International Connectivity in Papua New Guinea

A Presentation for ITU/PITA Workshop on enhancing Access to submarine Cables
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Country Overview – Papua New Guinea

Economy:
Main Sectors: Agriculture, Fisheries, Forestry & recently Mining & Petroleum, extractive & telecommunications
GDP: USD16.93 billion (overall)

Country Profile:
Country: Papua New Guinea
Capital: PORT MORESBY (22 Provinces)
Territory: 470,000 KM^2 (600 offshores Islands)
Population: 6.1 million
Region: Asia-Pacific
Language: 800 Languages (2 Nat. Lan)

Sector Profile:
Mobile: 2.7million (3operators & Fixed line 24K
Internet Exchange Point now established
GDP (ICT): 8.5%
Industry worth: USD350k (est)
Cables: APNG2 (TPNG&Telstra) & PPC-1 (Pipe Network)
Capacities - APNG 2 – 1Gbp/s&PPC-1-10Gbp s

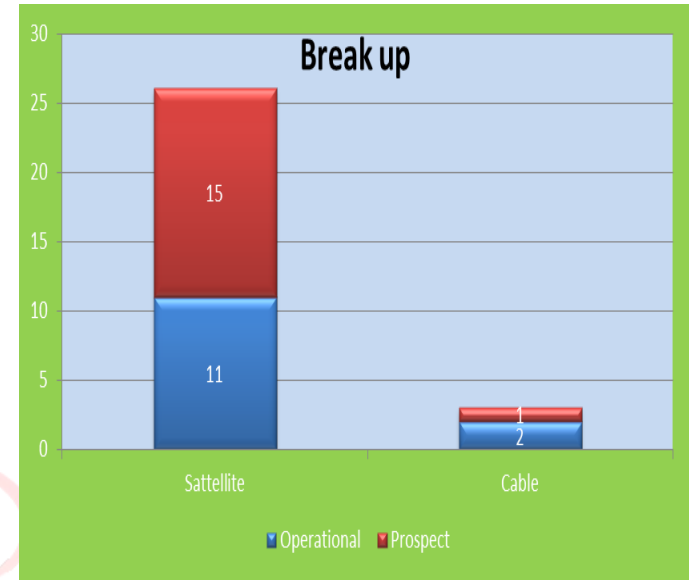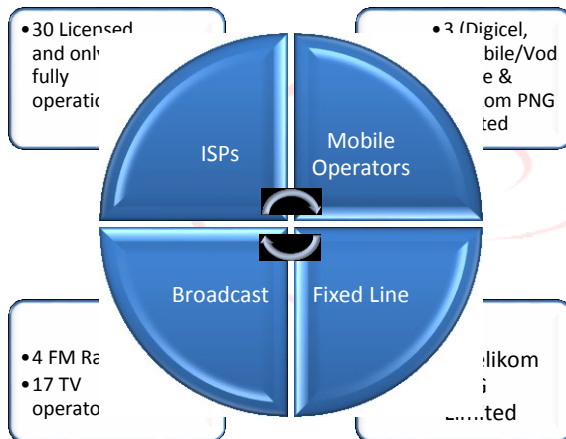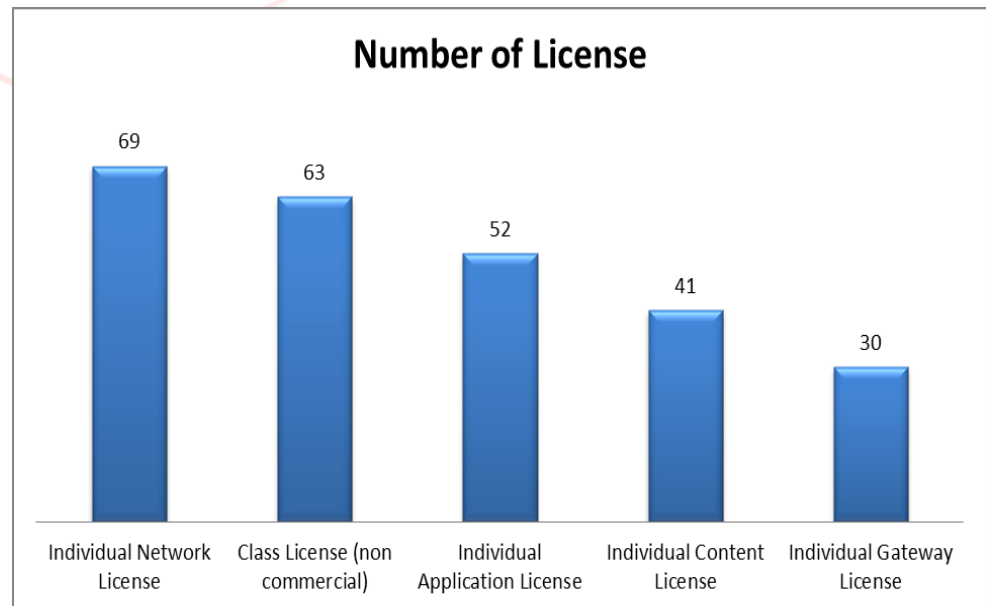# Telecommunications in PNG

