Technical Assistance Report

Project Number: 50409-001
Knowledge and Support Technical Assistance Cluster (C-KSTA)
September 2017

Pacific Information and Communication Technology Investment Planning and Capacity Development Facility (Phase 2)

Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
DMCs	–	Developing member countries
ICT	–	information and communication technology
TA	–	technical assistance

NOTE

In this report, "$" refers to United States dollars.

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KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE AT A GLANCE

1. Basic Data

Project Number: 50409-001

Project Name	Pacific Information and Communication Technology Investment Planning and Capacity Development Facility- Phase 2	**Department /Division**	PARD/PAUS
Nature of Activity	Capacity Development	**Executing Agency**	Asian Development Bank
Modality	Cluster, Regional		
Country	REG		

2. Sector

	Subsector(s)	ADB Financing ($ million)
✓ Information and communication technology	ICT industries and ICT-enabled services	0.50
	ICT strategy and policy, and capacity development	0.50
	Total	**1.00**

3. Strategic Agenda

	Subcomponents
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive
Environmentally sustainable growth (ESG)	Disaster risk management Eco-efficiency Natural resources conservation
Regional integration (RCI)	Pillar 1: Cross-border infrastructure Pillar 2: Trade and investment Pillar 3: Money and finance Pillar 4: Other regional public goods

Climate Change Information

Climate Change impact on the Project	Low

4. Drivers of Change

	Components
Governance and capacity development (GCD)	Institutional systems and political economy
Knowledge solutions (KNS)	Application and use of new knowledge solutions in key operational areas Knowledge sharing activities Pilot-testing innovation and learning
Partnerships (PAR)	Implementation Regional organizations
Private sector development (PSD)	Public sector goods and services essential for private sector development

Gender Equity and Mainstreaming

No gender elements (NGE)	✓

5. Poverty and SDG Targeting

Geographic Targeting	Yes
Household Targeting	No
SDG Targeting	Yes
SDG Goals	SDG3, SDG4, SDG6, SDG8, SDG11

Location Impact

Regional	High

6. Risk Categorization

Low

7. Safeguard Categorization

Safeguard Policy Statement does not apply

8. Financing

Modality and Sources	Amount ($ million)
ADB	**1.00**
Knowledge and Support technical assistance: Technical Assistance Special Fund	1.00
Cofinancing	**0.00**
None	0.00
Counterpart	**0.00**
None	0.00
Total	**1.00**

I. INTRODUCTION

1. The proposed regional knowledge and support technical assistance (TA) cluster will address requests from the governments of Pacific developing member countries (DMCs) seeking to strengthen their information and communication (ICT) capacities.[1] The TA will support (i) advancing ICT policy and regulatory frameworks, (ii) developing ICT applications, and (iii) adopting technology innovations and protection against cybercrime. The initiative builds on a similar TA program, which successfully and efficiently addressed ICT infrastructure-related challenges for submarine cable projects.[2]

2. The TA is in the regional operations business plan, 2017–2019 of the Asian Development Bank (ADB) for the Pacific.[3] This reflects the recognition of ICT applications for the development of ICT-enabled services as a key area of assistance in the Pacific Approach, 2016–2020.[4]

II. ISSUES

3. ICT development in the Pacific has come a long way from 2010. The region is on an ICT adoption path and has overcome the initial hurdle of setting up effective infrastructure systems for the next phase of ICT engagements. The limited quality and high costs of internet services inhibited the adoption of ICT application, but penetration rates have improved with the O3b (other three billion) network's low-orbiting satellite services and submarine cable systems, which provide greater and more reliable bandwidths at lower costs. Small market size and limited financial feasibility made private sector investments difficult to attract, so several Pacific DMCs relied on development partners, including ADB and the World Bank, to support fiber optic cable projects.[5]

4. With broadband infrastructure in place or expected to be in place in 2022, Pacific DMCs need to manage the changes involved in adopting technological advances. ICT policy and regulatory frameworks in most Pacific DMCs are nascent, if established, and require support to facilitate effective use of ICT applications. While isolated progress has been made in the adoption of ICT applications, the use of services is often limited to casual end users and basic communications, impeding large-scale progress. This has limited the contribution of ICT to the achievement of development goals in areas such as health, education, and private sector development, particularly in overcoming geographic remoteness.

5. The TA seeks to ensure that the region receives support for improving the environment for the adoption of essential ICT applications to tackle the issues described, and achieve its development outcomes more effectively.

