

**Digital transformation and innovation for a sustainable and equitable digital future: Supporting the SDGs organized by the International Telecommunication Union (ITU)**

**“DEVELOPING RESILIENT INFRASTRUCTURE IN ISLAND”**



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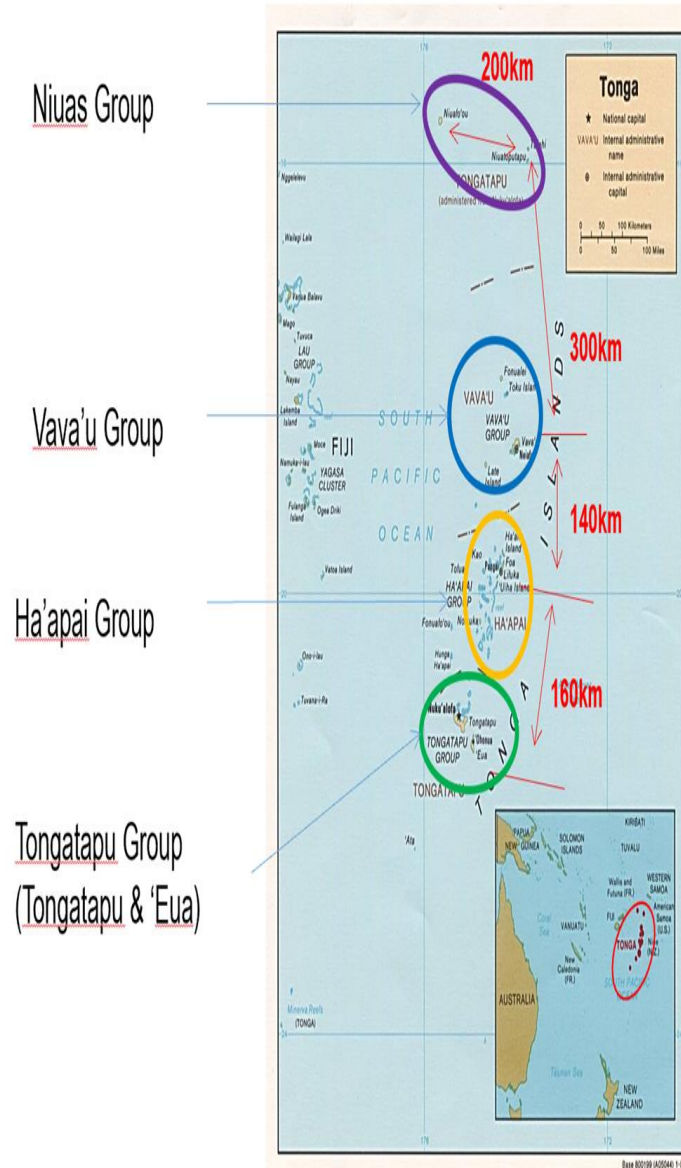
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Island Kingdom of Tonga

# Map of Tonga



Kingdom of Tonga

• Total Pop: 106,000  
(2022 Census)

• 176 islands  
(40 inhabited)

