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Report No: PAD2696

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF SDR 21 MILLION
(US\$29 MILLION EQUIVALENT)

TO TUVALU

FOR A

TELECOMMUNICATIONS AND ICT DEVELOPMENT PROJECT

December 12, 2018

Digital Development Global Practice
East Asia And Pacific Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective October 31, 2018)

Currency Unit = AUD

AUD 1= US\$0.73

SDR 1 = US\$ 1.38213

FISCAL YEAR

January 1 - December 31

ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
ADSL	Asymmetric Digital Subscriber Line
BMH	Beach Man Hole
BU	Branching Unit
CAPEX	Capital Expenditure
CLS	Cable Landing Station
CPF	Country Partnership Framework
DA	Designated Account
EIRR	Economic Internal Rate of Return
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESSIP	Environmental and Social Safeguard Instrument for the Pacific
FA	Financing Agreement
FM	Financial Management
Gbps	Gigabits per second
GDP	Gross Domestic Product
GNI	Gross National Income
GoTV	Government of Tuvalu
GRS	Grievance Redress System
ICT	Information and communication technologies
IDA	International Development Association
IFR	Interim Financial Reports
IP	Internet Protocol
IRU	Indefeasible Right of Use
ISMU	ICT Sector Monitoring Unit (a unit within MCT)
ITU	International Telecommunications Union
IXP	Internet Exchange Point

LCS	Least Cost Based Selection
Mbps	Megabits per Second
MFED	Ministry of Finance and Economic Development
MCT	Ministry of Communications and Transport
MoU	Memorandum of Understanding
OADM	Optical Add Drop Multiplexer
OPEX	Operating Expense
PCR	Physical Cultural Resources
PMU	Project Management Unit
PPA	Project Preparation Advance
PPP	Public-Private Partnership
PPSD	Project Procurement Strategy Document
PRIF	Pacific Regional Infrastructure Facility
PSC	Project Steering Committee
QCBS	Quality and Cost Based Selection
RFS	Ready for Service
RPF	Resettlement Policy Framework
SCD	Systemic Country Diagnostic
SLTE	Submarine Line Terminating Equipment
SMS	Short Message Service (text messaging)
SORT	Systematic Operations Risk-Rating Tool
STEP	Systematic Tracking and Exchanges in Procurement
SX NEXT	Southern Cross Cable, Next Generation
TA	Technical Assistance
TTC	Tuvalu Telecommunications Corporation
TvAIPMU	Tuvalu Aviation Investment Project Management Unit

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Tuvalu	TV: Telecommunications and ICT Development Project	
Project ID	Financing Instrument	Environmental Assessment Category
P159395	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input checked="" type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Disbursement-linked Indicators (DLIs)	<input checked="" type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
08-Jan-2019	29-Dec-2023

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The Project Development Objective is to facilitate improved access to, and reduced cost of, internet services in Tuvalu.



Components

Component Name	Cost (US\$, millions)
1. Technical Assistance	2.00
2. Enhancing Connectivity Infrastructure	26.50
3. Project Management	0.50

Organizations

Borrower: Tuvalu
 Implementing Agency: Ministry of Communications and Transport

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	29.00
Total Financing	29.00
of which IBRD/IDA	29.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	29.00
IDA Grant	29.00

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Total Amount
National PBA	0.00	13.00	13.00
Regional	0.00	16.00	16.00
Total	0.00	29.00	29.00



Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2019	2020	2021	2022	2023	2024
Annual	1.05	4.75	7.50	12.50	2.20	1.00
Cumulative	1.05	5.80	13.30	25.80	28.00	29.00

INSTITUTIONAL DATA

Practice Area (Lead)

Digital Development

Contributing Practice Areas

Infrastructure, PPP's & Guarantees

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	No
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	No
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	No

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Low
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● High
5. Institutional Capacity for Implementation and Sustainability	● High
6. Fiduciary	● Substantial



7. Environment and Social	● Low
8. Stakeholders	● Substantial
9. Other	
10. Overall	● High

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any waivers of Bank policies?

Yes No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04		✓
Forests OP/BP 4.36		✓
Pest Management OP 4.09		✓
Physical Cultural Resources OP/BP 4.11		✓
Indigenous Peoples OP/BP 4.10		✓
Involuntary Resettlement OP/BP 4.12		✓
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description

The MCT shall maintain a Project Management Unit (PMU) acceptable to the Association: FA Schedule 2, Section I B.



Sections and Description

The Recipient shall ensure that the Project is carried out in accordance with the Project Operational Manual acceptable to the Association: FA Schedule 2, Section I D.

Conditions



I. STRATEGIC CONTEXT

A. Country Context

Introduction

1. Tuvalu is one of the least connected countries in the Pacific region in 2018. Telecommunications and internet services are costly, of limited variety and variable quality. Services are particularly limited outside the main island of Funafuti. More affordable and reliable internet services would facilitate business development, tourism, and management of natural disasters, and support the delivery of social services such as education, and healthcare. In this context, this Project proposes to assist Tuvalu in developing and implementing a sustainable solution for high quality, high speed connectivity which shifts fiscal and operational responsibility away from Government to an experienced international telecommunications operator.

Country overview

2. Tuvalu consists of nine inhabited low-lying island atolls in the South Pacific. The nearest neighbouring states (more than 1,000 km away) are Kiribati to the North and Fiji to the South. The total population is 10,640 (2012 census) of whom 57 percent live on the main island of Funafuti. Tuvalu is vulnerable to natural disasters, the most recent being Cyclone Pam in 2015. As a Pacific Island Country, Tuvalu is highly vulnerable to climate change related impacts and events including storm surges, king tides and floods, sea level rise, tropical storms, and cyclones. The country's remoteness, dispersion and isolation make natural disasters particularly dangerous. Furthermore, most land areas are low lying with maximum elevation of about 4.5 meters. Population growth and migration coupled with poor coastal development and land use planning, unplanned urban growth and water and ecosystem degeneration are also making Tuvalu increasingly vulnerable to climate change,

3. Tuvalu's principal revenues derive from the sale of fishing rights of its waters, and remittances from expatriate workers, many of whom are merchant sailors or seasonal workers in Australia and New Zealand. It is also heavily dependent on foreign aid. The Government of Tuvalu (GoTV) has leased the internet domain "dot TV" to Verisign and that lease returns between US\$4 and US\$5 million per year (about 10- 12 percent of GDP).

4. Almost all formal employment is in the public sector. Outside the public sector the working population is mostly engaged in subsistence farming and fishing. Diversification of sources of growth and increased private sector-led employment and income-generation are therefore important medium-term development goals. Lack of, or inadequate, basic infrastructure remains a major barrier to economic development and service delivery, particularly on the Outer Islands.

5. The Government of Tuvalu appreciates the need for improved connectivity/digital infrastructure. Its third National Development Plan (NDP), the National Strategy for Sustainable Development 2016 to 2020 (also referred to as TKIII), notes the key role of information and communication technologies (ICT) to facilitate development in other priority areas for Government such as education, health, and disaster management. Successful development of ICT infrastructure and services will likely contribute to the overall economic reform process in Tuvalu. Accordingly, ICT infrastructure and services expansion and widespread availability are key priorities for the Government.



Economic Context and Recent Developments.

6. GDP per capita is currently US\$3,536 (2017). GDP growth increased to 9.1 percent in 2015 due in part to recovery spending following Cyclone Pam, before falling back to 3.0 percent in 2016. In 2017 growth is estimated to have increased slightly to 3.2 percent, reflecting the impact of ongoing public works. Besides being one of the most remote economies in the world, the inherent lack of economies of scale and high transaction costs resulting from the dispersion of a small population across nine islands has hampered economic development. The public sector plays a major role in the economy, accounting for almost all formal employment; while the private sector (consisting mainly of small firms in the wholesale and retail sectors) remains small and undeveloped.

7. Tuvalu’s economy is highly vulnerable to challenges stemming from its very small size, geographic isolation, and structural economic conditions. It relies heavily on grants and buffer assets (i.e. the Tuvalu Trust Fund, and its auxiliary fund – the Consolidated Investment Fund) to absorb shocks. With no monetary independence, a high level of import dependence and minimal financial infrastructure, fiscal policy is the main tool available to the GoTV to manage the economy. Tuvalu’s fiscal position is extremely tight with regular pre-grant fiscal deficits providing limited space for government investments or operations, particularly in times of crisis. In addition, natural disasters such as cyclones, king-tides, and droughts are relatively regular and devastating occurrences in Tuvalu. Given the small size of the economy in nominal terms, these exogenous shocks can significantly alter fiscal outcomes.

B. Sectoral and Institutional Context

8. **ICT Sector Overview.** Tuvalu’s ICT sector is characterized by a single Government owned provider, Tuvalu Telecommunications Corporation (TTC). TTC is a very small entity with limited business, marketing and services delivery competencies, low international and national access capacity and, at the retail end, affordability and quality of service issues. Fixed voice services to individual premises (residential and Government offices) are limited to two of the country’s nine islands - Funafuti and Vaitupu. The other Outer Islands have fixed phone services in the Island Council premises while the general population is served with bureau-based services, i.e. the customer must go to a specific location to use a phone or computer. Mobile broadband (3G and recently introduced 4G mobile) and voice services are limited to Funafuti although TTC is progressively installing new satellite facilities and plans on installing 3G services at some Outer Islands subject to Government finance and completion of the satellite facilities. The 2G network that did service four of the Outer Islands was shut down in September 2016, pending future replacement by 3G. WiFi internet access is available at four locations on Funafuti and one location at each of the Outer Islands. On some of the Outer Islands, the WiFi service is being extended but presently requires users to go to the WiFi hub with their own device; the available bandwidth has been increased but remains very limited – resulting in poor service suitable for little more than email. Access to ICT services is summarized in Table 1a.

Table 1a. Access to ICT Services, 2018 (% of population)

Service	Fixed Lines	Fixed (ADSL) internet	Mobile (2G) (active)	Mobile 3G/ 4G (active)
% population	11.0	3.0	0	25.0
Number of Active Subscribers	1,200	105 (Business & Residential)	0	2,800

Source: TTC

9. The condition of the infrastructure and quality of services both on the main island (Funafuti) and on the Outer Islands is poor. On Funafuti the fixed line (copper cable) network needs frequent repairs and the incumbent



envisages retirement of all copper cables by 2020 due to condition and costs of maintenance. The access network is then envisaged to migrate to wireless for all voice and data services. TTC has prepared a plan for establishment of fibre to the premises (FTTP) Passive Optical Network, but this proposal is unfunded and is dependant first on dramatically improved international capacity and technical analysis comparing the benefits of FTTP with wireless solutions.

