



## PAGE 3: B. ABOUT YOU

**Q1: Respondent details**

|               |                        |
|---------------|------------------------|
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**Q2: Country or Customs territory**

- MULTILATERAL OR REGIONAL DEVELOPMENT BANK

**Q3: Organization**

Public sector

## PAGE 4: C. ABOUT YOUR CASE STORY

**Q4: Title of case story**

Tonga's High-Speed Revolution

**Q5: Case story focus**

E-commerce development and efforts to bridge the "digital divide".

**Q6: Case story abstract**

"An undersea fiber-optic cable network is banishing Tonga's long-standing isolation and ushering in the wired world of the 21st century."

Tonga is one of the most isolated places on earth, a string of islands scattered over an area of the Pacific about the size of Myanmar. The first step to getting Tongans online involved laying an undersea fiber-optic cable by ship from Fiji at a cost of \$25 million, a sum far beyond the reach of the small country's budget. Under the Pacific Regional Connectivity Program, the Asian Development Bank, the Government of Tonga, Tonga Cable, and the World Bank Group joined forces to finance and support an 827-kilometer submarine fiber-optic cable system linking Tonga to Fiji via the Southern Cross Cable—the main trans-Pacific link between Australia and the United States.

Tonga Cable is the owner and manager of the fiber-optic cable. CEO Bolouri said the project team completed the job in four years, under budget and one day ahead of schedule. "Strong partnerships in the project were a critical component," he said. High-speed broadband internet is transforming everything from health care, business, and government services to education, disaster management, and the social life of Tongans. International connectivity costs have already fallen by more than 60%.

**Q7: Who provided funding?**

Multilateral organization

**Q8: Project/Programme type**

Single country

**Q9: Your text case story**

Nuku'alofa, Tonga – Robert Bolouri remembers trying to do business with the rest of the world from Tonga when the only option was an extremely expensive and slow satellite service.

“We used to joke that if you wanted to access the internet you would click on the site, go away and make a cup of tea, drink it, and then maybe when you returned to your computer the site would be up—if the system hadn't timed out,” said Bolouri, chief executive officer of Tonga Cable.

For some patients of radiologist Ana Akauola at Vaiola Hospital in the capital city of Nuku'alofa, the lack of high-speed internet could be a matter of life and death. Unable to transmit large data files, Tonga's sole radiologist had to mail x-rays and CT scans to colleagues in Australia for a second opinion. “The whole process could take up to 10 days,” she recalled. “Sometimes patients died during that time.”

“Faster internet speed and higher bandwidth at cheaper and more affordable prices is a real opportunity for Tonga.”

» Lord Tu'ivakano

Those days without a reliable connection to the outside world ended in August 2013. At the Operation Network Center of Tonga Cable, the King of Tonga, Tupou VI, initiated high-speed internet service with the click of a computer mouse. Alongside the King, then Prime Minister Lord Tu'ivakano declared, “Faster internet speed and higher bandwidth at cheaper and more affordable prices is a real opportunity for Tonga.”

High-speed broadband internet access has the potential to generate a host of new economic opportunities from e-commerce to online jobs. A 2009 World Bank study calculated that an increase in broadband penetration of just 10% boosts gross domestic product growth by 1.4% in low and middle-income countries like Tonga.

**Hooking-up Tonga**

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**Connected health care**

“High-speed internet has touched every aspect of our lives,” said Akauola at Vaiola Hospital. “Now, when I send x-rays, scans, and patient histories to colleagues overseas, they review the material and report back within hours.”

Ala Mea, a general surgeon who has worked at Vaiola Hospital for 12 years, reviews surgical procedures online before she performs an operation. The hospital's principal staff nurse, Be Piuela, said the connection helps her nurses keep up with their medical education.

**Wired learning**

Ana Koloto, who used to manage three university centers as a former director of the Tonga campus of the University of the South Pacific, says the university is now reliably connected to sister campuses in other Pacific island nations via videoconferencing and Skype.

Before the fiber-optic cable arrived, many of the university's finance and administration staff worked late at night or early in the morning when internet traffic was low, just to get their work done, said Koloto. They now keep regular hours. High-speed internet means higher work satisfaction, better educational resources and services, and greater responsiveness to students' needs.

Viviana Koloi, a year 12 student at St. Andrew's High School in Fanga Village, Nuku'alofa, said working in the computer lab at school is much more enjoyable since high-speed internet arrived. The 17-year-old uses the internet for her English, biology, and chemistry studies.

#### Boosting business

High-speed internet enabled Suliana Afu to expand her office supplies business and printing service from a single staff member to 12 employees. With 99% of supplies sourced overseas, she can now place orders with suppliers via email and get a response right away. "When customers ask us for a quote by e-mail our response time is quicker," she said.

Tonga is now seeing increasing interregional trade in services such as tourism and back-office functions. One of many new businesses is a call center that opened its doors in March 2013 in Nuku'alofa.

#### Bringing the Pacific online

The Asian Development Bank is also working with the World Bank to finance cable projects in Palau and Samoa.

"Bringing 'digital dividends' to the Pacific, in partnership with ADB, is a key component of our engagement in the region," says Natasha Beschorner, senior information and communication technology policy specialist at the World Bank.

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#### **Q10: Lessons learnt**

##### Benefits of Improved internet connectivity in Tonga

1. International connectivity cost dropped by 60%.
  2. Improved connectivity also provides better educational resources for Tonga's citizens.
  3. An improvement in health care facility due to an increase in the ease and frequency in Tonga's health care providers ability to reach out to specialist overseas.
  4. Increase international trade, particularly in the tourism sector and business process outsourcing.
  5. Enhanced quality of life of citizens, due to the improved ease in carrying out everyday activities, like paying bills, sending remittances, and communicating with friends and family at an affordable rate.
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