- The PNG telecommunications network comprises of microwave radio, satellite (domestic & international) and optical fibre transmission systems (intra-city and international).
- The network is 100% automatic, with international links to over 160 countries in the world and domestic services to all urban centres and major villages. Two submarine cables PPC1 & APNG2 as well as Satellite
- Operators are continuously upgrading their network such as converting its telephone exchanges from analogue to digital.
- Other plans are to digitize the radio bearer systems primarily to allow greater traffic flow. Alternate routing facilities for the domestic satellite system and improvements in upgrading the transmission technology
- Mobile operators are currently rolling out 4G in main centers and in the process of extending to other outer parts of the country
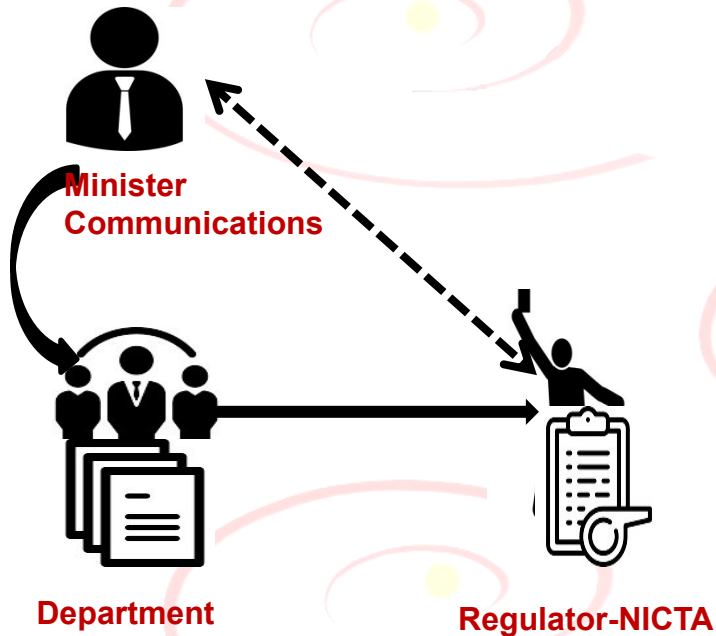
Break up

Sattellite: Operational 11, Prospect 15
Cable: Operational 2, Prospect 1

- Operational ▪ Prospect

Service Providers

- 30 Licensed and only fully operational

ISPs

- 3 (Digicel, bile/Vod e & om PNG ted

Mobile Operators

Broadcast

Fixed Line

- 4 FM Ra
- 17 TV operato

- elikom
- ....ted

Apart from the above the PNG has a National Transmission Provider for both international & domestic transmission needs

Number of License

Individual Network License	Class License (non commercial)	Individual Application License	Individual Content License	Individual Gateway License
69	63	52	41	30

Policy and Regulatory Administration

Policy & Regulations

Minister Communications

Department

Regulator-NICTA

The Regulator

Our Responsibility	Our Functions	Complementary role	Our Commitment
Regulating ICT Sector (Economic & Technical)	Assist Minister & other state agencies on ICT related matters	Cyber Crime Policy & Law	Ensures that ICT Policy objectives are met
Licensing (Spectrum & Operator)	Encourage & promote development of ICT industry	Sim Card Registration	Successful implement of NICT Act

ABOUT NICTA

- NICTA formally established in 2010 by the National ICT Act 2009

- NICTA is both **Economic** & **Technical** regulator for the ICT Sector.

- NICTA has responsibilities to promote the objectives of the National ICT Act 2009, which include ensuring that people and businesses in Papua New Guinea enjoy at the earliest practicable time and lowest sustainable price, the benefits of modern telecommunications and, in particular, broadband and Internet services.

POLICY & REGULATION -UNDER SEA CABLE

POLICY CONTEXT

Out of the 7 Key Objectives , 5 policy objectives provides for the current regulatory framework for NICTA which includes - LICENSING, ECONOMIC & TECHNICAL REGULATION, CONSUMER PROTECTION

To secure social & economic benefits of an efficient ICT Sector	To substantially increase access to ICT services across PNG with service to be available at affordable prices	Efficient ICT Infrastructure	To enjoy effective and sustainable competition to deliver market discipline and economic benefits	Improve International Connectivity