10. The scale and circumstances of TTC’s operations pose difficult challenges for its future. Although TTC made a modest profit in 2017, it operated at a loss for each of the previous eleven years, requiring periodic Government subsidies. TTC’s limited size also means that suppliers are reluctant to deal with it (market volume, cost of support, possibility of default) which limits its access to competitively supplied and priced products and services, including international services terminations. TTC’s limited workforce (total staff 37 as of 2018) means that the skills required are largely not available. As a monopoly TTC has had little incentive for marketing its services and stimulating demand for new services.

11. The very small population and low GDP of Tuvalu have so far limited the potential for private sector development. The ICT market is also highly fragmented with approximately 40% of the population living on Outer Islands outside of Funafuti. These Outer Islands represent only about 25% of the total revenue from the national market due to the lower disposable income of the population on the islands. The vast distances and lack of economical transportation services also contribute to the high operational costs in Tuvalu– e.g., the price of a small mobile tower ex-factory is about US\$4,000, but another US\$65,000 is typically required for transport and installation on an outer island. All these factors have contributed to a perpetuating cycle of limited services, high prices, low revenues and ongoing Government subsidies and financial support.

12. TTC has a community service obligation (CSO) arrangement with the Government for the provision of services to Outer Islands. Under this program TTC is progressively installing new satellite connectivity on each Outer Island coupled with new WiFi distribution. A new connection for Niulakita (population 30) is being considered. In November 2015, TTC negotiated satellite capacity on the ‘C band’ Asian Broadcasting Satellite (ABS) for an initial level of 10 Mbps for its backbone network. TTC has since expanded capacity from ABS to accommodate services to Vaitupu Island – 4 Mbps being dedicated to Vaitupu. TTC also has plans for some 3Mbps to each Outer Island (except Niulakita – population 30). However, these extensions are largely unfunded and those that have been completed suffer from the high costs of purchasing satellite connectivity in small amounts without the commercial scale, scope and expertise available to international operators.

Table 1b: Summary of ICT Connectivity in Tuvalu by Island and Technology

Island	Population (Est 2017)	Connectivity	Fixed lines	ADSL	Mob. data	Comment
Funafuti	6194	98 Mbps			2800 (3G)	4G mobile network recently active
Vaitupu	1565	4 Mbps (ABS)	72	Nil	Nil	Satellite upgraded & WiFi installed
Nanumea	556	3Mbps Shared	<10	Nil	Nil	Upgrade pending funds
Nanumaga	481	3Mbps Shared	<10	Nil	Nil	Upgrade pending funds
Niutao	606	3Mbps Shared	<10	Nil	Nil	Upgrade pending funds
Nui	541	3Mbps Shared	<10	Nil	Nil	Upgrade pending funds
Nukufetau	540	3Mbps (ABS)	<10	Nil	Nil	Satellite upgraded & WiFi installed
Nukulaelae	324	3Mbps (ABS)d	<10	Nil	Nil	Satellite upgraded & WiFi installed
Niulakita	30	3Mbps Shared	<10	Nil	Nil	Upgrade subject to GoTV funding

Source: TTC

13. The mobile broadband (3G and 4G) networks were established by two separate partnerships with separate equipment vendors. The 3G mobile facilities are provided and established on Funafuti as a wholesale service which



is on-sold by TTC. The 4G system is owned by TTC. TTC had contracted for new low-cost satellite connectivity for all islands via Asia Broadcast Satellite (ABS). Existing high cost satellite services contracts that were to expire at the end of 2016 have been extended pending completion of the ABS satellite service to Outer Islands. This ABS capacity is used to support the 3G service which is managed through a core switch in Pohnpei (Federated States of Micronesia) which also provides the data gateway for the 3G internet services. These investments in new ICT services are generally on the margins and overall service quality and access remains very constrained.

14. Total international connectivity (by satellite) in early 2018 was 101 Mbps (unidirectional, equivalent to about 70 Mbps via cable which is bi-directional). This corresponds to 6.3 kbps/ per capita. For comparison, Fiji, a near neighbour albeit with a larger economy, has international connectivity of about 32 kbps/ per capita. However, Tuvalu's need for bandwidth is expected to grow, in line with regional and global trends, driven by individual and institutional demand and expanded by expectations that are not funded. Recent analysis undertaken by the World Bank estimates demand for bandwidth to Funafuti to grow, in a conservative base case scenario, to at least 3.7 Gbps by 2037. Experience of other regional connectivity projects in the Pacific (e.g. Tonga and Samoa) has shown that data uptake has increased very rapidly after deployment of cables, surpassing expectations.

15. **ICT Policy, Legal and Regulatory Framework.** The Ministry of Communications and Transport (MCT) is responsible for the development of ICT policy but has very limited capacity. A preliminary ICT policy document has been prepared. This will be finalized in 2019. A small unit within MCT will be established specifically focused on ICT sector oversight. The existing Public Enterprise Reform and Management Unit (PERMU) under the Ministry of Finance and Economic Development (MFED) has a mandate to oversee public enterprise financial performance but the new unit will address ICT sector operational performance.

16. TTC was established under the Tuvalu Telecommunications Act (TTC Act) as Act 4 of 1993 which came into force on 1 February 1994. The TTC Act, formally known as the Tuvalu Telecommunications Corporation Act, has been amended three times to strengthen TTC's corporate governance and accountability (Act 2 of 1996), to establish procedures for approval of remuneration of TTC's directors (Act 4 of 2008) and in 2012 to end TTC's exclusivity over the right to supply telecommunications services and establish telecommunications systems in Tuvalu (Tuvalu Telecommunications Corporation (Amendment) Act 2012). The TTC Act serves as TTC's charter and provides part of TTC's corporate law framework.

17. The TTC Act is supplemented by the Public Enterprises Act (2009) and the Companies Act (2008) to form the overall corporate law framework within which TTC currently operates. The TTC Act also establishes the primary commercial and regulatory law framework for Tuvalu's communications sector. In terms of the broader legal enabling environment to support the proposed reforms and investments, the Public Enterprises Act would provide the basis for converting TTC into a Private-Public Partnership (PPP) and the Protected Industries Act (2008) authorizes Government to provide TTC with exclusivity for limited term of years. The Foreign Direct Investment Act (2008) requires ministerial approval for qualifying foreign investments, including the type of PPP envisaged between Government and a private sector partner for TTC.

C. Relevance to Higher Level Objectives

18. A Systematic Country Diagnostic (SCD) for eight small Pacific Island states was completed in January 2016. This identified the key challenges for Tuvalu which includes fully exploiting the limited set of economic opportunities; fostering access to economic opportunities and public services; protecting incomes, assets and services for the poor; and addressing selectively weaknesses in economic governance. The Project is also consistent with the World Bank Group's Regional Partnership Framework for Nine Pacific Island Countries



(FY2017-FY2021) (Report #120479), specifically with Focus Area 4 – Enablers of Growth Opportunities. Improving access to ICTs was identified as one of the country priorities during consultations on the SCD and RPF.

19. The Project will also build on the World Bank’s initial diagnostic assessment of Tuvalu’s ICT sector in 2014-2015 and policy dialogue with the Government. Consultations regarding potential technical solutions have also been carried out with other regional governments, industry stakeholders and development partners. The final design will be determined by the private operator selected under the PPP transaction. Improved ICT services are expected to contribute to a broad range of Government policy objectives articulated in the new medium-term development plan. The reform of the telecommunications sector is listed as a priority for the Government in the TK III, approved in April 2016.

20. The Project is part of a broader, ongoing, Regional IDA program that supports improved Pacific Connectivity. Other participating countries in the Regional IDA program include Tonga, Samoa, Fiji, FSM (with Palau) and Kiribati. Given the availability of national IDA resources for Tuvalu, the Project is leveraging SDR11.6 million (US\$16 million equivalent) of additional Regional IDA program funds with SDR9.4 million (US\$13 million equivalent) of Tuvalu’s national IDA funds. Regional IDA resources will be used entirely for the proposed international submarine cable investment under Component 2 described below. The proposed cable will link Tuvalu to the regional communications networks and strengthen relations with its regional neighbours. Over the long term, a potential cable link from Tuvalu to Kiribati could also be considered. Improved connectivity will contribute to regional infrastructure development, institutional cooperation for economic integration, and coordinated interventions to provide regional public goods:

- (a) Pacific island countries are characterized by their small size and extreme geographic isolation. Tuvalu’s distance from markets results in substantial economic disadvantages; previous research points to clear correlation between market access and economic growth.
- (b) For the medium term, overcoming challenges of distance and isolation will hinge on Tuvalu’s ability to stimulate domestic growth and on the extent to which they can integrate with each other and with their larger neighbours. Isolation and limited economies of scale also mean that Pacific economies often rely heavily on aid, remittances, natural resource rents, and tourism. In this context, improving connectivity throughout the region has the potential to support national economic growth and to underpin the critical processes of regional coordination and integration. Greater and more affordable connectivity in the Pacific would help lower transaction costs, create new economic opportunities and enhance communication and delivery of services to currently isolated domestic communities. From a regional perspective, improved connectivity has the potential to enhance the efficient use of resources, to facilitate cooperation on a wide range of transnational issues, such as, management and monitoring of natural resources (e.g., fisheries), comprehensive mitigation efforts addressing natural disasters, climate change and adaptation, as well as collaborative service delivery.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

The Project Development Objective is to facilitate improved access to, and reduced cost of, internet services in Tuvalu.



PDO Level Indicators

21. Progress will be measured against the following PDO-level results indicators:
- (a) Increase in access to internet services (% of population)
 - (b) Reduction in the price of internet services (US\$/GB)
 - (c) Project beneficiaries reporting satisfaction with improved internet services (%)

B. Project Components

22. The Project will address the physical connectivity infrastructure and the enabling environment needed to support the implementation of a Public-Private Partnership (PPP) governing the ownership, management and operation of connectivity infrastructure.