• Total Land Area:  
748 sq. km

• Total EEZ:  
700,000 sq. km

# Outline:

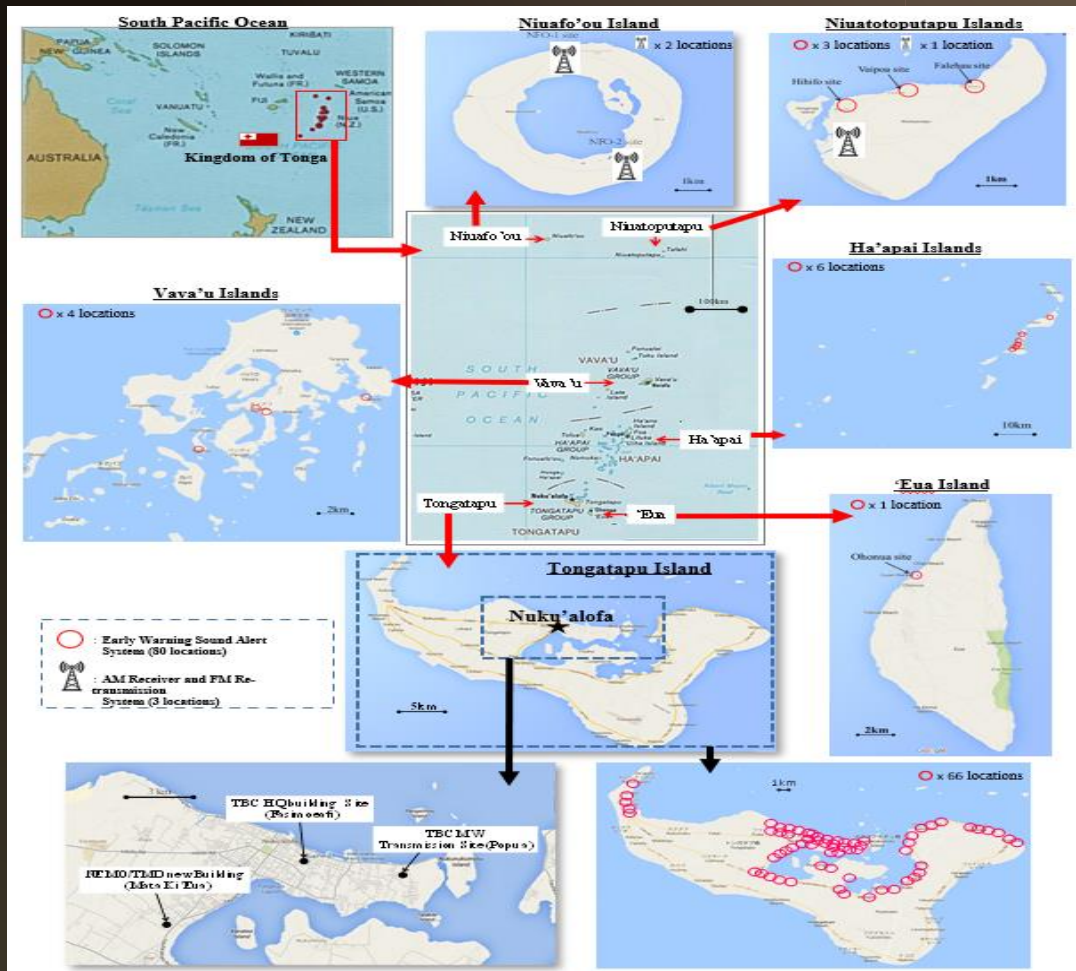
1. Introduction
2. Understanding the current ICT Landscape in Tonga
3. Establishing a resilient ICT infrastructure in Tonga
  - 3.1-Enhancing connectivity
  - 3.2 -Building redundancy
  - 3.3 -Strengthening cybersecurity measures
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  - 3.5 -Promoting ICT skills development
4. Collaboration and Partnering
5. Funding and resource allocation
6. Monitoring and evaluation
7. Conclusion

# 1. Introduction:



Good morning/afternoon/evening, ladies and gentlemen. Today, I am here to present a comprehensive strategy for building resilient ICT infrastructure in Tonga. In an increasingly interconnected world, the importance of robust and reliable information and communication technology (ICT) infrastructure cannot be overstated. This presentation aims to outline the key components and steps required to develop a resilient ICT infrastructure in Tonga, ensuring the country's ability to withstand and recover from various disruptions

## 2. Understanding the current ICT Landscape in Tonga



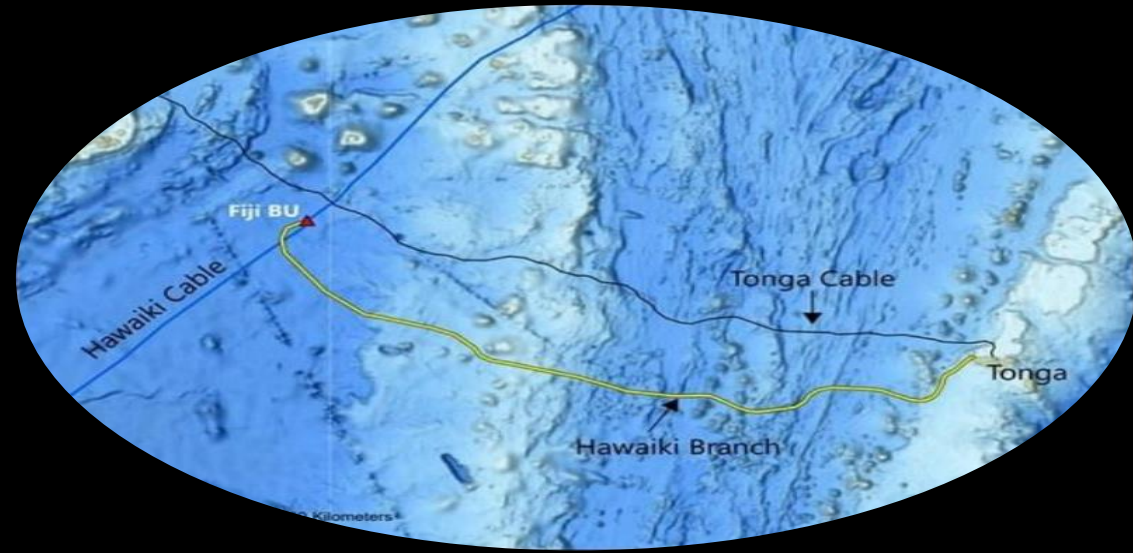
Before diving into the strategy, it is crucial to assess the current state of ICT infrastructure in Tonga. This includes evaluating existing network, connectivity, data centers, cybersecurity, measures, and disaster preparedness plans. By understanding the strength and weakness of the current system, we can identify areas that require improvement and prioritize our efforts accordingly.