III. JUSTIFICATION

6. The TA cluster is proposed because the subprojects are all strategically linked with a common overall objective. The TA cluster modality will allow subprojects to be flexibly designed and implemented, and allow for better sequencing of TA activities, compared with stand-alone TA.

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[1] The TA first appeared in the business opportunities section of ADB's website on 6 September 2017

[2] ADB. 2013. *Technical Assistance for the Pacific Information and Communication Technology Investment Planning and Capacity Development Facility.* Manila. The TA supported the Cook Islands, Nauru, Palau, Samoa in preparing for a submarine internet cable project along with an e-Health pilot project in Tonga.

[3] ADB. 2016. *Regional Operations Business Plan: Pacific, 2017–2019.* Manila. https://www.adb.org/documents/pacific-regional-operations-business-plan-2017-2019

[4] ADB. 2016. *Pacific Approach, 2016–2020.* Manila.

[5] O3b provides low orbit satellite internet service at a lower cost than geostationary satellite internet service.

7. ICT is more dynamic than most sectors, and requires prompt adoption strategies to be effective. It also needs regular interventions to remain relevant in the changing technology space. Pacific DMCs are still a long way behind their Asian counterparts in ICT use, and need a support mechanism to address their expansion plans quickly. A TA cluster approach[6] has worked successfully in mobilizing resources promptly, and helped Pacific DMCs assess feasibility for their ICT infrastructure development projects. Instead of devising separate TA for individual projects, all feasibility activities were undertaken under a TA cluster, saving time and effort for all parties involved. This approach has also been highly effective in developing and implementing the pilot project to support technology adoption, before a full-fledged project rollout is considered.

8. ICT projects have limited dependence on local environments, allowing a high degree of knowledge sharing. A regional TA approach has helped the Pacific DMCs to share similar experiences and learn from each other. Knowledge from the submarine cable projects in Palau and Samoa, for example, helped the Cook Islands and Nauru to decide on the organizational structure and business model for similar projects. Likewise, an e-government initiative in Tonga can provide the Cook Islands with implementation approaches and lessons learned, as the TA cluster provides an umbrella framework for such exchanges.

9. Overall demand for ICT-related services, resources, and equipment are limited by small population size in the Pacific DMCs, creating viability constraints for potential projects. Regional TA can consolidate the demand from multiple countries, leading to benefits such as improved negotiating power, as illustrated in the submarine cable projects in Micronesia and the South Pacific.[7] Without a regional approach, the Cook Islands and Nauru could not have justified their investments in submarine cable infrastructure, indicating that a regional approach can also benefit the next stage of ICT adoption.

IV. THE TECHNICAL ASSISTANCE CLUSTER

A. Outcome and Outputs

10. **Outcome.** The TA cluster will improve cross-sectoral service delivery through use of ICT innovations.[8]

11. **Output 1: Information and communication technology policy and regulatory framework supported.** Telecom markets in the Pacific DMCs are generally small and have limited growth opportunities. In many cases, one or two dominant operators have captured most of the market. Therefore, market competition cannot be expected to act as the primary mechanism to control prices for internet and other telecom services.[9]

12. Limited demand reduces the likelihood of Pacific DMCs having multiple cable service operators competing with state-owned entities, which virtually operate in a monopoly market. This may result in a tendency to overlook cost-cutting opportunities and efficiencies, preventing operators from leveraging wholesale bandwidth price reductions. Governments may require

[6] Similar regional TA (ADB. 2017. *Technical Assistance for the Pacific Urban Development Investment Planning and Capacity Development Facility*. Manila) was approved for the urban sector in the Pacific region.

[7] ADB. 2017. *Concept Paper: Improving Internet Connectivity for Micronesia*. Manila; and ADB. 2016. *Concept Paper: Improving Internet Connectivity for the South Pacific.* Manila.

[8] The design and monitoring framework is in Appendix 1.

[9] State-owned enterprises have been set up in most Pacific DMCs to run submarine internet cable systems and provide internet bandwidth to local telecom operators at wholesale prices.

periodic support to review the business model and enhance cable system efficiency to ensure affordable rates that benefit the population.

13. A strong regulatory regime is critical to ensure that internet prices remain affordable and service qualities are maintained.[10] ADB and the World Bank provided funding to set up the Pacific ICT Regulatory Resource Centre under the University of the South Pacific as a center of excellence for telecom regulation, which requires constant revision as new technologies and tools enter the market and legal environments evolve. Through the TA, policy and regulatory frameworks in the region will be further supported which are essential to ensuring affordable and widely accessible ICT services.

