

PAPUA NEW GUINEA QoS REGULATORY FRAMEWORK

**ITU Workshop on Telecommunication Service Quality as Enabler of
the Digital Economy, Singapore, 19-21 August 2019.**

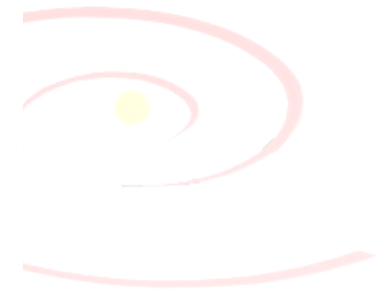
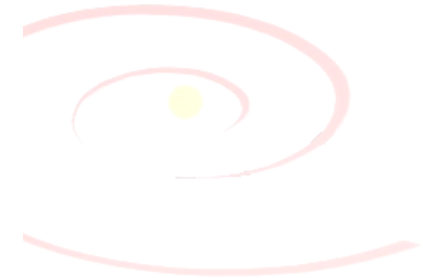


Felix Rupokei
NICTA
PNG

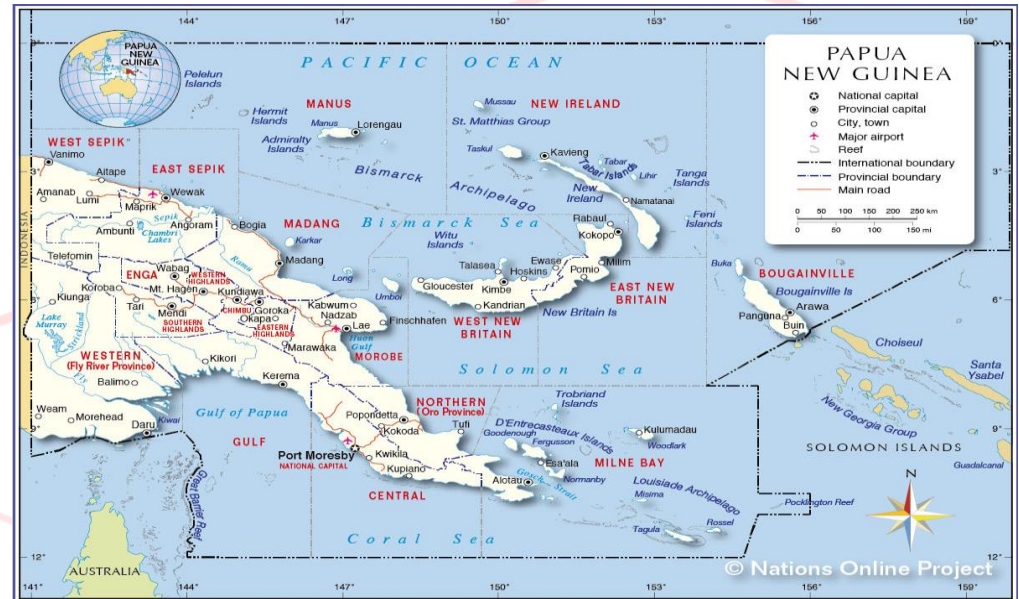
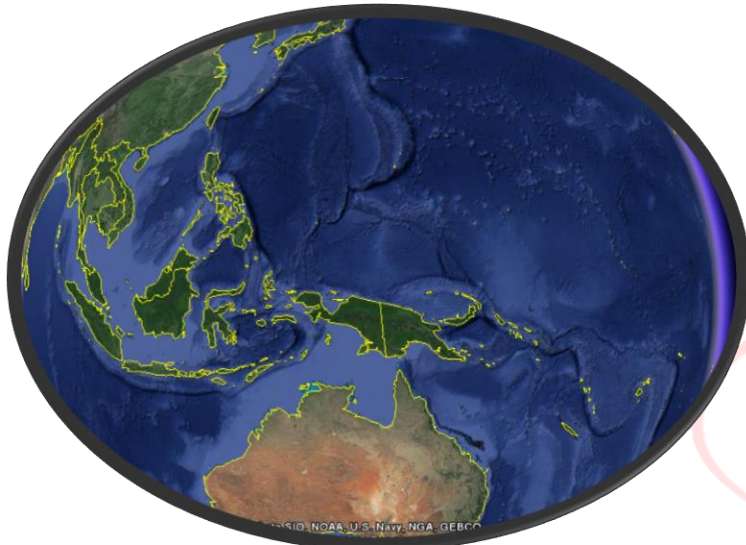
PRESENTATION OUTLINE