23. **Component 1. Technical Assistance (US\$2.00 million)**

(a) Develop and implement ICT policy, new / amended legislation and reforms for the ICT sector, including strategies for Outer Islands and international connectivity incorporating a submarine optical fibre cable system;

(b) Provide technical and management support for: (i) the design of a PPP transaction for telecommunications and internet service provision, including validation of design, costs, preparation of tender documentation, marketing and bidding, through a competitive process; and (ii) development and implementation of the legal and regulatory enabling environment to support the implementation of the PPP and repositioning of TTC. Technical and transactional support will also be provided during implementation to monitor and validate satisfactory compliance by the private partner of specified outputs mandated under the PPP transaction. The design of the PPP will also analyse and incorporate mechanisms to ensure the financial and operational sustainability of services over the life of the domestic and international connectivity infrastructure.

(c) Develop strategies to facilitate digital adoption, including a strategy and implementation plan for digital government and a new legal and regulatory framework to support digital government and digital commerce (data protection, cybersecurity, cybercrime, e-transactions, etc). The Project will finance technical assistance for the preparation of strategy/policy documents and draft legislation/regulations, and stakeholder consultations. The aim is to leverage improved connectivity to enable access to and utilization of internet-based services, strengthen the trust environment for online transactions and support consumer protection.

24. **Component 2. Enhancing Connectivity Infrastructure (US\$26.5 million)**. This will finance the Government's financial contribution to the PPP transaction to design, build and operate the international backbone and domestic access networks to connect users on Funafuti to the global internet. The largest investment will be in a submarine cable providing more affordable and higher capacity international bandwidth. The broadband network will provide affordable high quality end-to-end connectivity for Funafuti. The Outer Islands would also be covered by the services included under the PPP comprising improved satellite bandwidth and terrestrial access network infrastructure. Regional IDA program funding accounts for US\$16 million of this Component 2, with the balance from Tuvalu's national IDA resources.

25. The total financing under this component is a maximum amount and the private sector partner submitting the lowest complying bid will be selected. The PPP contract will specify minimum performance standards,



including financial and technical capacity, quality, coverage, availability and price. TTC will be repositioned as the implementation vehicle (private sector partner) for the PPP. The PPP contract will also specify and provide the financing for monitoring and enforcing compliance with the terms of the PPP contract for the life of the PPP.

26. Component 3. Project Management (US\$0.50 million). This will finance Project administration, fiduciary support, Project audit and communications and will complement the technical management support to be provided under Component 1. MCT will hire a Project manager and set up a Project Management Unit (PMU). This Component will also support management of applicable safeguards compliance.

C. Project Beneficiaries

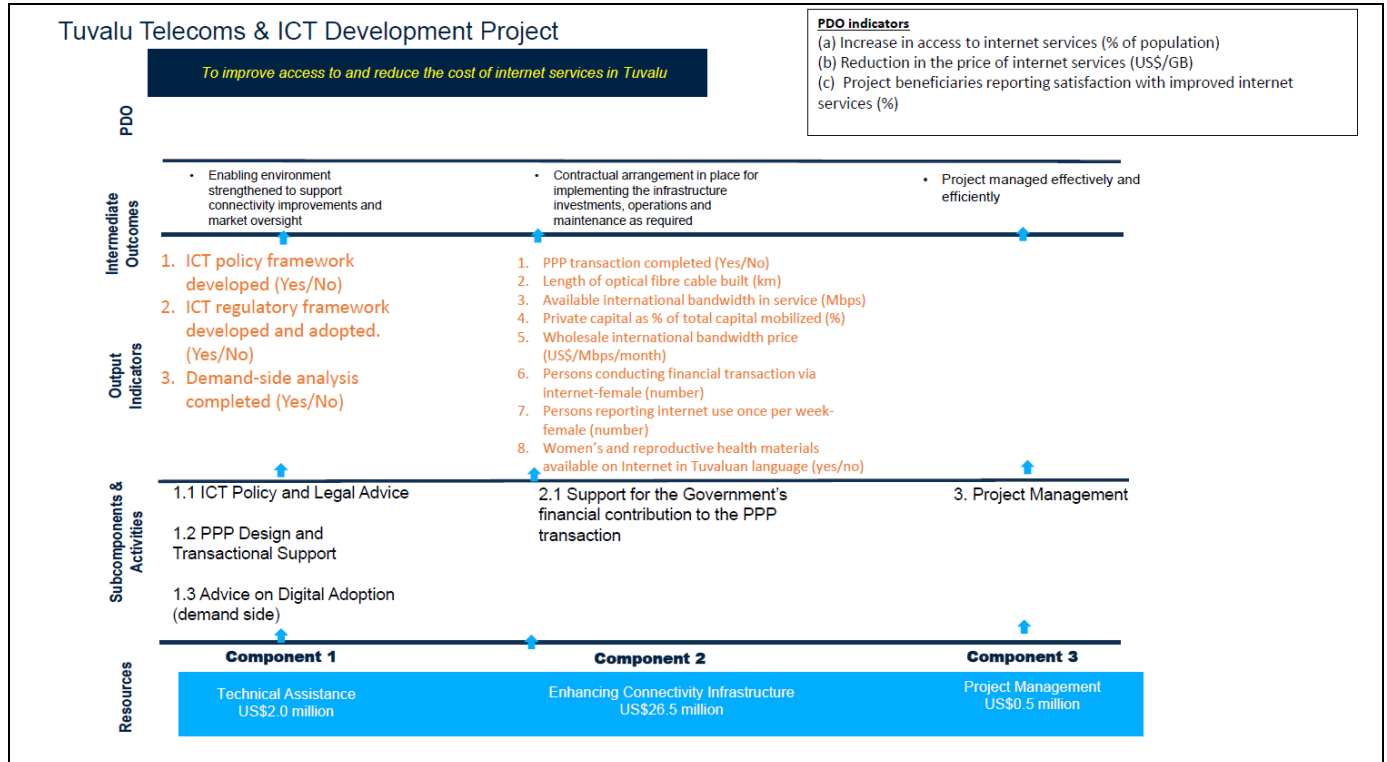
27. The direct beneficiaries of the Project will be the people of Tuvalu as well as businesses, government agencies and other institutions who will receive improved services and greater access to ICT services, including voice and internet services. The Project will also indirectly support the expansion of a new range of important services, including internet-based banking, e-commerce and e-government services. Tuvalu currently has no ATMs, credit card facilities etc so this is expected to improve financial inclusion. The broader impacts of the Project through the improved enabling environment are expected to be as follows:

- (a) direct investment in the wider economy supported by improved access and affordability of ICT services and lower transaction costs;
- (b) reduced isolation of remote communities on the Outer Islands and improved social and economic outcomes for the whole economy; and
- (c) improved communications facilities for schools, health clinics, churches and government offices.

28. Improving services for the most populated island (Funafuti) and a sustainable solution for Outer Islands connectivity (faster, cheaper international bandwidth) is essential. Introduction of broadband internet services in areas currently without services (or with only limited services) will lead to a range of significant benefits for all communities in Tuvalu, including remote communities. Benefits include business development opportunities and the expansion of health, education, government services and other information services. The delivery of these services is fundamental to securing the economic and social viability of the Outer Islands and, accordingly, reducing pressure on Funafuti caused by inter-island migration. By facilitating improved broadband internet access through regional connectivity solutions, and supporting regulatory reforms, the Project is also expected to provide regional benefits. These include fostering greater collaboration with regional institutions and private sector service providers. Other potential regional benefits may be derived through cooperation with regional neighbours on trade facilitation, natural disaster management and monitoring, and provision of online education and health services.



D. Results Chain



E. Rationale for Bank Involvement and Role of Partners

29. The Project is linked to a broader Regional IDA program supporting improved Pacific Connectivity which is financing cable projects in Tonga, Samoa, Fiji, FSM (with Palau) and Kiribati. The World Bank has been actively engaged on the digital development agenda in the Pacific for more than twelve years: supporting telecoms market liberalization, policy and regulatory capacity-building and catalytic infrastructure financing to reduce the region's digital divide. Looking ahead, once connectivity has been substantially enhanced—particularly through increased availability of affordable broadband internet—the World Bank will engage on other key aspects of digital development including helping to foster an enabling environment for digital economy and digital government throughout the region.

30. The World Bank is working together with several development partners in the area of ICT-enabled or digital development in the Pacific under the umbrella of the Pacific Regional Infrastructure Facility (PRIF) multi-donor engagement: particularly with the Asian Development Bank, Australia's Department of Foreign Affairs and Trade (MFAT), New Zealand's Ministry of Foreign Affairs and Trade (MFAT), the University of the South Pacific ICT Centre, regional telecom service providers as represented by the Pacific Islands Telecommunications Association (PITA) and international organizations such as the International Telecommunications Union (ITU), Asia-Pacific Telecommunity (APT). With regard to cable options, the World Bank has been coordinating with MFAT regarding the potential Tuvalu-Tokelau cable route. The IFC has been involved in overall policy dialogue on Pacific connectivity, following its earlier support to new market entrants in the region, but has not contributed financing to the regional connectivity program.



F. Lessons Learned and Reflected in the Project Design

31. The Project design has considered the lessons from implementation of ICT sector reform/development projects, from other regional connectivity projects, including in the Pacific and from operations in the Pacific region more broadly.¹ These lessons are reflected in the design of Project components, risk analysis and management, and selection of country readiness/eligibility criteria.

(a) A constructive and open relationship between the public and private sector is important for successful development of telecommunications sectors at the national level as well as at the regional level. The Project is based on a PPP approach, to mobilize private capital and management expertise in an economy where there has been little private participation to date. As noted from the Africa Regional Communications Infrastructure Project series and the Samoa and Tonga phases in the Pacific series private investors will likely have different incentives, requiring extensive upfront consultations and legal/transactional support to ensure that the final institutional model adequately addresses the expectations of different players. It may take time to establish appropriate institutional arrangements, and strong legal/transactional support is required.

(b) Legal and regulatory reforms go hand in hand with infrastructure investments. The legal and regulatory environment needs to support cost-based access to services on transparent terms. Mechanisms are needed to protect the interests of consumers. That said, the ICT sector in Tuvalu is too small to support the costs of creating and operating a separate regulatory agency. The key regulatory oversight need may be satisfied by mechanisms for monitoring and enforcing performance standards and other obligations established under the PPP and financed by the private sector investor under the PPP.

(c) Project stakeholders need to anticipate possible changes in technology that might alter the business case for investment in a particular type of communications infrastructure. The cable system to be financed under the Project will support high-speed international data transmission over the life of the cable system. The system design will also include scope for further capacity growth should demand exceed expected system requirements.