14. This output will include support for governments to adopt, implement, and revise policy and regulatory frameworks that (i) ensure the quality of ICT services, (ii) provide for equitable and affordable access to ICT services, and (iii) support the proliferation of ICT services use.

15. **Output 2: Development of information and communication technology applications supported.** Affordable broadband services facilitate the rollout of ICT applications and services, enabling the Pacific DMCs to reshape their ICT application strategies. Development benefits can be particularly apparent in education, health, governance, and other social services, where ICT services can be provided to vulnerable sections of the population easily and cost-efficiently. In other developing countries, e-health, e-education, and e-governance programs have been effective and sustainable solutions.[11] ICT applications can also enable climate change mitigation and adaptation efforts as well as disaster risk management, which are relevant for climate-vulnerable and disaster-prone Pacific DMCs. As tourism and agriculture are the main income-generating sectors in the Pacific, ICT applications can be used to tap efficiencies and directly contribute to economic growth. With disbursed populations on remote islands, ICT applications from improved communication services to digital banking and micropayment transactions can help bridge distances. Cloud-based platforms can also drive efficiencies, with lower maintenance costs and offshore support. A regional approach to adopting ICT applications will help small Pacific DMCs attain economies of scale, share implementation knowledge, and realize value for money.

16. This output will include targeted support for initiatives that drive the use of ICT services, with a focus on (i) devising programs that lead to the adoption of ICT applications as part of governments' service delivery functions, including regional cloud-based approaches; (ii) developing initiatives to design and implement sector-specific and sector-independent pilot ICT applications, with a focus on future full-scale rollouts; (iii) incentivizing ICT application adoption in non-ICT projects that can benefit from ICT-enabled efficiencies; (iv) fostering capacity-building measures that ensure the sustainability of application support and maintenance; and (v) supporting regional knowledge exchange and collaborations to take advantage of economies of scale in ICT use.

17. **Output 3: Adoption of technology innovations and protection against cybercrime supported.** With new submarine cable infrastructure and satellite technology systems, internet use is soaring in the region, providing opportunities as well as drawbacks that must be carefully managed.

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[10] Many countries are working toward setting up telecom regulatory offices, with Samoa having set up the first one in the Pacific, followed by Vanuatu, Kiribati, and Solomon Islands.

[11] ADB. ICT in Health. https://www.adb.org/sectors/ict/ict-in-key-sectors/health; ADB. Indonesian Government Reform and Public Services. https://www.adb.org/results/indonesian-government-reform-and-public-services.; ADB. ICT in Public Sector Management. https://www.adb.org/sectors/ict/ict-in-key-sectors/public-sector.

18. Pacific DMCs have not considered cybersecurity and protection critical because of limited regional exposure to the internet, but the threat of cyber crimes is growing. Without legislation and capacity to handle cybercrime, the region may quickly turn into a center for online criminal activities. The Pacific DMCs are requesting for technical support to set up processes and develop capacity to enhance resilience against this threat. Cybersecurity legislation has already been passed in Tonga,[12] though implementation support is needed. Resources are also required to educate internet users and raise awareness of cybercrime activities targeting end users.

19. Data protection and privacy issues are an increasing concern, as big data collection and surveillance can infringe individual rights and consumers' protection. Open and transparent internet access can ensure that information originating from smaller countries is not obscured, and improve their global economic competitiveness.

20. This output will include support for (i) evaluating governments' adoption of technology innovations within their own ICT infrastructure systems in terms of adherence to security, data protection, and privacy best practices; (ii) strengthening cybersecurity protections, mitigating against cybercrime threats, and addressing other social and technological risks that result from ICT innovation adoptions; and (iii) ensuring that policies and legislation provide an environment that allows open and transparent technology adoption.

B. Cost and Financing

21. The TA cluster is estimated to cost $1 million, of which $1 million will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-6). The key expenditure items are listed in Appendix 2. The participating governments will provide counterpart support in the form of counterpart staff, office and housing accommodation, office supplies, secretarial assistance, and other in-kind contributions.

C. Implementation Arrangements

22. ADB will administer the TA cluster and will be responsible for consultant recruitment and procurement, in close consultation with the participating governments. ADB will seek concurrence from the participating governments for the recruitment of consultants. The government counterpart in each country will assist ADB in identifying the TA implementing agencies based on the scope of the requests. The implementing agency in each participating country, together with the consultants, will implement the TA. The project team will maintain close coordination with ADB resident missions, other development partners, and any other external stakeholders during TA implementation.