- 1. Country Profile**
- 2. PNG ICT Industry**
 - ICT Statistic**
 - ICT Development**
 - ICT Challenges**
- 3. PNG ICT Regulator**
- 4. QoS Regulatory Framework**
 - Current Regulation**
 - Proposed Regulation**
- 5. Way Foward**

END



PNG Country Profile



- Land Mass - 462 840 sq km
- Population - 8 million (Appro)—87% live in rural villages and remote areas.
- Geography - Rugged terrain with high mountain ranges and very steep and deep valleys and over 600 associated islands.

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PNG ICT Industry

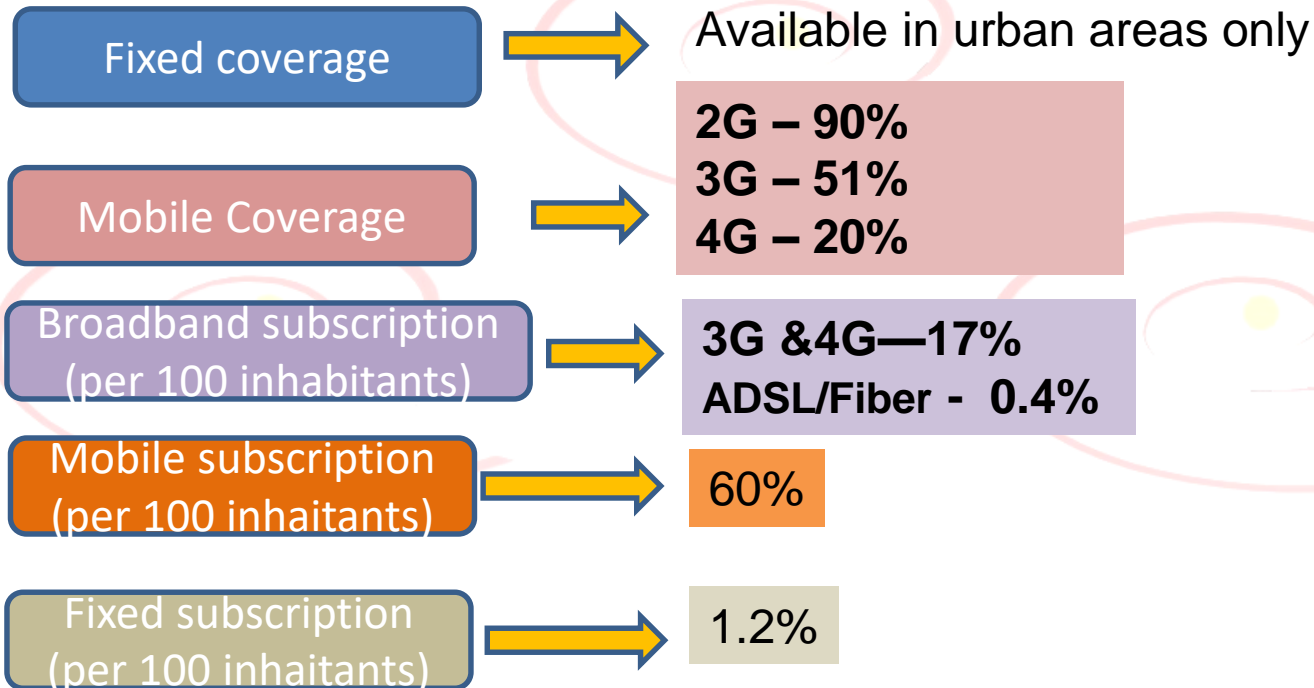
Telecommunications in PNG

- The PNG telecommunications network comprises of microwave radio, satellite (domestic & international) and optical fibre transmission systems (intra-city and international)..



