#### Media Briefing - Next Generation National Broadband Network for Singapore (Next Gen NBN)

**11 December 2007** 



## **Programme**

A. 5:00pm – 5:10pm

Opening Remarks by Dr Lee Boon Yang, Minister for Information, Communications and the Arts

**B.** 5:10pm – 5.25pm

Presentation by Mr Khoong Hock Yun, Assistant Chief Executive (Infrastructure Development Group), IDA

C. 5:25pm – 5:50pm

**Question & Answer Session** 





#### **Opening Remarks by**

## **Dr Lee Boon Yang**

Minister for Information, Communications and the Arts





#### A Presentation by

#### Mr Khoong Hock Yun

**Assistant Chief Executive**(Infrastructure Development Group), IDA



#### **Outline of Presentation**

- Overview of iN2015 and Strategic Objectives of Next Gen NBN
- 2. Update on Next Gen NBN Developments
- 3. Next Gen NBN Industry Structure
- 4. Key Next Gen NBN Project Parameters
- 5. Procurement Process & Timeline

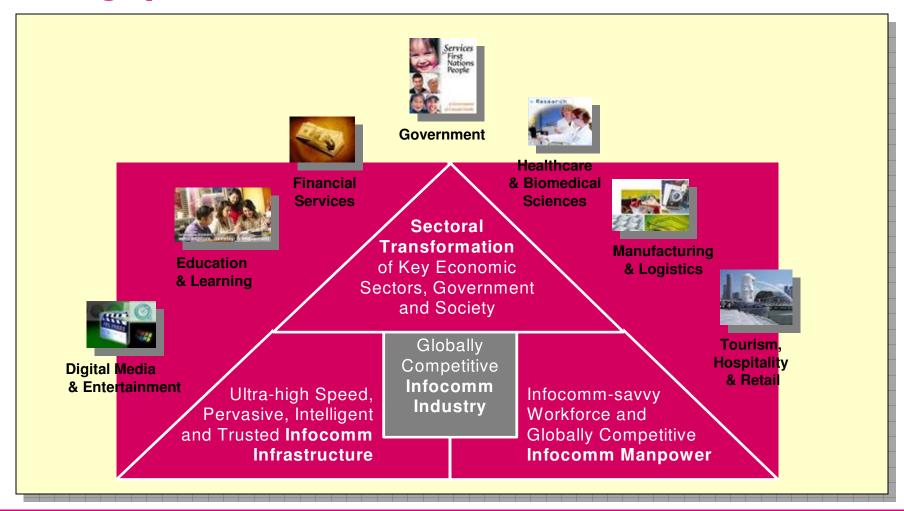


# 1

# Overview of iN2015 and Strategic Objectives of Next Gen NBN

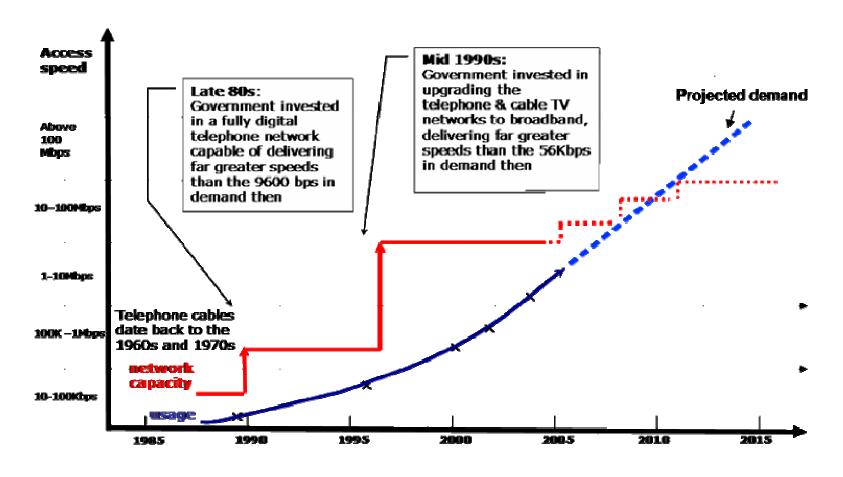


# iN2015 Masterplan : Our Digital Vision for Singapore



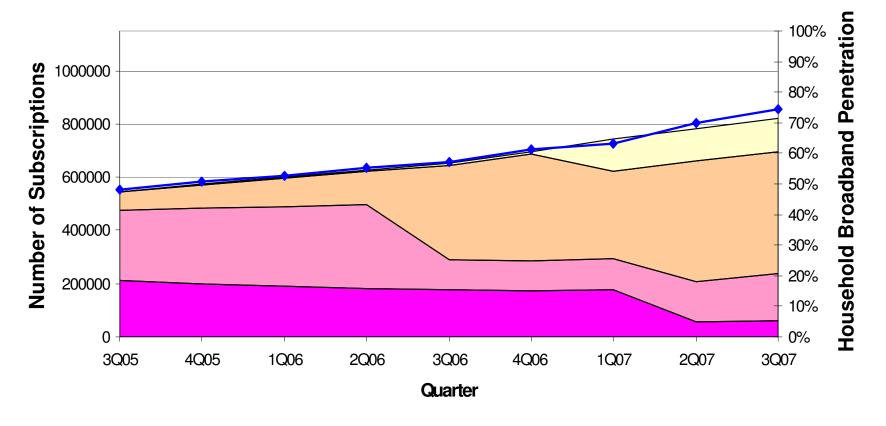