Table 1: Implementation Arrangements for the Technical Assistance Cluster

Aspects	Arrangements
Indicative implementation period of the TA cluster	September 2017–December 2022
Executing agency	ADB
Implementing agencies	ADB's Urban, Social Development, and Public Management Division; ADB's Pacific Department; and implementing agencies in participating countries
Disbursement	The TA resources will be disbursed following ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

ADB = Asian Development Bank, TA = technical assistance.
Source: Asian Development Bank.

[12] Tonga established a Cyber Emergency Response Team in 2016 (Tonga National CERT. https://www.cert.to/).

23. **Subprojects.** The TA cluster will be implemented through five TA subprojects as described in Appendix 3. Each subproject will be designed to support the achievement of the cluster outputs (paras. 11–20), and will be approved by the Director General, Pacific Department.

Table 2: Indicative Implementation Period and Budget Allocation for Subprojects

Item	Subproject Title	Implementation Period	Budget ($'000)
Subproject 1	Feasibility Assessment for e-Government Rollout in the Pacific DMCs	November 2017–November 2019	600
Subproject 2	Demonstrating Information and Communication Technology-Enabled Services in Water, Health, and Education Sectors	January 2018–December 2018	300
Subproject 3	Support Cybersecurity and Telecom Regulatory Capacity Development	January 2018–December 2021	100

Source: Asian Development Bank.

24. **Consulting services.** The TA cluster is expected to engage 20 consultants individually or through firms as and when needed. An output-based lump sum contracting approach will be preferred to minimize the administrative burden. The consultants will work across multiple subprojects to share knowledge and experience. ADB will engage the consultants in accordance with its Guidelines on the Use of Consultants (2013, as amended from time to time). The estimated cost and requisite fields of expertise are indicative and estimates will be finalized prior to approval of each TA subproject in consultation with the government during follow-up missions.

25. **ADB's procurement.** ICT equipment and systems will be needed for pilot implementation and proof of concept. Detailed implementation and procurement arrangements will be finalized following ADB Procurement Guidelines (2015, as amended from time to time) prior to the approval of each TA subproject, in consultation with the governments. The handover process of the equipment after TA completion will be determined in consultation with the government counterparts.

V. THE PRESIDENT'S DECISION

26. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of $1,000,000 on a grant basis to the Pacific DMCs for Pacific Information and Communication Technology Investment Planning and Capacity Development Facility (Phase 2), and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Impacts the TA is Aligned with Access to ICT increased (ADB Pacific Approach, 2016–2020)[a] Access to ICT applications for public service delivery improved (ADB regional operations business plan Pacific, 2017–2019)[b]			
Results Chain	**Performance Indicators with Targets and Baselines**	**Data Sources and Reporting Mechanisms**	**Risks**
Outcome Cross-sectoral service delivery through use of ICT innovations improved	a. At least four digital government services increased b. Selected internet-based online services available to citizens increased	a. Core list of ICT indicators[c]	Internet services are not tailored to population needs. Capital costs for ICT adoption are beyond budget constraints. Required ICT expertise cannot be sourced locally.
Outputs 1. ICT policy and regulatory framework supported	By 2022: a. At least one legislation governing independent ICT regulation supported b. At least one independent ICT regulatory entity or process supported c. At least one government ICT policy supported	a. Survey of established entities or processes b. Survey and review of government policy and ICT strategy	Lack of political support for independent regulatory reform
2. Development of ICT applications supported	By 2022: a. At least two programs to incentivize selected internet-based government–citizen online services, including cloud-based approaches, developed b. At least two sector-specific and sector-independent pilot ICT applications, with focus on future full-scale rollouts, designed and implemented	Stock-taking of government–citizen applications and their usage levels Stock-taking of number and effectiveness of pilot applications and resulting full-scale rollouts Project progress reports	Lack of local ICT capacity to support application development, maintenance, and support results in unsustainable costs. Internet-based government–citizen application services are not tailored to population needs. Non-ICT sector project stakeholders avoid ICT component integration because of added implementation complexities.