PNG ICT Statistic

Licensees



ICT Development

Expand Coverage and improve QoS

Universal Access Service

- Extend network to unserved areas
- Upgrade mobile 2G to 3G

National Transmission Network

- Fibre optic broadband network - Connecting Mainland centres
- Kumul Domestic Cable - Domestic submarine cable
- Coral sea cable - Linking Sydney to Port Moresby (PNG)--
To deliver minimum of 20Tps to PNG

ICT Challenges

Unique geographical

Widely dispersed populations, Rugged terrain with high mountain ranges and very steep and deep valleys and over 600 associated islands.

ICT connectivity challenges

- Access to site
- Land issues
- Vandalism

Digital literacy and high cost of internet access

Low literacy rates in the Pacific, hence minimal digital literacy levels

High vulnerability to natural disasters and climate change

Small market sizes discourage private sector investment

High cost of laying and maintaining subsea cables

Prioritizing funding for the ICT sector

Institutional strengthening

High business and operational costs

Lack of robust ICT Policy

Lack of electricity

Diesel & Solar alternate

Providing adequate telecommunication network coverage and quality of service in PNG remains a challenge for service providers .

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PNG ICT REGULATOR

BACKGROUND

-ICT Policy Reforms

To assist the growth of ICT in PNG which is needed for Effective and efficient communication, the Government has set a Policy to reform the ICT Sector.

Prior to 2007, Monopolistic ICT sector with Telikom having exclusive rights. Very low penetration, high priced services and the dual regulatory regime was costly and timely.

1994

National Policy on Information & Communication (NPIC)

1996

Corporatisation of PTC (Telecom Act 1996 & Radio Spectrum Act 1996)

2002

Introduction of Dual Regulatory Regime; (Telecom Industry Act 2002 & ICCA Act 2002)

A pro-competitive approach, with a forward looking policy to be implemented by a converged sector specific Regulator was the way to go...

2007

Liberalisation of Mobile sector (2 new mobile licenses)

2008

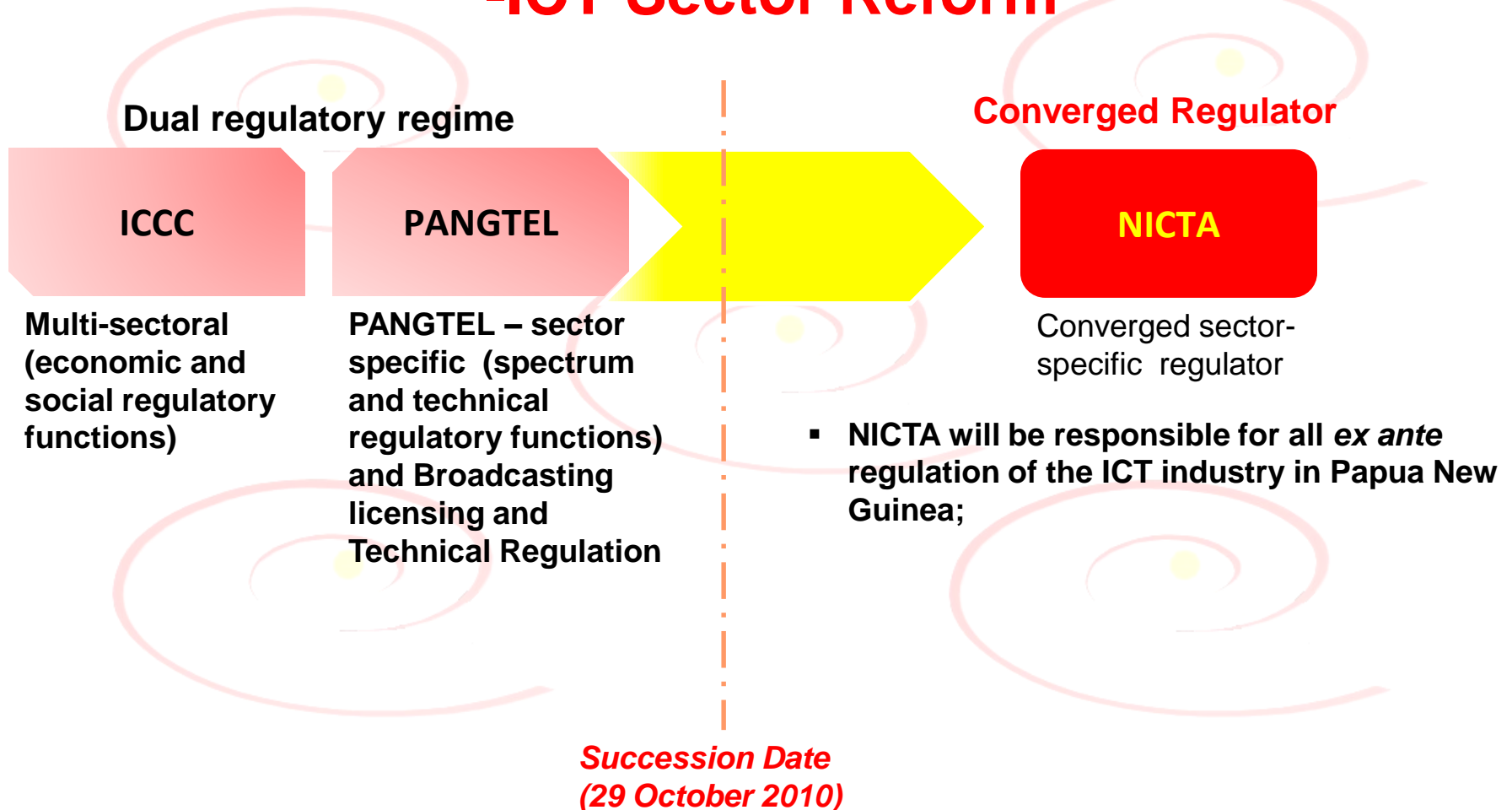
National ICT Policy (NICTP) 2008 and Amendments to Telecom Act 1996