REGULATION

NEGOTIATE & ABITRATE

EX ANTE ACCESS REGULATION

WHOLESALE BASED REGULATION

DECLARED SERVICES

LANDING STATION LICENSED UNDER GATEWAY
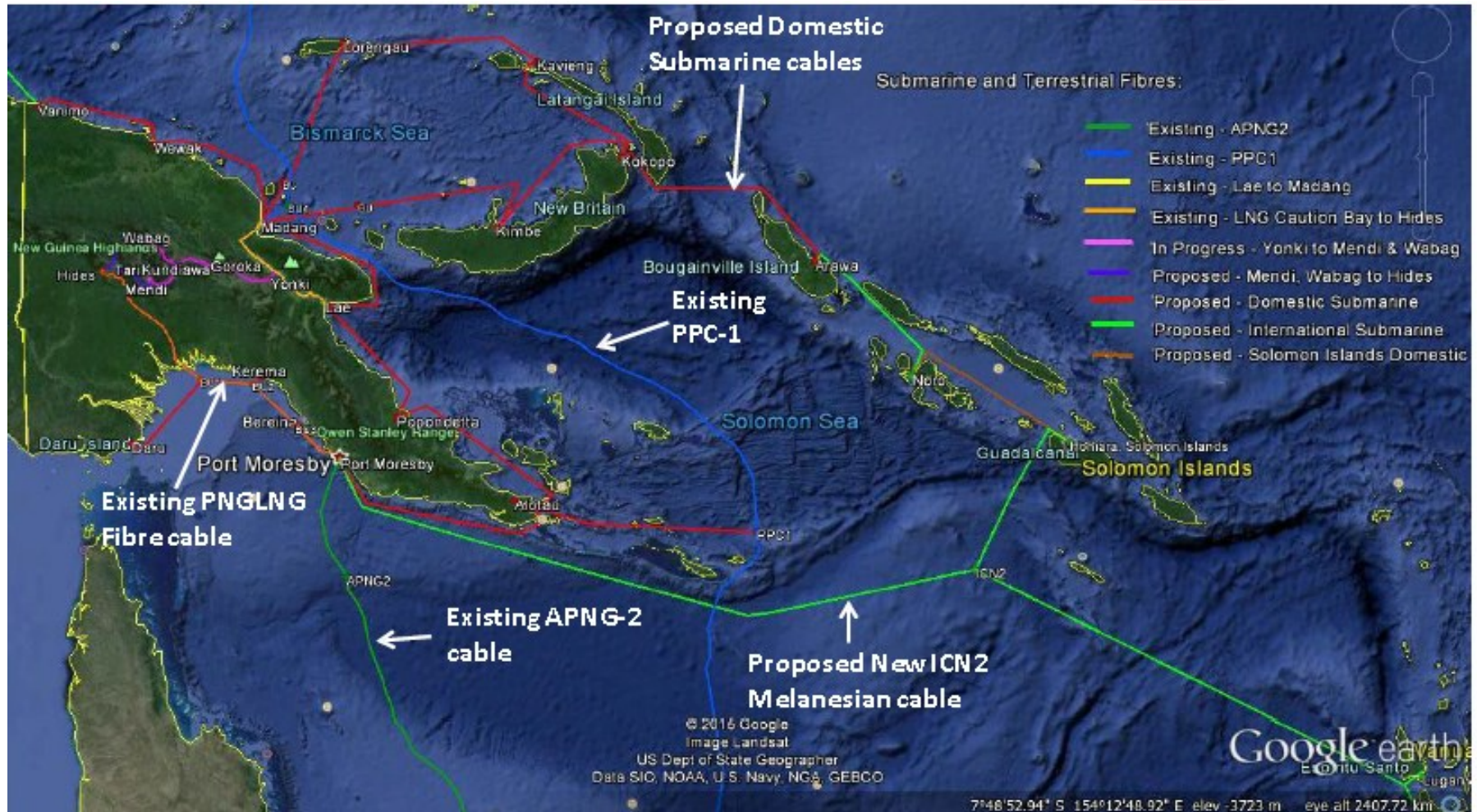
CURRENT PNG CABLE NETWORK

Major Telikom PNG microwave routes, other existing and planned telco infrastructure.

Note: Telikom routes are based on information publicly available. Telikom has been adding to M-W routes.
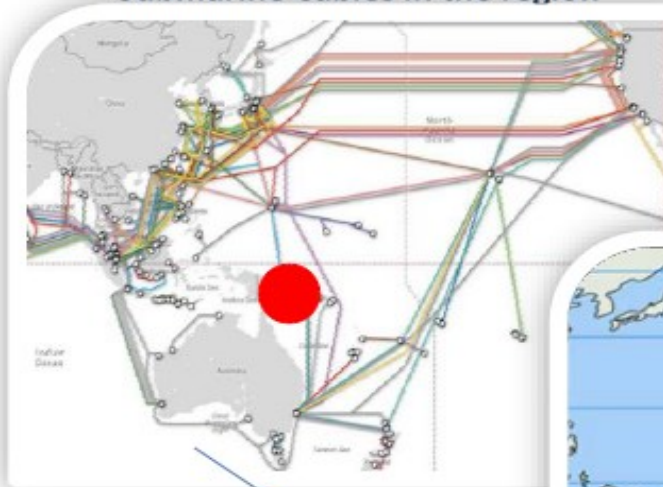
PLANNED CABLE NETWORK

OTHER PLAN

Different options are also been considered.

SOME OF THE RISKS/CHALLENGES

- Political risk – the new government may shelve the current planned projects

- Domestic landing stations for national transits (Land related issues)

- Traffic profiling to better understand the sources of upstream IP providers to assist in selected options.

- Denial of access