SECTOR ASSESSMENT (SUMMARY): INFORMATION AND COMMUNICATIONS TECHNOLOGY

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. The Cook Islands is presently dependent on satellite for internet connectivity. After the introduction of Other Three Billion (O3B) service in 2014, the quality of internet connectivity has improved while the price has decreased compared to traditional satellite connectivity. However, the service is still costly for the general population, and the quality of service is affected by weather disruptions. Retail internet service prices are high compared to any Asian developing country. Prepaid Wi-Fi services are available at different data volume levels. A 1,250-megabyte prepaid package costs NZ$50 and a monthly package for 100 gigabytes of data costs NZ$699 per month. There is no unlimited data plan available.

2. Isolation and other constraints to economic development in the Cook Islands may be mitigated in part by improved access to, and more affordable, telecommunications, especially high-speed (broadband) internet. A World Bank report found that in low- and middle-income countries, every 10-percentage point increase in broadband penetration accelerates economic growth by 1.38 percentage points.[1] Such impacts result from reduced transaction costs for business, government, and households; new business opportunities; and the harnessing of information and communications technology (ICT) for improved public service delivery.

3. A submarine cable would provide higher capacity and quality broadband internet at much lower cost to the Cook Islands, making the internet more accessible and affordable to the broader population. This would (i) help Cook Islanders stay in contact with their relatives residing abroad; (ii) support regional integration by increasing the frequency and quality of communications among the countries in the Pacific region, thus increasing trade in services (tourism and back-office functions) and allowing the region to form a sizable market for digital products and services; and (iii) strengthen the existing regional public goods and encourage new ones by allowing countries to share the limited knowledge and human resources available in the Pacific.

4. The Cook Islands is a group of 15 islands with a total land area of less than 240 square kilometers. The main island of Rarotonga has a population of about 10,000, while the second most populated island of Aitutaki has a population of about 1,200. The individual islands are connected by a combination of satellite earth stations, microwave systems, and very high frequency and high frequency radiotelephone. Within the islands, service is provided by small exchanges connected to subscribers by copper and fiber-optic cable. Currently, mobile data services are only available in Rarotonga, Aitutaki, Mangaia, Atiu, Mitiaro, Mauke, Pukapuka, and Manihiki. In Rarotonga, there is an underground fiber-optic network (ring system). In Aitutaki, the ring system is closed by microwave connection across Aitutaki's lagoon.

5. The internet speed is 2 megabits per second (Mbps) to 12 Mbps in Rarotonga and 256 kilobits per second to 1 Mbps in the *Pa Enua* (outer islands). Currently, there are 11,500 mobile subscribers and 7,800 fixed landline connections covering 98% of the population. The broadband connection is about 2,700 through an asymmetric digital subscriber line.

[1] World Bank. 2009. *Information and Communications for Development 2009: Extending Reach and Increasing Impact.* Washington, DC.

6. Telecom Cook Islands (TCI), trading as Bluesky Cook Islands, is the monopoly telecom operator providing landline, mobile data service, internet, directory, television, and marine radio services in the Cook Islands. The government owns 40% of the company and has two seats on the board; Bluesky Pacific Group, Samoa hold the other 60%. TCI is mandated to provide universal service in the non-profitable segment of the market, especially the sparsely populated outer islands. In 2016, Amalgamated Telecom Holdings Fiji purchased the majority of Bluesky Pacific Group operations in the Pacific and is in the process of taking over Bluesky's 60% share of TCI in the Cook Islands.

7. Through an arrangement with TCI, the University of the South Pacific and several commercial banks in Cook Islands are allowed to connect directly by satellite to their own regional private communication networks. There are a few resellers and internet cafés, mainly in Rarotonga and Aitutaki, and all rely on TCI services.

8. There is no telecom regulation in place. TCI, as the sole operator, manages telecom frequency, pricing, service level, and customer complaints.

2. Government's Sector Strategy

9. The Government of the Cook Islands' National Sustainable Development Plan, 2016–2020 includes the goals of improved ICT connectivity, broadband affordability, and mobile connectivity to improve the standard of living.[2] This reflects the government's recognition that infrastructure and ICT should serve to (i) improve or secure the lives of people by providing utilities and improving access to services; and (ii) provide, stimulate, or facilitate economic growth and activity.

10. The Ministry of Finance and Economic Management oversees the Cook Islands telecommunications sector. The government has identified the need to amend the existing Telecommunications Act Amendment 1997 to allow both competition in the market and establishment of an independent telecom regulator. A new amendment of the act has been drafted and is currently being viewed by Legal Services Agency of the New Zealand Parliament in cooperation with the Government of the Cook Islands' Crown Law Office. It is scheduled to be tabled in the Cook Islands Parliament in November 2017. Open market reforms with a strong regulatory regime are the key for the Cook Islands to achieve the goals set in National Sustainable Development Plan, 2016–2020, and will also help in fully realizing the benefits of the submarine cable project, making the internet affordable and available to the general population.