# Infrastructure leadership has been critical to Singapore's competitiveness





# Increasing Demand for Broadband and Demand for Higher Speeds







# Mainstream Services Increasingly Offered Online

Working from Home



Online Job Search



Online Gaming



Online Banking



Video Conferencing



E-mail



Online Travel Bookings



Online Stock Trading



Online Healthcare



Online Shopping



Global Collaboration



**E-Learning** 



Online Chatting



Filing e-Taxes



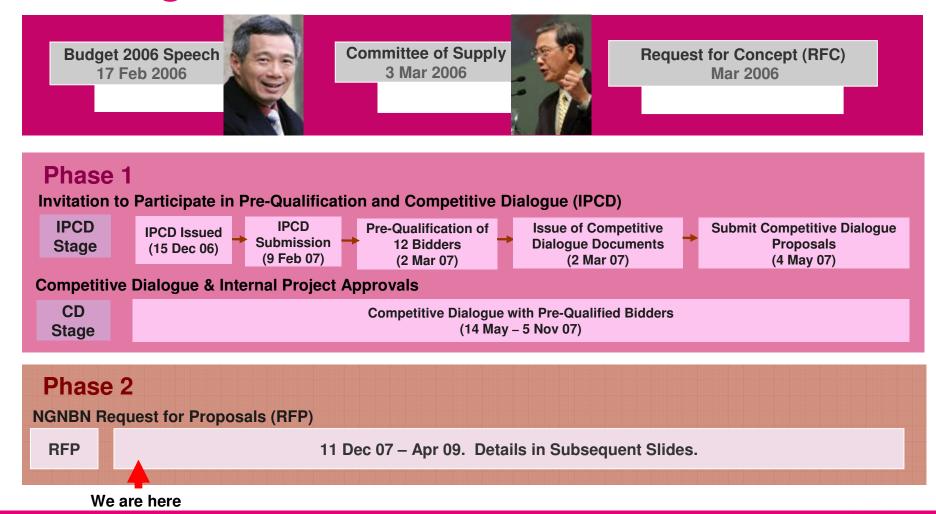
Video Streaming



# Update on Next Gen NBN Developments



# **Extensive Industry Consultation & Dialogue**



# 3

# **Next Gen NBN Industry Structure**



## **Next Gen NBN Concept Layers**



Retail Service Providers (RSP)
Purchase bandwidth connectivity
from OpCo(s) and compete with
each other in providing competitive
and innovative services to endusers



Retail Services

High Level Industry Value Chain Wholesale Operator(s) (OpCo) Responsible for the design, build and operation of the active NGNBN infrastructure



(including Servers & CPEs)

Services Wholesale (Layer 3 Open Access)

Bandwidth Wholesale (Layer 2 Open Access)

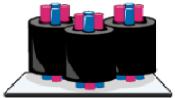
#### Active Infrastructure

(including Switches & Transmission Equipment)



