the regional level to ensure sustainability and further regional integration.</p> <p>The outcomes of Digital CASA Regional Program activities will be:</p> <ol style="list-style-type: none"> (1) Increase in the number of people provided with access to the Internet. Increased reliability, and lower prices of telecommunications and Internet services for end-users, schools, universities, hospitals, and small businesses. The availability of Internet throughout the country and in rural areas in particular will significantly contribute to economic development and job creation (2) Significant social benefits related to more efficient delivery of services and enhanced citizen participation, including in health, education, among others. The citizens will not need to travel long distances to access the services that will be made available through mobile and online platforms. (3) Increase in the number of e-Services and Applications Utilizing the Shared Services Platform. Investing in shared digital platforms and smart solutions is expected to improve the efficiency of Government operations and improve service delivery agenda in a variety of sectors. (4) Development of the ICT sector and digital job opportunities through increased productivity of firms, technological innovations across industries. The WDR16 indicates that the number of direct jobs created in the ICT sector itself may be fairly modest, but the number enabled by it can be large, including in the IT and IT-enabled services industry. (5) Facilitation of cross-border trade of knowledge, products (e.g. e-commerce) services across the region.

	<p>(6) Generation of indirect government revenue sources, including greater tax revenue from economic growth, and greater collections from telecom licenses and excise tax collections, in addition to direct government revenues via the enlarged wholesale bandwidth market.</p> <p>(ii) The outcomes of Pacific Regional Connectivity Program activities:</p> <p>(1) Mobile access increased: mobile phone penetration over 90% in most countries, including in many outer island regions (2) Internet access increased, particularly mobile broadband; new packages/services available. (3) Costs reduced for SIM cards, calling rates, data plans. (4) Foreign direct investment (e.g. IT enabled services). (5) Direct and indirect jobs created in the telecommunications sector; potential, selective growth in global outsourcing opportunities (especially Fiji). (6) Contribution to socioeconomic development and service delivery (health, education—new applications), fledgling e-commerce, online business services.</p> <p>(iii) The outcomes of the Africa Region – Regional Communications Infrastructure Project, the Central Africa Backbone Project and the West Africa Regional Communications Infrastructure Project include:</p> <p>(1) Increase in volume of international traffic (2) Increased access to Internet services (3) Increase access to telephones (4) Decrease in the average monthly price of international wholesale capacity link</p> <p>(iv) The outcomes of the Caribbean Regional Communications Infrastructure Program (CARCIP)</p> <p>(1) Increased percentage of broadband penetration on the Caribbean coast. (2) Increase percentage in IT companies’ satisfaction with the IT/ITES skills training and certification program. (3) Increase in percentage of trainees certified under the skills and training program. (4) Increase number of services or applications created as a result of the ICT Innovation Ecosystem activities.</p>
<p>Timeframe of the activity/project/study</p>	<p>(i) [Timeframe of activity. If completed already, please indicate start and end date of activity]</p> <p>(i) Digital CASA Regional Program:</p> <p>(1) Digital CASA Afghanistan Project timeframe: 2017 – 2022 (2) Digital CASA Kyrgyzstan Project timeframe: 2017 - 2023</p> <p>(ii) Pacific Regional Connectivity Program:</p> <p>(1) Tonga-Fiji Connectivity Project timeframe: 2012 - 2018</p>

	<p>(2) Palau-FSM Connectivity Project timeframe: 2014 - 2020</p> <p>(3) Samoa Connectivity Project timeframe: 2015 - 2020</p> <p>(4) Fiji Connectivity Project timeframe: 2016 - 2021</p> <p>(5) Kiribati Connectivity Project timeframe: 2017 - 2022</p> <p>(6) Tuvalu Connectivity Project timeframe: from 2018</p> <p>(iii) Africa Regional Connectivity Program:</p> <p>(1) Africa Region – Regional Communications Infrastructure Project timeframe: 2017 - 2022</p> <p>(2) Central Africa Backbone Project timeframe: 2017 - 2022</p> <p>(3) West Africa Regional Communications Infrastructure Project timeframe: 2017 - 2022</p> <p>(iv) Caribbean Regional Connectivity Program:</p> <p>(1) Caribbean Regional Communications Infrastructure Program (CARCIP) timeframe: 2016 - 2021</p>
<p>(iv). Any other suggestions/issues:</p>	<p>(i) [List any suggestions]</p>