11. The Cook Islands has recognized the need to improve internet connectivity. However, a 2013 assessment financed by the Asian Development Bank (ADB) found the cost of building a cable connection to Samoa (the closest internet connection point) was too costly to be financially viable.[3] In February 2016, the government was invited to join a task force with the governments of French Polynesia, Niue, and Samoa to explore the possibility of a regional submarine cable project. The ICT Division under the Prime Minister's Office was mandated to represent Cook Islands in the task force and be the focal point for project preparatory activities. The Cook Islands is supported by a technical advisor to ensure the regional cable solution selected meets the Cook

[2] Government of the Cook Islands, Prime Minister's Office, Central Policy and Planning Office. 2016. *Te Kaveinga Nui: National Sustainable Development Plan, 2016–2020*. Rarotonga.

[3] ADB. 2013. *Report on the Feasibility of an International Submarine Cable System for the Cook Islands.* Consultant's report. Manila (TA 7787-REG).

Islands' needs.[4]

12. In 2017, the government, with the support of a legal advisor (footnote 4), established a state-owned enterprise named Avarua Cable to implement and operate the submarine cable for the Cook Islands. The cable-operating entity will be a wholesale provider of the submarine internet bandwidth in the Cook Islands on a fair and equitable wholesale basis. The business model of the cable-operating entity will ensure internet affordability for the general population. Avarua Cable has joined with Telecom Niue, French Polynesia's Office Des Postes et Télécommunication, and Samoa Submarine Cable Company to set up a Project Steering Group (PSG) consortium to implement the regional submarine cable system—called the Manatua cable system—and share the implementation and operation cost. The Cook Islands, which does not have experience or capacity in running a submarine cable business, will leverage the experience of PSG consortium members to operate cable system in Cook Islands.

3. ADB Sector Experience and Assistance Program

13. Globalization and digitalization offer challenges and opportunities, particularly for ADB's small and isolated Pacific developing member countries (DMCs). ADB's Pacific Approach, 2016–2020 prioritizes ICT for improved connectivity among Pacific DMCs and between Pacific DMCs and the rest of the world.[5] ADB's country operations business plan, 2017-2019 for the Cook Islands,[6] in line with the Strategy 2020 Midterm Review,[7] supports the government's goal of developing ICT.

14. Tonga was successfully connected by a submarine fiber-optic cable to the existing global international submarine cable network in 2013 through a project jointly financed by ADB and the World Bank. The regional policy and advisory technical assistance (TA) initiative for ICT-based inclusive growth and poverty reduction aimed to support regional knowledge sharing and identify new investment opportunities for ICT applications.[8] ADB is implementing similar submarine cable projects in Palau and Samoa.[9] ADB provided TA to support preparatory work in the development of these projects, and will support other Pacific DMCs in assessing the feasibility of future investment options for further international connectivity.[10]

15. Promoting competitive pricing in ICT services requires an appropriate regulatory environment. In late 2014, ADB approved TA for the Pacific ICT Regulatory Resource Center, contributing in the Pacific to (i) frequent sharing of experiences and international best practices, (ii) strengthening the capacity of ICT regulatory bodies and policy makers, (iii) providing demand-driven advisory services, and (iv) raising broad-based awareness to demand better ICT regulations.[11] The World Bank is providing follow-on resourcing to the center.

16. ADB is also supporting projects to identify and implement ICT applications at other sector

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[4] Technical assistance (TA) was provided through ADB. 2013. *Technical Assistance for Pacific Information and Communication Technology Investment Planning and Capacity Development Facility*. Manila (TA 8540-REG).
[5] ADB. 2016. *Pacific Approach, 2016–2020*. Manila.
[6] ADB. 2017. *Country Operations Business Plan: Cook Islands, 2017—2019.* Manila.
[7] ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.
[8] ADB. 2009. *Technical Assistance for Information and Communication Technology-Based Inclusive Growth and Poverty Reduction in the Pacific*. Manila.
[9] ADB. 2015. *Palau: North Pacific Regional Connectivity Investment Project.* Manila; ADB. 2016. *Samoa: Submarine Cable Project.* Manila
[10] ADB. 2014. *Technical Assistance for Results-Based Strategy and Sector Planning in the Pacific*. Manila.
[11] ADB. 2014. *Technical Assistance for Strengthening Regulatory Capacity for Information and Communication Technology Development in the Pacific*. Manila.

level to support inclusive growth and poverty reduction in the Pacific region.

Problem Tree for the Information and Communication Technology Sector