Passive Infrastructure Operator (NetCo)

Responsible for the design, build and operation of the passive NGNBN infrastructure



Passive Infrastructure (including Ducts & Wirelines) Wholesale Wirelines (Layer 1 Open Access)

Subject matter of NetCo RFP



## Types of Separation Considered Between Upstream and Downstream Operators to Achieve Effective Open Access

#### >Structural Separation

- Defined as "No Effective Control"
- Stricter form of separation
- For all intents and purposes, they are separate entities with fully autonomous decision-making considerations
- No Effective Control means that Entity A have no control over the management and major operating decisions of Entity B, and vice versa.
- One assessment factor is level of cross-shareholding, amongst others

#### >Operational Separation

- Less stringent form of separation
- Allows the upstream entity to retain full shareholding ownership of its downstream operating units
- Required to set up a separate business entity for its operations
- Including separate branding, physical premises and Board of Directors



## **Next Gen NBN Industry Structure**

Retail Service Providers (RSP)
Purchase bandwidth connectivity
from OpCo and compete with

each other in providing competitive and innovative services to endusers



Retail Services

#### **Operational Separation to Ensure Open Access**

High Level Industry Value Chain Wholesale Operator (OpCo) responsible for the design, build and operation of the Network active infrastructure



Services Wholesale (Layer 3 Open Access)

Bandwith Wholesale (Layer 2 Open Access)

#### **Structural Separation to Ensure Open Access**

Passive Infrastructure Operator (NetCo)

responsible for the design, build and operation of the Network passive infrastructure



(including Switches & Transmission Equipment)



Passive Infrastructure (including Ducts & Wirelines)

Wholesale Ducts & Wirelines (Layer 1 Open Access)

Subject matter of NetCo RFP



# Key Next Gen NBN Project Parameters



**Exciting Benefits End-Users Can Look Forward To** 

> Competitive Pricing
> For both wholesale and retail broadband services.

**Innovative Services** 

Supports R & D efforts in and delivery of innovative services such as healthcare. education and security

High Access Speeds
Minimum access speeds of 50Mbps uplink and 100Mbps downlink per end-user connection; scalable up to 1 Gpbs and more

Pervasive Nationwide Coverage Ensure that all segments in Singapore

benefit



### **Key Bidding Parameters**

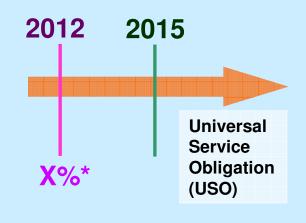
#### **Parameter 1**

**Maximum Level of Government Grants** 

**Grant Amount** 

#### Parameter 2

Minimum Level of Coverage of Physical Addresses



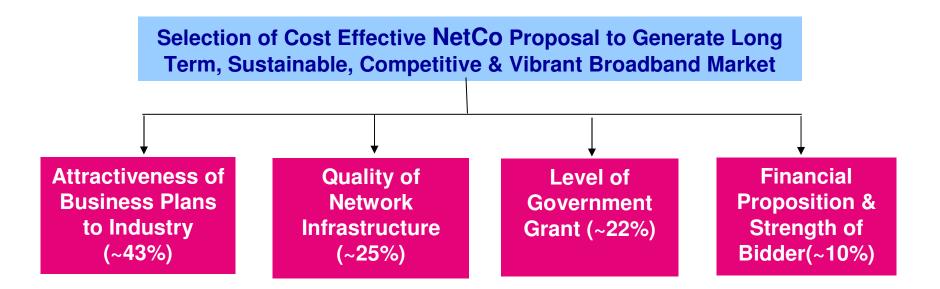
Where X% shall be more than 50%

#### Parameter 3

Level of Wholesale Prices for Residential & Commercial Segments



# **Evaluation Criteria for Next Gen NBN NetCo**RFP





## **Business Aspects**

Attractiveness of Business Plans to Industry (~43%)

Quality of Network Infrastructure (~25%)

Level of Government Grant (~22%)

Financial Proposition & Strength of Bidder (~10%)

#### Attractiveness of Business Plans to Industry (~43%)

Attractiveness of Wholesale Prices (~20%)

#### Factors include:

- Residential
- Non-Residential Prices
- Non-Building Address Points
- Internal Equity Rates of Return (IRR) for Price Review

The wholesale prices offered by NGNBN NetCo.