32. Tuvalu faces the challenge of very limited institutional, technical and financial capacity. It is significantly more vulnerable and constrained than any other activity undertaken under the World Bank's engagement on connectivity and regulatory reform in the Pacific. The sector is too small to attract private sector participation and investment without substantial public sector contributions. It is also important that Government does not take on the financial or operational risks of building and maintaining infrastructure that cannot be operated on commercially viable terms. A PPP structure will be used to ensure that the technical solution is financially viable and that the operational risk is passed to a private sector partner. Core technical and operational standards will be established under the PPP transaction to ensure that the technical solution and performance standards met the country's needs and expectations.

¹ Phase 1: Tonga-Fiji Connectivity Project. The Tonga-Fiji cable was implemented ahead of schedule and became operational in August 2013, with operational domestic extensions in June 2018. Phase 2: Palau-FSM Connectivity Project. The cable was operational in 2017. Phase 3. Samoa Connectivity Project: the cable became operational in February 2018. 4. Fiji Connectivity Project: cable ready for service in June 2018. 5. Kiribati Connectivity Project: cable expected to be deployed in 2020.



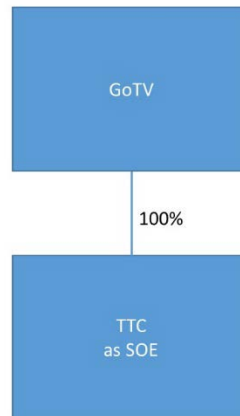
III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

33. MCT has overall responsibility for the implementation of this Project. MCT will engage technical and management advisors to support the implementation of Component 1 and for the oversight of the PPP planned under Component 2. For Component 3, MCT shall maintain a Project Management Unit (PMU) acceptable to the World Bank to provide financial, fiduciary and related support service under the Project. The PMU may enter into support arrangements acceptable to the World Bank.

34. Component 2 will be implemented through a PPP arrangement. The implementation arrangements are as follows and involve a significant transition from the current institutional set-up in the sector. The Government is currently the 100% owner of Tuvalu Telecoms Corporation (TTC). It has all economic and governance rights and is legally entitled to deal with TTC as the sole shareholder. The design of the PPP and supporting legal and regulatory enabling environment will be guided by the following foundational factors: (i) clearly defined and scoped regulatory style authority over the reformed TTC or successor; (ii) authorization of the reformed TTC or successor for establishment of communications facilities and provision of services; (iii) exclusive rights for of the reformed TTC or successor for a defined period; (iv) authorization of the reformed TTC or successor to use radio spectrum; (v) access by the reformed TTC or successor to public, private and customary land on reasonable terms; (vi) the reformed TTC or successor to offer services on a common carrier basis; (vii) retail prices and performance standards including gender based access and services to be subject monitoring and control; (viii) private sector operator investor in PPP to be subject to specific commitments regarding agreed levels of coverage and service options; (ix) consumer protection provisions and rights of redress to be specified; (x) specific obligations and conditions during public emergencies; and (xi) predictable and sustainable taxes on of the reformed TTC or successor and the private sector operator investor.

Figure 1: Existing Institutional Arrangements

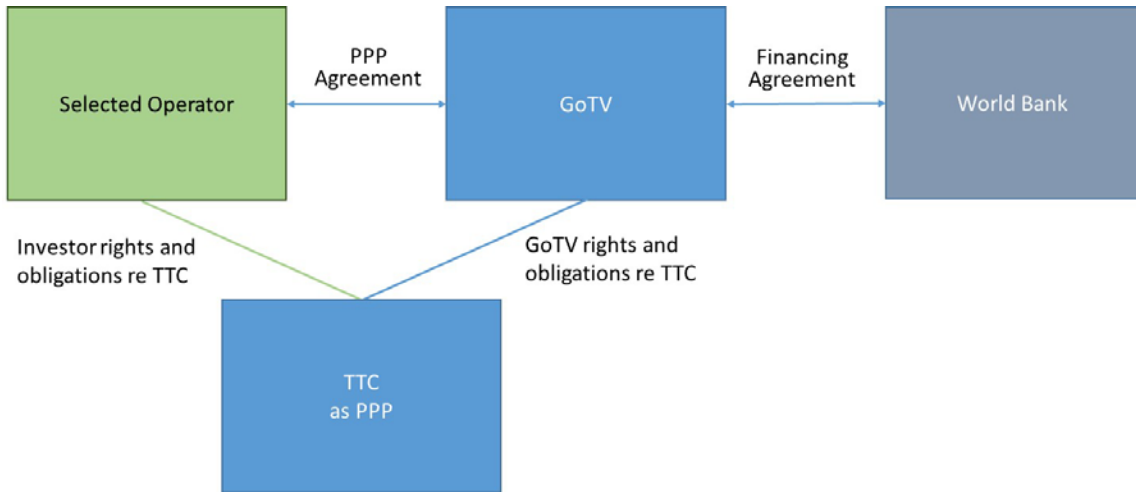


35. The Government and a selected operator will enter into a PPP Agreement which will convert, reform or replace TTC as a corporate vehicle for the PPP transaction. It is expected that the transaction will be prepared in years 1-2 of the Project and that private sector investment will be mobilized within 3 years of Project effectiveness, although the business environment is very challenging and there is a risk that private investment in the sector may not materialize. The private sector operator investor has not yet been identified and the level of investment



expected by the private partner has not been determined. Insufficient interest from the private sector may require either additional public sector financing or modification of the design specifications (to improve the forecast private sector IRR or to reduce risk).

Figure 2: Institutional Arrangements for Project Implementation and Post Project Operations



B. Results Monitoring and Evaluation Arrangements

36. The PPP contract will set out all the various institutional, governance, financial and performance obligations. These include as follows: (a) Government will invest and commit public financing to support the business case for the private sector operator; (b) the private sector operator will commit to invest its own funds to meet any additional capital expenses, working capital and operational expenses as necessary to meet specified infrastructure deployment and operational commitments under the PPP; (c) a suitably representative board will be established (incorporating gender equity); and (d) the private sector operator will have the sole right to receive dividends from earnings and profits during the PPP term. A performance monitoring arrangement will be established between the Ministry of Finance and Economic Development (MFED) and MCT to monitor and enforce compliance by the private sector operator with the PPP arrangements—the costs of supervising compliance, monitoring and enforcement, will be borne by the private sector partner under the PPP contract for the life of the PPP.

C. Sustainability

37. Improved service coverage and quality at more competitive prices for international connectivity and for data services will sustain increased demand in Tuvalu as the Project will create opportunities for increased use and the introduction of applications that require high speed bandwidth. Given the small market size and likely revenues, even under a high case demand scenario, the probability of ongoing public sector support for the sector is high. However, the proposed PPP approach represents a significant departure from the status quo scenario with a non-viable state-owned enterprise requiring significant periodic cash injections. The reformed TTC or successor will bring with it better buying power for plant, equipment and services as well as stronger managerial, technical and financial resources. This Project and the PPP will ensure the reformed TTC or successor adequate capital and other support, foreign partner capital investment, access to sales revenues over the life of the PPP and the possibility of some later Government support. Sustainable commercial operations for reliable and lower cost broadband and



other services to Funafuti and improved services to the Outer Islands over the life of the PPP are underpinned by the analyses of this project. A sustainability plan will be prepared as part of the PPP/exit strategy to address needs and initial plans for the closure of the PPP. The PPP partner will be required to maintain the assets for transfer to the Government at the end of the PPP term in a state useable for any replacement PPP partner.

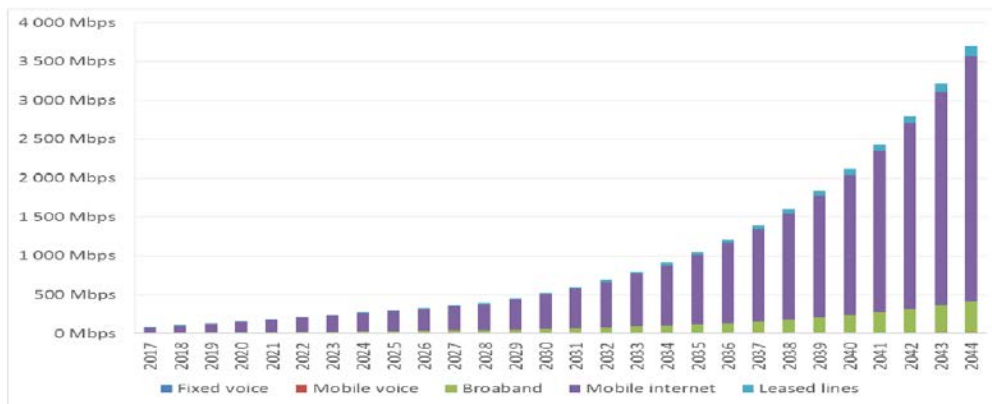
IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

Technical

38. The proposed solution is intended to address the need for bandwidth demand which is projected to be in the range of 3.7 (base case) to 8.5 Gbps (high case) over the next 25 years, given other social and economic development factors. Figure 3 shows the medium (base)-case demand for internet bandwidth.

Figure 3: Projected Bandwidth Demand



(Source: WB estimates)

39. Government has considered several scenarios for provision of enhanced international connectivity for Tuvalu, including submarine cable and satellite options. Government has expressed a strong preference for a cable solution considering relative resilience and capacity optimization potential. Potential cable routes are summarized in Table 4. However, the final cable route option will be decided based on compliance with technical requirements and standards to be set in the PPP bidding documents and as proposed by the winning bidder in consultation with the Government. The PPP bidding documents will therefore not prescribe a particular technological solution but will mandate a set of technical standards that the winning bidder is expected to meet for the supply of international bandwidth and the provision of domestic broadband access networks.

