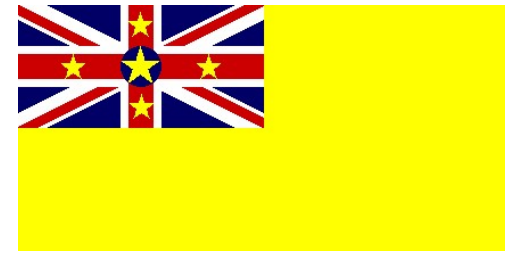


Niue Island Overview

Bula Vinaka!!

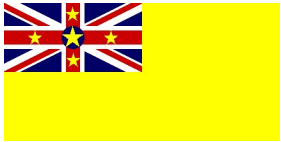


**Niue Island
Government**



Niue Island.

Niue's Current Situation



Niue has an existing fibre ring with ten MSANs spread out over the island. This is currently being used for Mobile, Voice, and Data.

Population:	1700
2G Mobile Users	970
Fixed phone lines	700
Government Users	400
ADSL Customers	400
Leased Fibre Customers:	10
Tourists per year	10,000

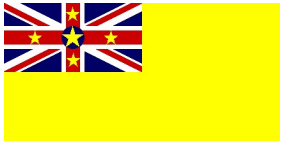
Using Geostationary Satellite on IS18 @40/8 Mbps using Spark.

Niue pushes approximately 1.8 Terabytes through the satellite per month

Leased fibre internet lines available to Businesses in capacity of 1-5Mbps price dependant on contract term.

Niue Island.

Current pricing - Prepaid Plan sample Ad

A scenic view of a tropical coastline with lush green vegetation in the foreground and a blue ocean under a sunset sky.

TELECOM Niue

New Prepaid ADSL

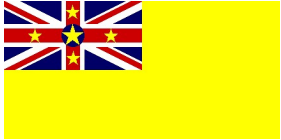
Plan	Data	Price
Heavy	20Gb	\$100.00
Normal	15Gb	\$75.00
<u>Lite</u>	10Gb	\$50.00

- Internet direct to your home.
- No Expiry, unlimited time to use data!
- No Monthly Fee!
- Top up over the phone, internet banking.
- Call 4730 or 4737 to find the best plan

Homo ha ia!!
Support Local Business!
Go Faster!!!

Niue Island.

Current Local Challenges



We can expect a Data Explosion once 4G onboarded
With 4G being delivered the data requirement will increase as public consume more.

Affordability

The cost of Satellite is still high >\$700USD per Mbps, any savings are passed down to our customers however one third of our fixed line customers are not using broadband yet.

Reliable Power

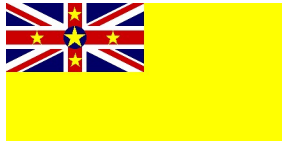
Niue is mainly run off diesel fuel with a small percentage of Solar. Power is stable but contingency must be built into local systems i.e Generators, batteries, spares, diesel, = increased TCO.

Harsh climate

Niue is prone to lightning strikes . Because Niue is made up of limestone it is difficult to get good grounding. This is a national problem and is exacerbated with any electrical equipment.

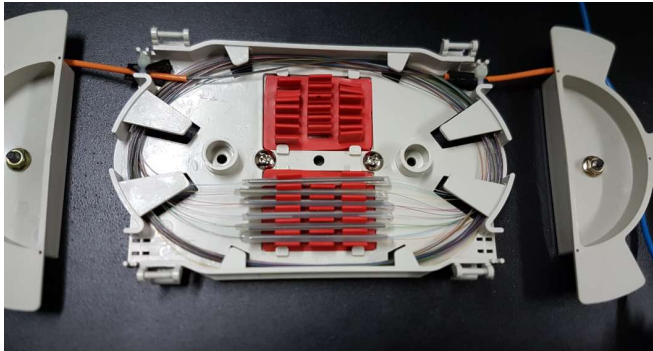
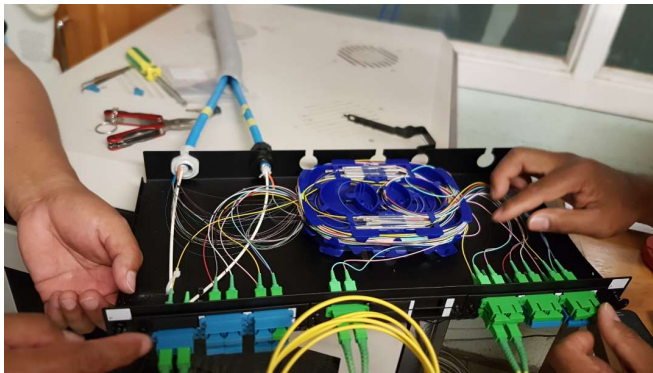
Ageing Hardware

Telecom Niue has a mixture of Legacy Network Equipment in its Core, Distribution and Access layers which makes it hard to manage.