2009

NICT Policy Phase 2 Reforms 2009 and NICT Act 2009

Set in place legislation for Full liberalisation and formation of NICT Authority

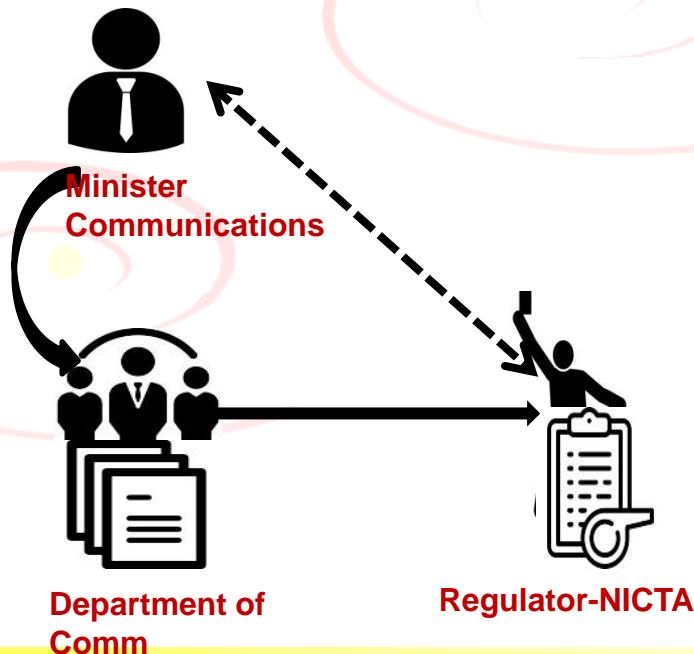
BACKGROUND -ICT Sector Reform



NATIONAL ICT AUTHORITY - NICTA

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/ICT services.



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QoS Regulatory Framework

Qos Regulatory Frameworks

Current QoS Regulatory Framework

Current QoS regulation is carried over from previous regime or Telecommunication Act.