40. The following cable and other options were considered and analysed during Project preparation:

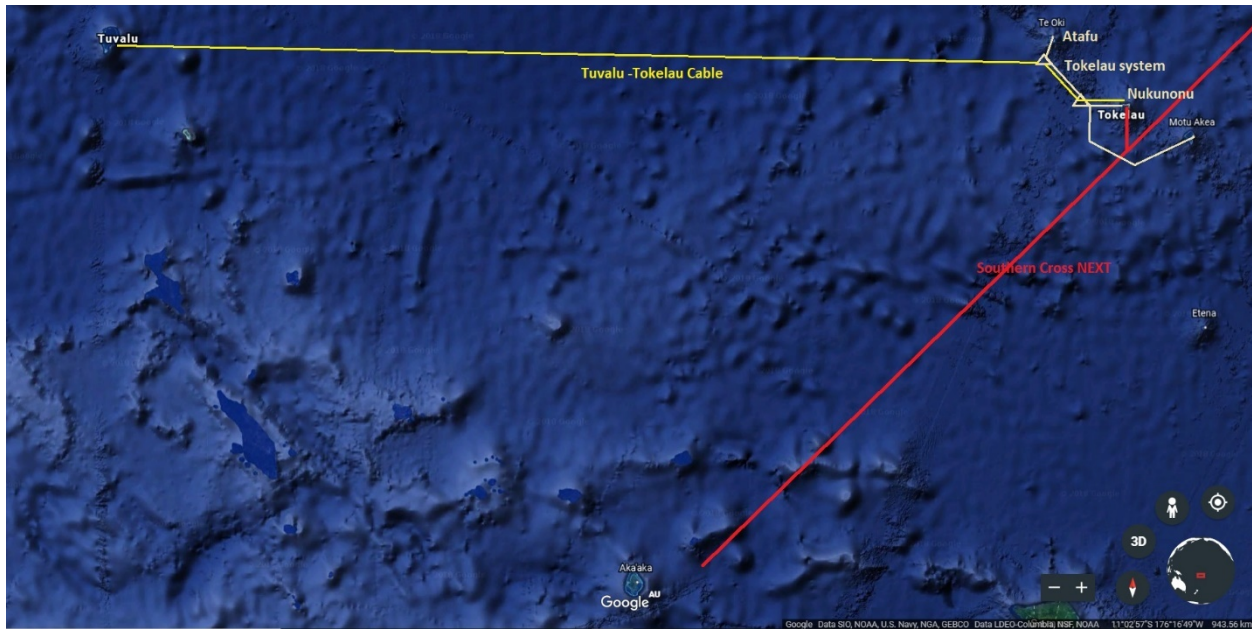
- (a) Connection to the planned Southern Cross (SX) NEXT cable in Fiji (Labasa) which requires a separate land cable to connect on to Savusavu at which point a connection to SX NEXT or the existing Southern Cross cable is possible;



- (b) Connection to the planned SX NEXT Cable in Tokelau via the CLS on Nukunonu – via one of two sub-options to access SX NEXT - (i) a direct connection to the CLS in the Island of Nukunonu (ii) an indirect connection via a BU to be installed on a cable that is part of the contemporaneously constructed Tokelau national cable that will link on to Nukunonu;
- (c) Connection to the existing Southern Cross cable via the *Tui Samoa* cable (Samoa-Wallis-Fiji) that is accessible in Apia or at a BU on the Tui Samoa cable at a location near Wallis and Futuna; or
- (d) A regional satellite solution: a preferred option for backup/redundancy rather than primary connectivity due to bandwidth costs, capacity limitations and possible performance issues due to environmental factors.

41. In order to undertake a reasonable economic and financial analysis for Project preparation, the baseline scenario assumes that the international connectivity solution will be an optical fibre submarine cable connecting Tuvalu to Nukunonu atoll in Tokelau, as depicted in Figure 4. This would be a repeated cable of about 995km in length, with one fibre pair. However, the PPP operator may opt for an alternate cable route.

Figure 4: Tuvalu -Tokelau Cable System Route



42. For future redundancy an additional cable connection may be considered to Tarawa in Kiribati. While this would be a long-term prospect, interim redundancy/resilience would need to be provided via satellite, as a component of the provision of services to the Outer Islands.

43. The technical support required for ongoing operation of the cable will be the responsibility of the PPP partner – anticipating that the operator will be either an overseas partner that operates such cables or an international service provider that specialises in such arrangements. This arrangement will include Tuvalu site services for the CLS such as security, electricity and water supply, generator and air conditioning maintenance etc.

44. Support for the non-terrestrial component of the system (the cable on the ocean floor) will be via a service contract entered into with a marine maintenance provider by the PPP partner (in concert with multiple other



cable system operators) that will be negotiated as part of the cable system supply contract. This contract will be managed by the PPP partner and all dealings with the cable termination location.

45. Construction or construct and supply elements as managed by the PPP partner will comprise:

- (a) Provision of an end to end submarine cable system from Funafuti– including all marine components and the end terminal and power feed system components;
- (b) Supply of interconnection and termination services at both intermediate interconnection and final termination locations;
- (c) Provision and installation of a modular Cable Landing Station (CLS) Station in Funafuti and if required at the far end location into which the submarine cable terminal components will be installed by the submarine cable system provider;
- (d) Construction of the Beach Man Hole and CLS foundations (to the requirements of the CLS provider) on Funafuti together with the short-buried duct from the BMH to the CLS by an overseas contractor (probably employing available local trades and staff); and
- (e) Construction of a land side duct on Funafuti to connect the CLS to the existing duct under the airstrip and validation of the useability of the balance of the duct route to the network centre of the reformed telecommunications operator (likely the existing network centre of TTC).

46. The technical support required for ongoing operation of the national network components will be sourced via the PPP. The PPP contract will provide for establishment of new facilities, network equipment and required contracts transfer for required satellite services and require the PPP partner to operate and maintain such assets and provide services at agreed prices and price reduction paths. Some of the relevant assets (land, buildings, ducts etc.) may be owned by the Government but made available to the PPP partner via an indefeasible right of usage (IRU) or similar component of the PPP.

47. Project design and components will address the fact that the submarine cable solution would serve only Funafuti (which has 57% of the population). Arrangements for the Outer islands will need to be able to integrate the Outer Islands populations to the capital and Government in Funafuti. As part of the PPP contract the winning bidder will be expected to offer a mobile broadband solution and appropriate backhauling arrangements for the Outer Islands of Tuvalu.

Economic and Financial

48. The Economic and Financial Analysis described in this section is based on the possible options for Component 2, recognizing that these will be further developed in the implementation phase of the Project.

49. The expected economic impacts of improved access to broadband internet include reduced transaction costs for businesses and households, access to information and new economic opportunities (digital economy), and reduced transaction costs for public service delivery. Modest direct and indirect job creation may also be anticipated.

50. Submarine cable options generate higher economic welfare which is mostly captured by consumers- in this case about US\$7.3m based on 57% of Tuvalu’s population being directly connected in Funafuti. As above, a submarine cable system enables lower prices in the long run due to cable operating expenditures (opex) being dominated by a largely fixed component and hence incremental expansion of capacity at very low cost.

51. Regarding financial analysis, the international cable connectivity option for Tuvalu is challenging and will require a major subsidy. While the percentage of GDP applied to telecommunications/ICT is likely to be about 5-6% (in line with other similar Pacific Island countries), the low population and GDP will mean a very small market



value. Revenue-generation from the market is likely to remain limited pending expansion of the economy and national GDP. However, preliminary analyses based on prospective GDP growth projects a viable standalone business for a private sector entrant.

52. The main financial results related to the international cable are summarized in Table 2. The Government’s preferred approach for Component 2a means analysing a cable solution, incorporating both capital expenditures (capex) and operating expenditures (opex) over the life of the cable (25 years) and a separate Project to implement the strategy component 2b for connections to the Outer Islands. Additionally, noting that the prospective traffic that will need to be reticulated on each island- including Funafuti, there will need to be consideration of development of network capacities and capabilities for each island under the PPP.

53. An analysis of the financial and economic attributes over 25 years of potential cable solutions is summarised in Table 2. Note that the two options in relation to a cable to Tokelau are very close in terms of financial and economic analysis and so presented as a single summary of results. However, connecting Tuvalu to the Nukunonu – Atafu cable via a passive branching unit represents the less expensive solution and the one better dimensioned to the two countries’ needs, based on current assumptions.

Table 2: International Cable Connectivity Options Summary

	Labasa (Fiji)	Tokelau (SX NEXT)	Apia (Samoa) via Tokelau
CAPEX (US\$ M)	20.3	17.9	22.0
Cumulative discounted OPEX (US\$ M)	6.9	7.6	8.4
Cumulative discounted interconnection Costs (US\$ M)	6.3	3.0	5.8
Total costs (US\$ M)	33.5	28.5	36.2
Cumulative revenues (US\$ M)	6.0		
NPV before financing (US\$ M)	-27.6	-22.5	-30.2
FIRR before financing	NA	NA	NA
Financing (US\$ M)	29.2	26.5	34.2
NPV after financing (US\$ M)	1.7	5.0	3.9
FIRR after financing	3.4%	NA	0.4%
ENPV after financing	0.5	2.0	2.6
EIRR after financing	5%	2%	2%
Social surplus	6.1		

Notes:

- i. For cumulative financing, a discount rate of 6% is applied. This reflects a premium for the risk specific to the submarine cable industry and a risk-free return.
- ii. Cable ready for service (RFS) is assumed to be late 2020. Cable life is of 25 years (standard lifetime).
- iii. Medium scenario of bandwidth demand is considered.
- iv. Financing for analysis purposes is considered to cover: CAPEX, cumulated cable OPEX, interconnection costs (IRU + landing fees) for the first year, net economic benefit is net of all O&M, CAPEX and capacity costs. It does not consider savings realized comparing to the current situation

Economic Benefit and Economic Internal Rate of Return (EIRR).

54. The economic impact of a cable connection for Tuvalu (based on the Tuvalu-Tokelau connection) is assessed by estimating the impact on Tuvalu’s GDP over the next 25 years. The cumulative discounted impact on GDP over the next 25 years is US\$ 5.8M (with a 6 percent discount rate), assuming all the costs are financed by grant. This analysis assumes that broadband penetration (both fixed and mobile internet) will rise from 53 percent in 2019 to 69 percent in 2044, due to the submarine cable. Current actual usage is largely connectivity capacity constrained, which will not be a factor once the cable is operational.



55. **Macroeconomic.** World Bank and other studies show that broadband deployment in developing countries assists economic growth - average impact on GDP growth ranging from 0.25% to 1.5% per 10% increase in broadband penetration (World Bank study “Economic Impact of Broadband” from Christine Zhen-Wei Qiang and Carlo M. Rossotto with Kaoru Kimura 2009). Separately, an economic impact study of submarine cables conducted by cable suppliers, suggests an impact of 0.9% per 10% increase in BB penetration.