Attractiveness of Interconnection Offer (ICO) (~15%)

#### Factors include:

- Basic Product
   Offering and Terms
   & Conditions
- Adaptability of Service Offerings

The diversity of product offerings and their ability to support multiple OpCos.

Level of Independence (~5%)

Level of independence in which the NGNBN NetCo delivers services to downstream operators. Benefits of Business Plan (~3%)

Plans that bring about other economic benefits to Singapore would be viewed favourably, e.g. establishment of R&D centre.



## **Technical Aspects**

Attractiveness of Business Plans to Industry (~43%)

Quality of Network Infrastructure (~25%)

Level of Government Grant (~22%)

Financial Proposition & Strength of Bidder (~10%)

#### **Quality of Network Infrastructure (~25%)**

Quality of Network Design and Operations (~15%)

Extent of Network Coverage (~5%)

Innovations to Minimise Rollout Disruptions (~5%)

#### Factors include:

- Network Quality
- Network Scalability
- Network Resilience and Redundancy

These factors relate to the quality of the network.

The extent of coverage proposed.

#### Factors Include:

- Outside Plant
- In-Building Cabling

The criteria to be considered include level of disruption caused, and impact on environment.



## **Financial Aspects**

Attractiveness of Business Plans to Industry (~43%)

Quality of Network Infrastructure (~25%)

Level of Government Grant (~22%)

Financial Proposition & Strength of Bidder (~10%)

#### **Level of Government Grant (~22%)**

The level of government grant will be capped at \$750 Million.



# **Bidder Credibility**

Attractiveness of Business Plans to Industry (~43%)

Quality of Network Infrastructure (~25%)

Level of Government Grant (~22%)

Financial Proposition & Strength of Bidder (~10%)

#### Financial Proposition & Strength of Bidder (~10%)

Financial Proposition of Bidder (~5%)

Bidder's Track Record & Management Expertise (~5%)

#### Factors include:

- Profitability
- Leverage

Factors to be considered will include equity, debt structure, etc.

#### Factors include:

- Technical Track Record
- Financial Track Record
- Management Team

The track record of the bidder in similar projects (scope and scale), as well as the strength of the team that they will assign to Singapore for the project.

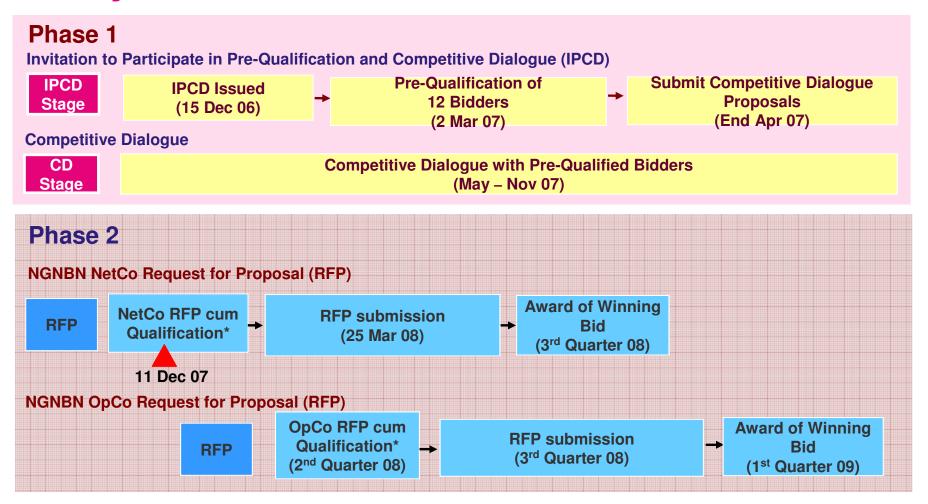


# 5

#### **Procurement Process & Timeline**



# **Project Timeline**



<sup>\* 21</sup> days window for new bidders to submit qualifications. If new bidders are qualified or new consortium leads appointed, IDA will extend tender closing for all bidders by 40 days, or on the next working day.







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