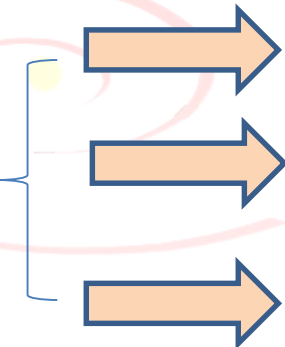
LAW



NICT ACT, 2009

- To ensure that ICT industry contributes to the greatest extent possible to the long term economic and social development of Papua New Guinea

Regulations



-NICT Operator Licensing Regulation, 2010

- Specify General Licence Conditions

-Consumer Protection Rule, 2014

- Provide rule for better protection of the interest of the consumers

-Data Collection Rule, 2016

- For Licensees to provide to NICTA data specified in the rule.

QoS Regulatory Frameworks

Cont..

Regulations



Standard and Special Conditions of Individual Licences Rule, 2011

- Contains QoS condition on licensees.
- Specify QoS parameters

Minimum level of Network Performance

Network Fault Repair

QoS Regulatory Frameworks

QoS Parameters

Minimum level of Network Performance

- a call drop-out rate of no more than 2%;
- a rate of call failure due to network congestion of no more than 2%;
- a network availability rate of 99.99% in specified main centres and mid-sized centres, and 98.00% in specified administrative district centres and localities;

QoS Regulatory Frameworks

QoS Parameters

Network Fault Repair

- Repair 95% of network faults occurring in:
 - main centres within 6 hours;
 - mid-sized centres within 24 hours;
 - administrative districts within 2 working days;
 - Small population centres within 3 working days.

QoS Regulatory Frameworks

Monitoring

Enforcement

NICTA has not been monitoring the licensees performance with respect to the QoS parameters outlined in the regulation.

Proposed QoS Regulation



CONSULTATION PAPER

Draft rules on telecommunications quality
of service performance monitoring

Issued on xx 2019

Proposed QoS Regulation

New Regulation



Telecommunication's Quality of Service Rule, 2019

Objectives

1

To enable NICTA to help consumers understand any QoS differences that may exist between different service providers so that consumers may take such information into account when choosing a service provider.

2

To provide NICTA with objective points of reference for assessing and comparing the QoS provided by service providers.


3

To give NICTA objective insight into the QoS of telecommunications services in PNG.

Proposed QoS Regulation

TELECOMMUNICATIONS QUALITY OF SERVICE RULE, 2019

New regulation with a view to establish a set of parameters that;

- 
- A vertical decorative graphic on the left side of the list, consisting of five downward-pointing chevrons. The chevrons are yellow with a white outline, and they are arranged in a slightly staggered, overlapping fashion.
- Relate to Mobile telephony and fixed and Mobile broadband internet access
 - Relate to the aspects of those services that have the biggest impact on customers
 - Are well-defined and can be measured cost-effectively
 - Will help inform NICTA's understanding of the state of telecommunications markets and the level of performance;
 - May in time help customers to make better informed choices

Proposed QoS Regulation

QoS Parameters

Proposed quality criteria for key telecommunications services

Mobile telephony	Broadband internet access
<ul style="list-style-type: none">• Availability• Call set-up time• Speech quality• Reliability	<ul style="list-style-type: none">• Availability• Speed• Latency• Reliability

Proposed QoS Regulation

QoS Measurement

Measurement

- **Measurement by licensees themselves, which then submit statistical reports to NICTA.**
- **Measurement by NICTA to proof report submit by licensees.**
- **Measurement by third party companies that specialise in such technical services and who are contracted by the regulator for dedicated test campaigns.**

Proposed Measurement Method

Measurement

Licensees required to;

- Measure each of QoS parameters,
- Carry out measurement in accordance with ITU-T standards specified in the regulation,
- Provide NICTA with the measurement result within 30 days of the end of each measurement period.

NEXT STEP

NICTA will consult with licensees on the proposed QoS regulation to consider;

- **The proposed QoS parameters,**
- **The cost and complexity of the proposed measurement arrangement ,**
- **Plans for publication of the monitoring results/measurements**

THANK YOU..

Felix Diou Rupokei
Manager ICT Standards & Policy

E-Mail: frupokei@nicta.gov.pg

Website: www.nicta.gov.pg

Telephone: +675 303 3261

Facsimile: +675 3004829

Address: PO Box 8444
Boroko, NCD
Cnr. Frangipani St. and Croton St., Hohola,
PORT MORESBY, NCD
Section 34 Allotment 19&20