Niue Island

Proposed plans to enhance access, bandwidth and speed of connectivity in the country



Upgrade of 1Gb to 10Gb Core, Distribution Layers in preparation for Submarine Fibre.

Rollout Access layer of GPON and FTTH to all homes and business', i.e replace Copper network And increase speed from 4Mbps DSL to 100Mbps

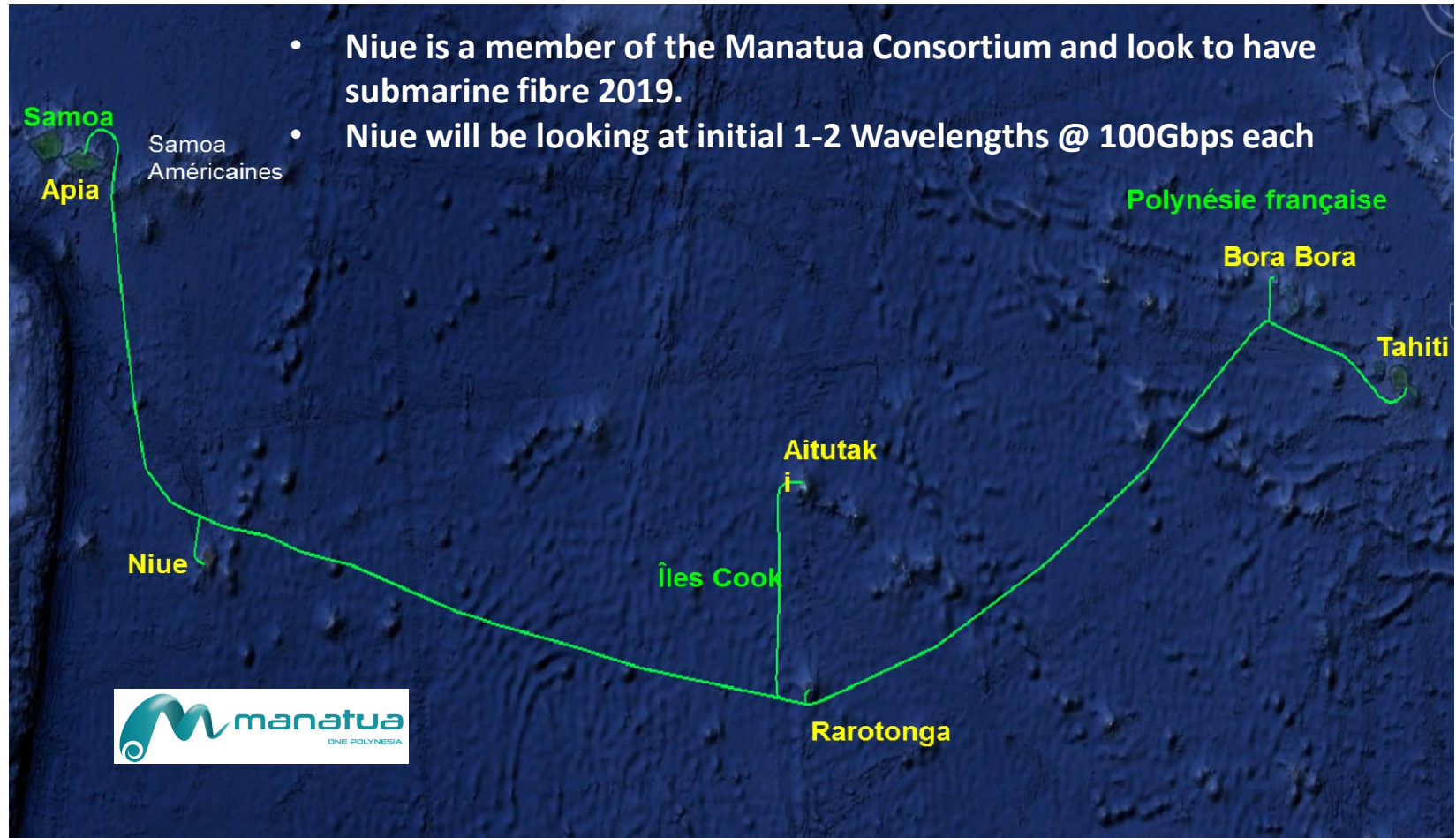
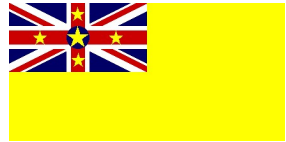
The roll out of a new 4G VoLTE Mobile network to increase access speed to 150Mbps to mobile devices

