International Satellite Symposium 2016 Bali, Indonesia, 6-8 September 2016



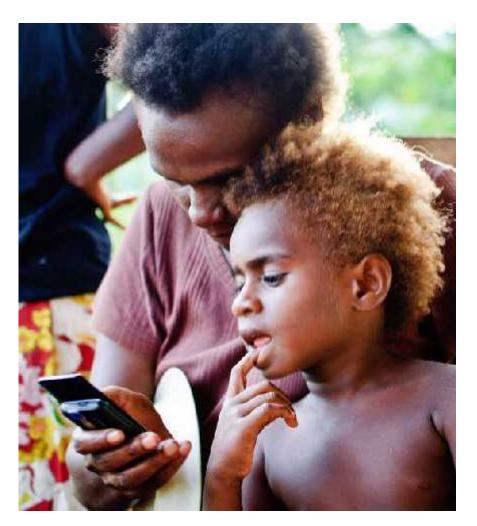


Satellite Service in Pacific Islands Countries: Country experiences

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Presentation Outline

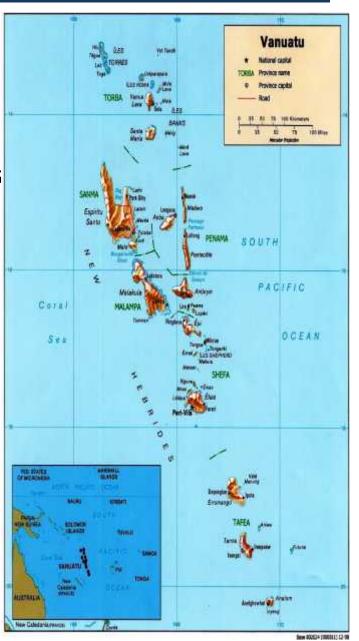
- 1. The Republic of Vanuatu
- 2. Geohazard Overview of Vanuatu
- 3. Situation before / after the Sub Marine Cable
- 4. Why we still need Satellite services
- 5. Current Satellite services in place
- 6. The future



Source: Lew Toulmin, OGCIO, Vanuatu

Vanuatu – Geopolitical Overview

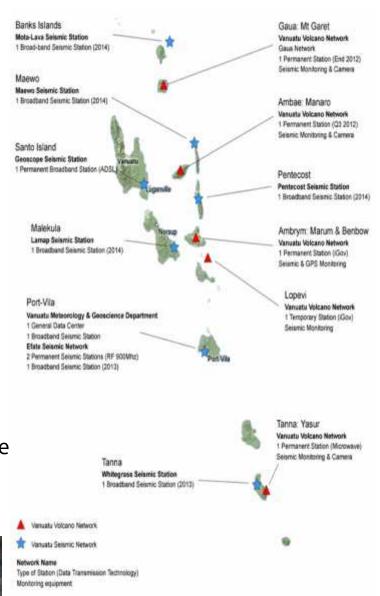
- Archipelago consisting of 83 islands of which 63 are inhabited
- Population of approximately 280,000 (2014 estimates
 - 50% of the population are under 18
- GDP (2013) of VUV75,800 million (\$688.9 million)
- Largest contributor to GDP is Tourism
 - Agriculture follows close behind
- GNI (per capita 2013) \$US3,130
- Political system is unicameral
 - Single chamber, multiparty, democratic republic
- Political challenges
 - Stability



Vanuatu – Geohazard Overview

- Rated 1 for last 4 years on World Bank Disaster Risk Index
- Last major disaster TC PAM March 2015
 - Catastrophic damage to Erromango and Tanna
 - Severe damage to Efate and the Shepard's Group
- Volcanic activity is increasing
 - 6 active volcanos
 - Mt Yasur (Tanna) most active, however there has been a noticeable increase in activity in other locations
- Earthquakes are frequent
 - June 2016 magnitude 6 causes property and stock damage in Malekula and Santo
- Increasing use of monitoring services





Vanuatu – Geohazard Overview – Impact on Satellite services.

Satellite Infrastructure before & after cyclone PAM – March 2015

Before Tropical Cyclone PAM



After Tropical Cyclone PAM

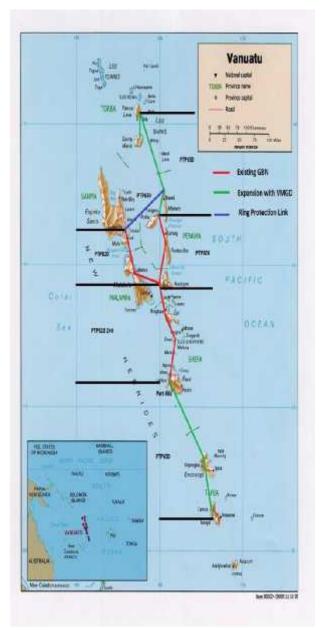


Before and After the introduction of Submarine Cable

	Before Submarine cable	After Submarine cable
Access	16%	92% (This is also due to Opening up of the telecommunication market)
Connectivity	2MB (satellite)	20GB (cable)
Internet	1% (dial up)	21% (4g, LTE)
Mobile Subscription	21,000	180,000
GDP	< 1%	5.3% (2015)
Cost	High	74% drop (still expensive)
e-Government	Infrastructure	e-Services
IXP	No Internet Exchange Point	Establishment of Internet Exchange Point

However Vanuatu still need satellite services

- Due to the geographical location of the country, the roll out of the telecommunication coverage is still very difficult and is currently done via terrestrial microwave link.
- The terrestrial microwave link cannot link all areas and villages around of all Vanuatu islands;
- The current available bandwidth in the microwave links are not sufficient to supply the demand from certain economic sectors.
- The current microwave link and the submarine cable cannot help the government complete the implementation of its Universal Access Policy objectives.



Universal Access Policy ... Connecting People ...

- Universal Access Policy
 - **>98% coverage by 1st of January 2018**
 - ➤ Bandwidth 21 MB downlink, 12 MB uplink
 - Priority is schools, health centers and public offices
 - ➤ Tablet for Students (Phase 2 in progress)
 - ➤ Broadband for Schools (Phase 2 in progress)
 - ➤Telemedicine Pilot launched
 - ➤ National Digital TV rollout
 - ➤e-Government Applications
- Free Facebook
- ICT Days Celebration (since 2012)



Source: Nguna Mama's, Vanuatu

The current Satellite services & usage • Universal Access Policy Projects

- Universal Access Policy Projects
 Delivering broadband internet connectivity to :
 - → Schools (8 sites)
 - → Health Clinics (2) to provide telemedicine (1)

This service are provided by Kasific Broadband Satellites using KU Band.

- Disaster & Emergency
 - The government have put in place in all provincial centres around Vanuatu Inmarsat and other Satellite phones that were sponsored by World Food Program, ITU and some other providers.
 - Proposes ITU Proposed Satellite project for the management of Disasters and Emergencies to very remote areas of the country.
- Business and Overseas diplomatic Missions connection:
 - Banking services in rural areas
 - Embassy and High commission offices; Resorts in Rural areas
- Telecommunications Operators Backup links



The future

- Government is looking into a long-term solution with a satellite provider to provide high broadband connectivity to areas where Commercial operators cannot deliver.
- To deliver connectivity to more
 - Schools;
 - Health centres with Telemedicine;
 - Government centres for government services through eApplications;
- To deliver Emergency and Disaster solutions to very remote areas of the country;
- Started the discussions with Kasific Broadband Satellite;
- Discussion is open to other Satellite providers also



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