56. The analysis summarised in Table 2 assumes a 10% increase in broadband penetration (wireless internet + Broadband) correlates with a 0.7% increase in GDP. This conservative quantum for potential growth reflects the challenges for Tuvalu with its specific constrained economic context: remoteness and low scope for economic activities. A discount rate of 6% is applied for economic impacts, which is in line with GDP growth of Tuvalu in the last period (approx. 3%).

57. **Microeconomic.** Social welfare related to the development of a high quality, lower price international connectivity solution includes several social dimensions: more accessible telecommunication services for both retailers and final users, better access to information resources, education, training, development of electronically-delivered services such as e-Government administration (reducing time and effort to carry out administrative procedures) and overall improved productivity, etc.

58. Among the most significant quantifiable dimensions of social welfare, the producer and consumer surplus of telecommunication services is estimated based on the following:

- (a) the retail price of telecommunication services follows the same price reduction rate of wholesale bandwidth price;
- (b) the elasticity of price-demand when the price is high is 1.5 and when the price is low is 0.8. (Economic analyses indicate that the higher a product’s price as a percentage of consumer income, the higher the elasticity tends to be, as consumers are more selective when purchasing because of its cost. Conversely, when the goods represent only a negligible portion of the budget the income effect will be insignificant and demand inelastic; and
- (c) Annual demand growth, even if price stagnates is 5%.

59. This approach coincidentally leads to approximately the same bandwidth demand forecast as in the medium demand scenario.

60. The social surplus generated by the Project can also be assessed. Based on the low and high demand forecasts scenarios, an equilibrium price can be calculated, and as a result a demand at the equilibrium. These provide the discounted total surplus (both for the operators and consumers), estimated at US\$ 10M over 25 years assuming a minimum 60% penetration rate would be achieved in 25 years from now, to make the submarine cable component of the Project economically viable in the long run.

Project Financing Arrangement

61. The analysis summarised in Table 2 demonstrates the economic and financial benefit of the submarine cable benefit of the Project on the basis that capex and opex are funded. Accordingly, the Project that funds the PPP to establish this connectivity based on US\$26.5 million funding is viable and beneficial. Separate Free Cash Flow analyses based on funding the PPP, together with revenues from sale of services, indicates the Project is a positive business proposition for the selected partner and makes entry into the Tuvalu ICT market and the provision of services beyond the capital of Funafuti a sound business proposition.



B. Fiduciary

(i) Project Management

62. As noted above, MCT will engage a PMU to provide a dedicated resource for fiduciary functions including, procurement support, all interfaces and reporting to the World Bank, and to guide financial management processes. To date the few necessary procurement support actions under the Project Preparation Advance (PPA) have been provided to the Project by the Tuvalu Aviation Investment Project Management Unit, with assistance from consultants in the Technical and Fiduciary Services Unit (TFSU) based in Tonga. For the remaining Project implementation period, MCT will recruit a dedicated PMU in early 2019 and fiduciary and procurement support functions will be transferred from the TFSU. This will ensure that all Project support components are physically located in Funafuti and within the organization of the MCT.

(i) Financial Management (FM)

63. The FM assessment was carried out in accordance with the 'Principles Based Financial Management Practice Manual' issued by the Financial Management Sector Board on March 1, 2010, which states that with respect to projects financed by the World Bank, the recipient is required to maintain appropriate implementation arrangements—which include accounting, financial reporting, and auditing systems—adequate to ensure they can provide the project management and the World Bank with accurate and timely information regarding the project resources and expenditures. While the Project will be implemented by MCT it has been assessed that there are insufficient FM resources within MCT to meet the project FM requirements, hence the FM requirements for the project will be undertaken by a consultant/bookkeeper with additional support from an external based consultant. Finance Advisor.

64. The PMU will maintain the Project accounts, produce required periodic reports and interfaces for this project. This is consistent with other World Bank financed Projects in Tuvalu. The PMU will be responsible for the financial management of all components, with the Project reporting responsibilities to the World Bank will with the MCT via the Project Manager.

(ii) Procurement

65. As the Project implementing entity MCT is responsible for all procurement activities under the Project. It was agreed that procurement of this Project will follow the World Bank Procurement Regulations for IPF Borrowers (dated July 2016, revised in November 2017 and August 2018). A Project Procurement Strategy for Development (PPSD) was prepared by MCT for procurement arrangements and planning. Based on the analysis of the PPSD, a procurement plan covering the Project life has been prepared and was agreed at Negotiations.

66. The main procurement risks are (a) limited capacity of MCT; (b) inadequate staffing of the Project implementation team; (c) low efficiency in processing procurement process; and (d) weak supply capacity of the national market. The key mitigation measures are (a) MCT will engage a PMU for administrative support; (b) the transaction advisors under Component 1b will assist MCT to select a private partner following the PPP arrangement acceptable to the Bank; (c) the major contract for connectivity investment will be included into the PPP package and will be procured by the private partner following commercial practices; and (d) the Systematic Tracking and Exchanges in Procurement (STEP) system will be used to monitor procurement progress and identify delays. Adoption of the PPP approach reduces the number of procurements required to about five; one high value and the rest lower level and low value.



C. Safeguards

(i) Environmental Safeguards

67. The Project is classified as Category B under Safeguards Policy OP4.01 Environmental Assessment and OP4.03 Performance Standards for Private Sector. OP4.01 will apply to the Technical advisory activities under Component 1 implemented by MCT. OP4.03 Performance Standards will apply to the activities under Component 2 (the design and installation of the sub-marine cable and associated facilities implemented by the PPP. The environmental and social impacts from technical advisory services and physical investments are expected to be minor to moderate, reversible and readily mitigated. The Environmental and Social Impact Assessment (ESIA) has culminated in an Environmental and Social Management Plan (ESMP), which assesses the investments based on the option to connect to the Tokelau SX NEXT cable. Regardless of the remote destination for termination of the cable, the arrangements for termination in Funafuti will be as assessed and the ESMP will apply.

68. The location of the Project assets, mainly the cable, beach manhole and cable landing station, are not known at appraisal, however there has been technical and safeguards screening of several options. It is within the power of the Government to direct the PPP partner to apply one of the acceptable options. The ESMP provides a summary of (i) sensitive receptors on and near Funafuti, (ii) social and environmental issues for each option, and (iii) mitigation measures to employ during final site selection, and during physical works, to avoid sensitive receptors and manage nuisances and issues during construction and installation of equipment. Several alternative sites were discounted because of the higher risk of potential issues with access to land and potential impacts on beach / foreshore use.

69. With respect to potential impacts in the near shore, the ESIA shows that there are few ecological values in the existing reef and inshore areas. The cable laying process will be guided by ecologically-qualified divers who will ensure that the cable will avoid any significant coral assemblages. The environmental and social assessment concludes that no other safeguards policy requires triggering.

70. With respect to potential impacts in the deep water, the ESMP identifies that the risk of vulnerable habitats (sea-mounts, hydrothermal vents etc.) being present is very low between Tokelau and Funafuti. The key mitigation measure is to avoid those habitats. The detailed marine survey (bathymetry and ecological survey), to be carried out prior to the finalisation of the cable laying route, will identify any such features and it is standard practice to avoid them to prevent potential damage to the cable.

(ii) Social Safeguards

71. The Project is expected to result in numerous positive social and economic benefits for Tuvalu residents through improved access to communications. Due diligence during Project preparation has identified that there will be no involuntary resettlement. OP4.12 is therefore not triggered. The foreshore and seabed are controlled by the Kaupule (Council) and there is a permit process to access and use the land. The beach manhole and the cable landing station will be located on Government-leased land or private land and the final locations will be based on voluntary negotiations of land lease. All options identified to date do not involve involuntary resettlement. Any terrestrial cabling will be buried within the road easement without disturbing the road or road easement surface (there are existing ducts).

72. OP4.10 Indigenous Peoples has not been triggered. The assessment undertaken by the World Bank and documented in the Environmental and Social Safeguard Instrument for the Pacific found that the Tuvalu population does not meet all the Bank's defining characteristics.



(iii) Gender Issues

74. A recent (February 2018) study by the University of the South Pacific (USP) of ICT access to and use of ICT services in Samoa (a Polynesian society and culture like Tuvalu), found that women's use of or control over access to mobile telephony and internet represented some 60% of total use and access control. In Tuvalu, sensitivity to gender equity in access not only to ICT services but all matters that may flow from such access, has meant the establishment within the Prime Minister's Office of a Gender Affairs and Culture Department. Linked to the role of this Department, the incumbent TTC has established a 'Women's' Champion' to foster women's access to and benefits from telecommunications and ICT services.

75. This project will work with this Department in working from the present baseline to establish programs for encouragement of equity of opportunity for skills development in and access to careers in ICT for all members of Tuvalu society. Such activities could be modelled after similar encouragement programs in Vanuatu by the regulator in that country which are linked to the ITU "International Girls in ICT Day" in late April or Early May of each year. The Performance Indicators of this project reflect meaningful, measurable and monitorable indicators toward the goal of gender equity in relation to use of and benefits from the availability of telecommunications and ICT services. These will be assessed through surveys.

(iv) Other Safeguards

76. OP4.03 Performance Standards applies to Component 2 since the newly-created Private Entity will be responsible for the design, installation and operation of the cable infrastructure and network. The Private Entity will be formed through a PPP and will be developed during project implementation, and therefore the capacity for safeguards management has not been assessed prior to appraisal. Therefore, the approach to the PPP and any agreements between the Government of Tuvalu and the private sector will need to consider the requirements of OP4.03 for the Private Entity such as: the need for an Environmental and Social Management System and Policy, and human resources policies that comply with the Performance Standard 2 Labor and Working Conditions.

(v) Climate Change

77. The deployment of a submarine cable connection to provide international internet connectivity will contribute to improved climate change resilience in Tuvalu; cables offer greater reliability than satellite connections in the event of major climate events (they may be affected adversely by seismic events, however). In addition, the proposed connectivity improvements in Funafuti and prospectively on Outer Islands may facilitate improved climate change monitoring, risk management and community alerts through improved communication, warning and monitoring systems. This will be because the available internet bandwidth will enable easier access to and utilization of monitoring websites/data sets, including in real time, and the expanded access network may be used for alert systems and messaging.