### 3. Establishing a Resilient ICT Infrastructure Framework

To build a resilient ICT infrastructure in Tonga, we propose the following framework



3.1 Enhancing Connectivity: Improving connectivity is fundamental to building a resilient ICT infrastructure. This involves broadband access across the country, particularly in the rural areas, through initiative such as fiber optic deployment, satellite connectivity, and wireless technologies. Additionally, promoting competition among service providers can drive innovation and improve service quality.



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- 3.2 Building Redundancy is crucial for ensuring uninterrupted service during disruptions. This can be achieved by establishing redundancy network links, backup power systems (e.g., generator or solar), and redundant data centers located in different geographical areas to mitigate risks associated with natural disasters.

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### 3.3 Strengthening Cybersecurity Measures:

With the increase threat of cyberattacks, it is imperative to implement robust cybersecurity measures. This include developing a national cybersecurity strategy, enhancing network security protocols, conducting regular audits and vulnerability assessments, promoting cybersecurity awareness and education, and establishing a dedicated Computer Emergency Response Team (CERT) to response to incident promptly.

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TELECOM AND ICT SERVICES FOR DISASTER PREVENTION AND PREPAREDNESS



### 3.4 Implementing Disaster Recovery Plan:

Developing comprehensive disaster recovery plan is essential for minimizing downtime and ensuring quick recovery in the event of disruption. This involves creating backup systems, data replication strategies, and establishing off-site data storage facilities. Regular testing and updating of these plans are crucial to maintain their effectiveness.



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### 3.5 Promoting ICT Skills Development:

Building a resilient ICT infrastructure requires a skilled workforce. Investing in training programme, scholarships, and partnerships with educational institutions can help develop a pool of skilled professionals capable of managing and maintaining the ICT infrastructure effectively.

#### 4. Collaboration and Partnerships:

Building a resilient ICT infrastructure cannot be achieved by the government alone. Collaboration with various stakeholders is vital for success. This includes partnering with international organizations, private sector entities, academia, and civil society to leverage expertise, resources and funding opportunities. Public-private partnerships can play a significant role in financing and implementing projects



DIGITAL SKILLS TO PUT INTO REAL PRACTICE IN THE WORKFORCE



## 5. Funding and Resources Allocation:

Securing adequate funding is crucial for implementing the proposed strategy. The government should allocate sufficient budgetary resources for ICT infrastructure development while exploring alternative financing options such as grants, loans, and public-private partnerships. Additionally, seeking support from international organizations specialized in ICT development can provide additional financial assistance.



## 6. Monitoring and Evaluation:



To ensure the effectiveness of the strategy, regular monitoring and evaluation mechanisms should be established. Key performance indicators (KPI's) should be defined to measure progress towards building and resilient ICT infrastructure in Tonga. Periodic assessments will help identify any gaps or areas requiring adjustments to ensure continuous improvement.



# Conclusion:



In conclusion, building a resilient ICT infrastructure in Tonga is crucial for the country's sustainable development and resilient against disruptions. By following the following propose strategy framework, Tonga can enhance connectivity, establish redundancy measures, strengthen cybersecurity protocols, implement disaster recovery plans, promote skills development, and foster collaboration with various stakeholders. With these efforts, Tonga can position itself as a leader in the Pacific Region in terms of ICT infrastructure resilience.

# Authoritative Reference Publication or Domain Names Used:

International Telecommunication Union (ITU) –

[www.itu.int](http://www.itu.int)

World Bank – [www.worldbank.org](http://www.worldbank.org)

Tonga Communication Corporation (TCC) –

[www.tcc.to](http://www.tcc.to)