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
3. Adoption of technology innovations and protection against cybercrime supported	By 2022: a. At least one CERT supported b. At least two cybercrime legislations developed	a. Survey of CERT established b. Survey of cybercrime, cybersecurity, and related legislation and policies	Lack of local ICT capacity and cybersecurity skills to support and maintain cybersecurity defenses and lack of resources to keep up with fast-paced cybercrime developments and security threats

Key Activities with Milestones

1. TA activities and timelines will be finalized for each participating country. The host government and ADB will approve the detailed work plan, schedule, and deliverables of the engaged experts or consulting firm.
2. TA activities will be undertaken, which may include conducting research, evaluation, consultation, field survey, and desk review or collecting required baseline data from existing credible sources and assessment of technical solutions, with the full participation and engagement of concerned government staff and national organizations.
3. Capacity building will be rolled out at the governments' request, based on the skills or knowledge assessment related to ICT use, and application and institutional strengthening of national regulators.

TA Management Activities

Continue regular monitoring and supervision until Q4 2022
Manage contracts from Q4 2017 until Q4 2022
Provide timely progress reports until Q4 2022
Carry out regular accounting until Q4 2022

Inputs

ADB: $1 million
Note: The participating governments will provide counterpart support in the form of counterpart staff, office and housing accommodation, office supplies, secretarial assistance, and other in-kind contributions.

Assumptions for Partner Financing

Not applicable

ADB = Asian Development Bank, CERT = Cyber Emergency Response Team, ICT = information and communication technology, Q = quarter, TA = technical assistance.

[a] ADB. 2017. *Pacific Approach, 2016–2020*. Manila. https://www.adb.org/documents/pacific-approach-2016-2020.

[b] ADB. 2016. *Regional Operations Business Plan: Pacific, 2017–2019.* Manila. https://www.adb.org/documents/pacific-regional-operations-business-plan-2017-2019

[c] Partnership on Measuring ICT for Development. 2016. *Core List of ICT Indicators*. March 2016 version. https://www.itu.int/en/ITU-D/Statistics/Documents/coreindicators/Core-List-of-Indicators_March2016.pdf

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN

($'000)

Item	Amount
Asian Development Bank[a]	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	500.00
ii. National consultants	150.00
b. International and local travel	100.00
c. Reports and communications[b]	30.00
2. Training, seminars, and conferences	50.00
3. Information and communication technology equipment	100.00
4. Surveys[c]	15.00
5. Miscellaneous[d]	5.00
6. Contingencies	50.00
Total	**1,000.00**

Note: The technical assistance (TA) is estimated to cost $1 million, of which contributions from the Asian Development Bank are presented in the table above. The participating governments will provide counterpart support in the form of counterpart staff, office and housing accommodation, office supplies, secretarial assistance, and other in-kind contributions. The value of government contribution is estimated to account for 10% of the total TA cost.

[a] Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-6).

[b] Including preparation and printing of guidebook.

[c] Including surveys for conducting environmental, gender, and social assessment.

[d] Including visas and other miscellaneous costs.

Source: Asian Development Bank estimates.

SUBPROJECT DESCRIPTIONS

Subproject 1	Feasibility Assessment for e-Government Rollout in the Pacific DMCs
Indicative outputs and activities	The TA will support (i) the governments to assess the current situation of ICT with recommendations toward the necessary developments (infrastructure, hardware and software, organizational structure, human resources, and policies and legislation) for the implementation of full-scale e-government process; and (ii) a pilot implementation of the recommended services in a sector.
Indicative implementation arrangements	ICT division, Office of the Prime Minister, the Cook Islands; and Ministry of Meteorology, Energy, Information, Disaster Management, Climate Change and Communications, Tonga
Implementation schedule	November 2017–November 2021

Subproject 2	Demonstrating Information and Communication Technology-Enabled Services in Water, Health, and Education Sectors
Indicative outputs and activities	The TA will support (i) conducting a pilot implementation of a system enabling water utility customers to use prepaid mobile phone credit to top-up prepaid water meters in the Marshall Islands; (ii) field-testing a text message service for disseminating key messages on hygiene, and water service interruptions in the Marshall Islands and Vanuatu; (iii) preparing an implementation road map for the e-Health project in Tonga; (iv) organizing an “as-is assessment” of the current education system and identifying potential opportunity for e-education; (v) identifying infrastructure, process, and resource gap; and (vi) preparing an implementation road map for the e-education system.
Indicative implementation arrangements	Kwajalein Atoll Joint Utilities Resources Inc., Marshall Islands; Prime Minister’s Office, Vanuatu; Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications, Tonga; and Ministry of Education, Palau
Implementation schedule	January 2018–December 2021