Increase utilization of Layer 7 Caching, Packet shaping, Packet filtering, and provide local content to enhance user experience

Investment in Fibre and 4G seen as climate friendly

Niue Island

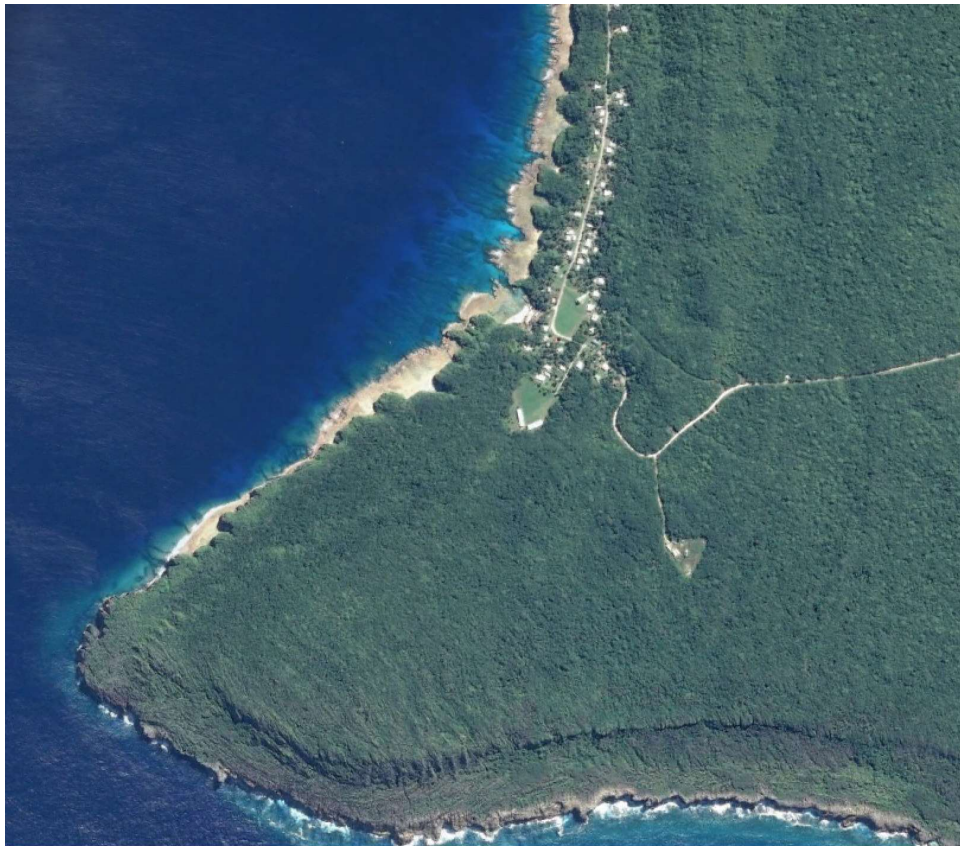
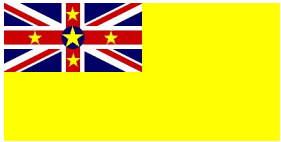
Submarine Fibre- Manatua Cable



- Niue is a member of the Manatua Consortium and look to have submarine fibre 2019.
- Niue will be looking at initial 1-2 Wavelengths @ 100Gbps each

Niue Island

Submarine Fibre Challenges



Consortium Agreements, Treaties, MoUs,
Tech specs, SoW, C&MA, tender.

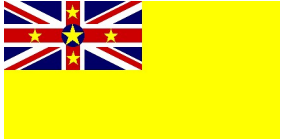
Upfront Capex and the proportion of
megahertz allocation based on
investment.

Niue is a raised Coral atoll so the
Technical logistics of landing the cable is
complex and Social Economic impacts
critical to the small potential areas.

CLS preparation.

Terrestrial network preparation

Niue Island Regulatory Framework



Telecom Niue is the incumbent Telecommunications licenced operator.

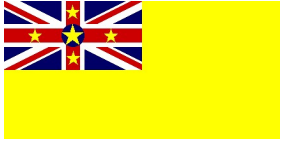
Regulations are set and managed by Niue Law:

Niue Communications Act 1989.

All public, private, radio, telecommunication licences are granted by Cabinet.

Supporting Policies:

Cyber security
Niue ICT policy



OSI - Ocean Specialists Inc.



SCCL – Southern Cross Cables



Hawaiki Submarine Cables
CIENA

Thank you to all Sponsors

Fakaaue lahi

Vinaka vakalevu



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