Grievance Redress Mechanisms

78. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported Project may submit complaints to existing Project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address Project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, because of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS),



please visit <http://www.worldbank.org/en/Projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org

V. KEY RISKS

79. The overall implementation risk rating is high particularly because of institutional capacity and technical design.

Table 3: Systematic Operating Risk Rating

Risk Categories	Rating
1. Political and governance	L
2. Macroeconomic	M
3. Sector strategies and policies	M
4. Technical design of Project or program	H
5. Institutional capacity for implementation and sustainability	H
6. Fiduciary	S
7. Environment and social	L
8. Stakeholders	S
Overall	High

80. *Institutional capacity risk.* Thin capacity in the public sector presents a risk that could impede the implementation of the reform measures supported by this program. Capacity constraints are typical in the case of Small Island States, especially in the Pacific, and Tuvalu faces significant institutional limitations. These pose the risk that the actions supported by this Project might not be implemented as successfully as expected or in the agreed timeframe due to staff changes or unavailability. This risk will be managed by shifting technical and financial responsibility for the infrastructure investments and service delivery to the private sector and by MCT recruitment of a dedicated PMU as described above. Government will be supported by technical assistance to develop and execute a PPP transaction, to monitor implementation of the PPP during the life of the project and by development of skills within MCT for monitoring ongoing compliance with the provisions of the PPP after the closure of the project through to end of the PPP period. Additional resources will be committed under the PPP arrangements and the Project to assist with the monitoring and enforcing the PPP arrangements and private sector operator investor commitments.

81. *Technical design risk.* There is a risk that, due to business climate/perceptions, private investment in the sector may not materialize. Due diligence carried out during Project preparation, including by the Government’s specialist advisers, has concluded that the proposed design is achievable and realistic. Insufficient interest by the private sector may require either the addition of either additional financing from the Government or donors (to improve the forecast private sector IRR or to reduce risk) or modification of the design specifications including either reducing the duration of the term of the PPP or lowering performance standard obligations to permit lower cost solutions to be deployed than currently envisaged. In either scenario, the PDO would remain achievable.

82. On the demand side, adequate legal and regulatory safeguards will become increasingly important as users begin to transact online. A focus on digital authentication, data protection and cybersecurity are necessary to provide a “trust” environment to address the added risks associated with the digital economy. The Project will include a component to support policy development and new legislation to address these risks and opportunities.



83. *Fiduciary risks.* Procurement and financial management risks are detailed in Annex 2. The principal risks are associated with limited institutional capacity and limited experience of similar transactions. These risks will be mitigated through the proposed PPP approach, and through the engagement of a PMU.

84. *Stakeholder risks.* The Project will require a significant amount of coordination among private and public, Tuvalu and international/regional stakeholders. This risk will be mitigated through the engagement and retention of legal, technical and transaction support advisors to MCT.



VI. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Tuvalu

TV: Telecommunications and ICT Development Project

Project Development Objectives(s)

The Project Development Objective is to facilitate improved access to, and reduced cost of, internet services in Tuvalu.

Project Development Objective Indicators

Indicator Name	DLI	Baseline	Intermediate Targets	End Target
			1	
Increase in access to internet services				
People provided with access to the Internet (CRI, Number)		2,800.00	3,500.00	4,500.00
People provided with access to the Internet - Female (CRI, Number)		1,400.00		2,500.00
Reduction in the price of internet services.				
Price of fixed internet service (US\$/GB) (Amount(USD))		26.00	18.00	5.00
Price of mobile internet services (GB) (Amount(USD))		14.00	10.00	5.00



Indicator Name	DLI	Baseline	Intermediate Targets		End Target
			1		
Project beneficiaries reporting satisfaction with improved internet services.					
Persons identifying improved internet services (%) (Number)		0.00	1,500.00		3,000.00
Persons identifying improved internet service-female (%) (Number)		0.00			1,500.00

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets			End Target
			1	2	3	
1. Technical Assistance						
ICT Policy formulated and adopted (Yes/No)		No	Yes			Yes
ICT regulatory framework developed and adopted (Yes/No)		No	Yes			Yes
Demand-side analysis completed (Yes/No)		No	Yes			Yes
2. Enhancing Connectivity Infrastructure						
PPP transaction completed (Yes/No)		No				Yes
Length of optical fibre cable built (Kilometers)		0.00	500.00			1,000.00
In-service international bandwidth (Mbps) (Number)		50.00				1,000.00
Private capital mobilized as a percentage of total capital		0.00				10.00



Indicator Name	DLI	Baseline	Intermediate Targets			End Target
			1	2	3	
mobilized (%) (Percentage)						
Price of wholesale internet bandwidth (Amount(USD))		750.00	650.00	450.00	350.00	100.00
Persons identifying as having conducted a financial transaction via the Internet-female (Number)		0.00	200.00			500.00
Persons reporting Internet use once per week-female (Number)		0.00				1,500.00
Women's and reproductive health material available via the Internet in Tuvaluan language (Yes/No)		No				Yes

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
People provided with access to the Internet		Annual	MCT Report, sourced from operator.	Review of operator data.	MCT.
People provided with access to the Internet - Female		Semi-annual	Telecom/internet service provider	Telecom/internet service provide to share data with MICT.	MICT.
Price of fixed internet service (US\$/GB)	Monthly price of fixed internet (ADSL/fibre-if	Annual	Telecom/internet service	Reports to be provided to MCT	MCT



	applicable) service		provider		
Price of mobile internet services (GB)	Price of 1GB of internet bandwidth at the retail level. Note that current price is AUD 0.10 per MB.	Semi-annual	Telecom/Internet service provider	Semi-annual report	MCT
Persons identifying improved internet services (%)	Measures user satisfaction with internet service	Annual	Survey.	Beneficiary survey.	MCT.
Persons indentifying improved internet service-female (%)					

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
ICT Policy formulated and adopted	Government to formulate and adopt a policy for ICT development.	Once	MCT	Policy document	MCT
ICT regulatory framework developed and adoped	Development of a regulatory framework for monitoring the performance of the telecoms/internet market and an appropriate regulatory institutional arrangement for the Tuvalu context.	Annual	MCT	Review of regulatory framework	MCT
Demand-side analysis completed	Project report describing potential uses of the internet for digital services delivery.	Annual	MCT	Analytical report-methodology to be developed.	MCT



PPP transaction completed	Satisfactory execution of a PPP contract for the services defined under the Project.	Once, upon completion of construction	PPP contract report.	Contract milestone	MCT
Length of optical fibre cable built	This indicator measures the length of the submarine cable.	Once.	Telecom/internet service provider	Telecom/internet service provider report	Telecom/internet service provider and MICT
In-service international bandwidth (Mbps)	This measures the sector capacity to deliver Internet in Tuvalu.	Annual	Telecom/internet service provider	Telecom/internet service provider report to MCT	MCT
Private capital mobilized as a percentage of total capital mobilized (%)	Measures private investment in Tuvalu's telecommunications/ICT sector including in backbone and access network and ancillary services.	Annual	MCT and MFED	Investment data, annual report.	MCT
Price of wholesale internet bandwidth	Price of international connectivity in Tuvalu-composite of satellite and cable bandwidth pricing at the wholesale level	Annual.	Operator data.	Data source from operator.	MCT.
Persons identifying as having conducted a financial transaction via the Internet-female	Local content development and access to value added services by beneficiaries.	Annual.	Survey.	Survey, financial services utilization data.	MCT, MOF.
Persons reporting Internet use once per week-female	Measurement of beneficiary usage of internet service-by gender.	Annual.	Survey, operator data.	Survey.	MCT.



Women's and reproductive health material available via the Internet in Tuvaluan language	Development of local language content for beneficiary usage.	Annual	Survey and Ministry of Health data.	Beneficiary survey	MCT.



Annex 1. Implementation Support Arrangements

Strategy and Approach for Implementation Support

1. The Implementation Support Plan for this Project will comprise regular dialogue with the MCT and other Government stakeholders, joint reviews of project implementation; and regular oversight and support for fiduciary aspects with emphasis to be placed on the risks surrounding institutional capacity identified in the SORT. Regular dialogue and ongoing implementation support will enable the early identification of problems and permit the provision of timely TA to correct any potential issues that arise.
2. The MCT will prepare a Project Operational Manual. As a part of the joint reviews, the lessons learned from implementing the POM will be sought. These will be incorporated into future revisions and further training will be offered for PMU staff and other relevant stakeholders where necessary.
3. The implementation support plan envisages significant inputs from legal and technical staff given the pioneering nature of the proposed PPP transaction in the Tuvalu and indeed the Pacific region context.
4. Regarding fiduciary issues, the World Bank will provide guidance on procurement and FM, as required. This will include (a) providing training to the PMU staff; (b) assisting with the technical specifications for TORs; (c) examining procurement documents and providing feedback to the PMU; (d) monitoring progress that has been made against the detailed Procurement Plan; (e) reviewing Tuvalu’s FM system and planned arrangements under the TFSU; (f) assisting with accounting, reporting, and internal controls; and (g) reviewing submitted reports and providing feedback to the PMU.

Implementation Support Plan and Resource Requirements

5. The lack of institutional capacity within the MCT and the risks associated with the proposed PPP approach requires intensive support during the first two years of implementation. Four implementation support missions will take place during the initial year of implementation. This will be reduced to two implementation support missions in subsequent years of the operation. These periodic support visits will be complemented by regular teleconferences.