Subproject 3	Support Cybersecurity and Telecom Regulatory Capacity Development
Indicative outputs and activities	The TA will support (i) the assessment of existing cyber laws and telecom regulation, (ii) the identification of possible areas of improvement, and (iii) capacity development to implement and monitor telecom regulation and cyber laws.
Indicative implementation arrangements	Relevant ministries in the participating countries
Implementation schedule	January 2018–December 2021

ICT = information and communication technology, TA = technical assistance.
Source: Asian Development Bank.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. Detailed terms of reference will be formulated for each subproject on a case-by-case basis. The Asian Development Bank (ADB) will evaluate government requests for assistance based on (i) government commitment to pursue information and communication technology (ICT) development, (ii) relevance and links to ongoing and forthcoming ICT investment and programs in the country, (iii) complementarity with development partners, and (iv) capacity to mobilize the full participation of government staff and national organizations from concerned areas who will take part in technical assistance (TA) activities through on-the-job and other training. ADB, through the Pacific Department, will coordinate the overall TA activities working closely with resident missions and other development partners.

A. Subproject 1: Feasibility Assessment for e-Government Rollout in the Pacific Countries

2. The subproject will help the Cook Islands, Tonga, and other interested Pacific DMCs to carry out a comprehensive assessment of current ICT use in government operations and a road map to promote e-government. It will include “as-is” and “to-be” analysis, infrastructure, hardware and/or software recommendation, organization structure, human resource requirement, and legal and regulatory gap analysis. Subproject 1 involves recommending a set of services to be pilot tested to demonstrate e-government capabilities. It will involve the recruitment of an international ICT architect, a sector specialist, and legal consultants, preferably through a firm, to deliver the feasibility report. The project team will work closely work with ADB and government counterparts to execute day-to-day tasks. During the pilot implementation, computer software, hardware, and digital equipment will be procured to demonstrate the benefit of e-government operations.

3. The main activities under the subproject are the following:
   (i) proposals on feasible ICT applications for delivering public and social services through e-government;
   (ii) learning sessions or capacity-building training programs rolled out to line ministries on the use and application of ICT in e-governance;
   (iii) analyses of potential socioeconomic and poverty reduction impacts of ICT, including affordability assessment and capacity of the governments to mitigate risk;
   (iv) technical support for negotiations with potential private investors on the scope of partnership, terms of financing, and sharing of risk; and
   (v) coordination support for joint country or regional initiatives for e-government.

B. Subproject 2: Demonstrating Information and Communication Technology-Enabled Services in Water, Health, and Education Sectors

4. Subproject 2 will enable the participating countries to explore opportunities to use technology in various sectors. The TA will support the Marshall Islands and Vanuatu in pilot testing the ICT system for water billing system and water usage awareness campaign. Tonga has already initiated pilot implementation of a health information system. The proposed TA will extend the pilot project and develop a road map for a comprehensive e-health program. The TA will support Palau in leveraging better internet connectivity through the ongoing submarine cable project (footnote 1) and in developing a distance education system. International water, health, and education specialists will be recruited to support the Pacific DMCs.

5. The main activities under the subproject are the following:
   (i) set up a process to integrate the water billing system with mobile top-up service offered by local mobile operators;
   (ii) develop and procure necessary ICT hardware and software;
   (iii) train the water agency officials to operate the systems;
   (iv) negotiate with local telecom providers for smooth system rollout;
   (v) implement a short messaging service system to deliver key information;
   (vi) assess various health and education systems;
   (vii) a high-level architecture and rollout plan for ICT systems;
   (viii) plan and estimate the resources and budget; and
   (ix) facilitate the handover of equipment.

C. Subproject 3: Support Cybersecurity and Telecom Regulatory Capacity Development

6. Other organizations (PRIF and DFAT) have parallel initiatives to strengthen the telecom sector in the Pacific, with the introduction of cybersecurity regulation and policies.[1] The TA will help the Pacific DMCs to continue the initiative and refine the output to suit the local context. It will facilitate knowledge sharing with other Pacific DMCs and manage the telecom industry through a regional approach. The project team will hire a set of legal consultants, telecom industry experts, and cybersecurity specialists for this purpose. They will work across the Pacific DMCs and help them to learn from one another.

7. The main activities under the subproject are the following:
   (i) coordinate with similar initiatives in the region;
   (ii) understand the local context and judiciary requirements;
   (iii) arrange consultations with civil society organizations, nongovernment organizations, and local communities
   (iv) draft legal documents for telecom reforms and cyber laws; and
   (v) advise on the technology available for monitor and control.

[1] Pacific Region Infrastructure Facility (PRIF), Department of Foreign Affairs and Trade (DFAT)