Time	Focus	Skills Needed	Resource Estimate (staff weeks/year)
Years 1-2	Implementation support coordination	TTL	8
	Legal support	Legal specialist	6
	Technical and regulatory support	Technical/regulatory specialist	4
	FM	FM Specialist	4
	Procurement	Procurement Specialist	4
	Safeguards	Safeguards Specialist(s)	2



Time	Focus	Skills Needed	Resource Estimate (staff weeks/year)
Years 3-5	Implementation support coordination	Task Team Leader	6
	Legal support	Legal specialist	4
	Technical/regulatory support	Technical specialist	4
	Overall operational support	Operations Officer	2
	FM	FM Specialist	2
	Procurement	Procurement Specialist	2
	Safeguards	Safeguards Specialist(s)	1



Annex 2. Procurement and Financial Management

(i) Procurement

1. The procurement under this Project will follow the procurement procedures specified in the World Bank Procurement Regulations for IPF Borrowers (July 2016, revised in November 2017 and August 2018). MCT is the project implementation agency and responsible for all procurement activities under the project.
2. The procurement risk assessment of MCT identified the following potential procurement risks, and corresponding mitigation measures were also agreed as follows:

Table A2.1 Procurement Risks and Mitigation Measures

Risk Description	Description of Mitigation	Risk Owner
Limited capacity of MCT and CPU	<ul style="list-style-type: none"> • The World Bank Procurement Regulations for IPF Borrowers, and related guidance notes, will be disseminated to concerned agencies early on in project preparation. • MCT establishes support from existing PAIP-TV project implementation team and TFSU. • Obtain additional specialist procurement support by an international specialist with demonstrated experience in ICT infrastructure procurement, capacity development and contract management if needed. • Avoid procurement of small value goods to support project management under this project. • CPU be invited to 'shadow' procurement under the proposed project. • The major contract of connectivity investment will be included into the PPP package with a private partner to install, own and operate infrastructure and supply services for a defined period. Procurement, project management, technical and financial and other risks shifted to the private sector party (away from Govt). • For selection of private investor, the consulting firm employed under PPA for Component 1 will assist MCT to conduct the selection process including preparing all the related documents. 	MCT (involving all relevant agencies)
Limited capacity of local market	The project will invite international consultants and contractors to ensure the required capacity and quality are achieved.	MCT
Inadequate staffing for the project	Staff should be designated specifically for procurement management.	MCT
Low efficiency	STEP will be used to monitor progress.	MCT
Lack of response from market due to size and lack of potential for an ongoing relationship	<p>Broad publication of advertisement including UNDB.</p> <p>MCT may request the World Bank to provide details of contact information of potential firms and individuals as longlists.</p> <p>MCT ensure that when EOIs are advertised they also communicate directly with these firms/individuals.</p> <p>Project design to maximise business value of the market</p>	MCT



3. PPSD and Procurement Plan. MCT has prepared the PPSD with the following conclusions. Based on the analysis of the PPSD, the overall procurement plan for the Project was prepared and will be finalized by negotiations. Once the plan is finalized, it will be submitted through STEP for the Bank's approval. The procurement plan will be updated in agreement with the Bank at least annually, or as required, by including contracts previously awarded and to be procured in the next period to be covered by the updated procurement plan (refer to paragraphs 4.4 and 4.5 of the Borrower Regulations). The summary procurement plan is at Table A2.2 below.

4. In accordance with paragraph 5.9 of the "World Bank Procurement Regulations for IPF Borrowers" (July 2016) ("Procurement Regulations") the Bank's Systematic Tracking and Exchanges in Procurement (STEP) system will be used to prepare, clear and update Procurement Plans and conduct all procurement transactions for the Project.

5. Frequency of procurement supervision. In addition to the prior review to be carried out by the World Bank, procurement supervision missions will be undertaken at least once per year.

6. Other relevant procurement information. For the preparation of this Project a Project Preparation Advance (PPA) No. V049 has been approved and signed (November 8, 2016). The PPA has been extended to now close on 29 December 2018. The amount of the PPA is not to exceed US\$750,000. Activities to be financed under the PPA include the (a) Development of a new ICT Policy for Tuvalu together with amending or new Telecommunications /ICT legislation (MCT-CI-1); and (b) Development of options for ICT sector reform and services provision and implementation of GoTV selected option (MCT-CF-2). It has also funded production of the ESIA report.



Table A2.2 Procurement Plan

Procurement Plan as per format from STEP system

<u>Description</u>	<u>Reference No.</u>	<u>Procurement</u>	<u>Procurement</u>	<u>Estimated Amount</u>	<u>Bank Financed %</u>	<u>Review Type</u>	<u>Planned Start Date</u>
(Value cannot exceed 250 Characters)	(Value cannot exceed 40 Characters)	<u>Category</u>	<u>Method</u>	(Must be greater than zero, and a positive number; no points or commas)	(Cannot be greater than 100%)		(Must be in YYYY/MM/DD format)
New policy and legal system development	MCT-CI-1	CS	Open, INDV	250000	100	Prior	2017/10/01
Sector Review, development of options for GoTV decision, implementation of GoTV decision.	MCT-CF-2	CS	Open, QCBS, International	500000	100	Prior	2018/05/01
ESIA Specialist	MCT-CI-3	CS	Open, International, INDV	10000	100	Post	2018/06/01
PPP - selected International partner	MCT-CF-4	CS	Open, International, PPP	26500000	100	Prior	2019/03/01
Environmental Management Plan Monitoring.	MCT-CI-5	CS	Open, INDV	20000	100	Post	2020/02/01
ICT services oversight regime development.	MCT-CI-6	CS	Open, INDV	50000	100	Post	2018/12/01
PMU services (FM, STEP admin reports, client connection, etc.).	MCT-CI-7	NC	Open, INDV	60000	100	Post	2018/06/01
Procurement & Fiduciary support - MoU - TFSU	MCT-CI-8	NC	Open, INDV	60000	100	Post	2018/06/01
Additional Contract staff Project & FM, Procurement	MCT-CI-9	NC	Open, INDV	100000	100	Post	2018/11/01
Project Audit Services	MCT-C-10	NC	Open, LCS International	100000	100	Post	2019/06/01

(ii) Financial Management (FM)



7. The FM assessment was carried out in accordance with the 'Principles Based Financial Management Practice Manual' issued by the Financial Management Sector Board on March 1, 2010, which states that with respect to projects financed by the World Bank, the recipient is required to maintain appropriate implementation arrangements—which include accounting, financial reporting, and auditing systems—adequate to ensure they can provide the project management and the World Bank with accurate and timely information regarding the project resources and expenditures. While the project will be implemented by MCT it has been assessed there is insufficient FM resources within MCT to meet the project FM requirements, hence the FM requirements for the project will be undertaken by a consultant/bookkeeper with additional support from an external based consultant. The assessed FM risk of the project is considered substantial, but this risk will be partially mitigated through the recruitment of a Consultant/Bookkeeper and additional input through a part time external Finance Advisor.

8. **Country Issues:** The most recent PEFA assessment was in 2011 and identified several weaknesses in the FM processes within government. There is limited capacity across the range of public financial management functions within Tuvalu due to lack of an in country professional body, limited education and professional opportunities and isolation from peers within the profession.

9. **Implementing Agencies:** Neither MCT or TTC have had experience in implementing World Bank Financed Projects and neither agency has the resources to devote staff to the FM requirements to successfully implement this project. Hence, as with all projects in Tuvalu additional specialist FM staff are recruited to be dedicated to the FM responsibilities of the project.

10. **Budgeting Arrangements:** The Project budget will be in Australian dollars and on a cash basis, formulated from the agreed work plans to cover the life of the Project, broken down into each financial year which spans from January to December. While MCT have some experience in the formulation of budgets, external assistance may be required formulation and monitoring of the budget. The budget will be an aggregate of the activities whose costs will be estimated at the start of the Project and updated annually. MCT will liaise with the Finance Advisor in the annual budget review.

11. **Accounting/Staff Arrangements:** A Bookkeeper who, will be partially financed through the project has been employed to maintain the PPA accounts. The person is currently being trained by the Tuvalu Aviation Project Management Unit's Finance Manager. While this project is high value, there is likely to be a relatively low number of transactions. Under the Project plan, there may be only about four contracts and limited other expenditures hence the FM workload should only require one staff member, however it is recommended there is additional external support provided by a Finance Advisor to assist on contract management, preparation of annual financial statements and input into the preparation and monitoring of the budget.

12. Quick Books accounting software will be used to record the financial transactions through a separate company for which an additional licence will be required. Accounts will be maintained on a cash basis.

13. **Internal Controls:** The Public Finance Act outlines the broad Financial Management controls in Tuvalu. While there have been issues within Government over compliance with internal controls, and the 2016 National Accounts included a disclaimer, generally there have been satisfactory accounting processes and compliance within the World Bank financed projects within Tuvalu which ensure authorization and payment processes are clearly segregated. The TvAIPMU also has prepared a Financial Management Manual which can provide an additional resource on the additional FM requirements for World Bank financed projects. The bookkeeper will prepare the accounting documentation for each transaction which will be authorized by MCT. There is no internal audit division within the government of Tuvalu.



14. **Flow of Funds:** An Australian-dollar denominated segregated Designated Account (DA) has been opened at the National Bank of Tuvalu in Funafuti for the PPA and this same account will be used to enable the Bank to advance funds for the day to day project funds however it is envisaged that the majority of the payments for Components 2a and 2b will be Direct Payments to the suppliers.
15. **Financial Reporting:** The Project will be required to prepare semester interim financial reports (IFRs) in a format agreed upon with the Bank. The IFRs will be required to be submitted not later than 45 days after the end of the reporting period. The IFRs will be prepared by the Bookkeeper in consultation with MFED in a format agreed between the MFED and the World Bank.
16. **External Audit:** The Tuvalu National Audit Office will conduct an annual audit of the Project accounts and these will be required to be received by the Bank within six months of the end of each of the reporting periods. The Tuvalu National Audit Office has experience in auditing government departments and World Bank Funded Projects and is an auditor acceptable to the World Bank.
17. **Disbursements:** The Project will be able to use four Disbursement Methods: Advance, Reimbursement, Direct Payment and Special Commitment. Component 1 of the Project is already operating under the provision of a Project Preparation Advance (PPA) of US\$0.75 million.
18. To facilitate the incremental operating costs, payments for national works and consultants associated with components other than the Submarine Cable Construction, the PPA Designated Account which is already in place will become the designated account for the Project. Documentation requirements will be outlined in the Disbursement Letter. The bookkeeper will prepare all Withdrawal Applications which will be reviewed and signed by the authorizing officers at MEFD and MCT prior to submission to the World Bank.



19. The Project will have the disbursement categories as outlined in Table A2.3

Table A2.3 -Disbursement Categories

Category/ Component	Amount of the Financing Allocated US\$ (millions) equivalent	Percentage of Expenditures to be Financed by the Grant (inclusive of Taxes)
(1) Consulting Services, goods and operating costs for Components 1 and 3 of the Project	1,750,000	100%
(2) Goods, works, non-consulting services, and consulting services for Component 2 of the Project	26,500,000	100%
(3) Refund of Preparation Advance	750,000	Amount payable pursuant to Section 2.07 (a) of the General Conditions
Total Amount	29,000,000	