

Lighthouse Thematic Workgroup 2 and Launch of NGSIP & CFP

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1

Lighthouse Thematic Workgroup 2 100 Mbps Next Gen Experience

Agenda

- > **100 Mbps Next Gen Experience**
- > **Strategic Enablers That Government Has Put In Place**
- > **Thematic Workshops for ISPs and Content Providers**

1a **100 Mbps Next Gen Experience**

100 Mbps Next Gen Experience (100 Mbps NGE)

- > 100 Mbps Next Gen Experience
 1. Higher Throughput
 2. Better Quality of Service (QoS)



High **throughput** is made up of:

- Higher **bandwidth**
 - Amount of data per second



Better **QoS** is made up of:

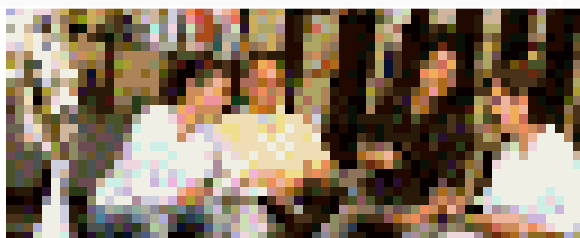
- Lower **latency** / delay
 - Time the data takes to traverse the network end to end
- Smaller **jitter**
 - The variability of latency across the network
- Less **packet loss**
 - Packets that are not forwarded due to congestion at any particular router



Desired Outcome

100 Mbps Next Gen Experience

Today	← Service →	100 Mbps Next Gen Exp.
“Thumbnail” images and standard definition	Video Conference	Full screen, HD quality, with no observable lag
Predominantly low definition	Video Streaming	Clear, crisp, smooth and vivid HD content on major sites
Best efforts – some lags	Gaming	Consistent fast response time
Long transfer time for large files	File Sharing	Fast file transfer for large and small files alike



> “Thumbnail images” which become blurred when projected on large screen



> Clear High Def content, which is clear, even when projected on large screen

1b Strategic Enablers That Government Has Put In Place

IDA has put together key enablers

Content Providers

Grid Service Providers
Data Centres

Data Centre

- > Conducive, efficient and cost-competitive environment for data centres (DC)
- > Grid Service Providers (GSPs) leveraging on data centres to provide scalable storage and computing services

SGIX

- > A neutral and central point of traffic exchange

RSPs

Next Gen NBN

60% by 2010
Nationwide by 2012

- > High speed symmetric connectivity
- > Multiple classes of service offered by Next Gen NBN
- > Provide content/ service providers with the option of secure high QoS connectivity

National Authentication Framework and Policy

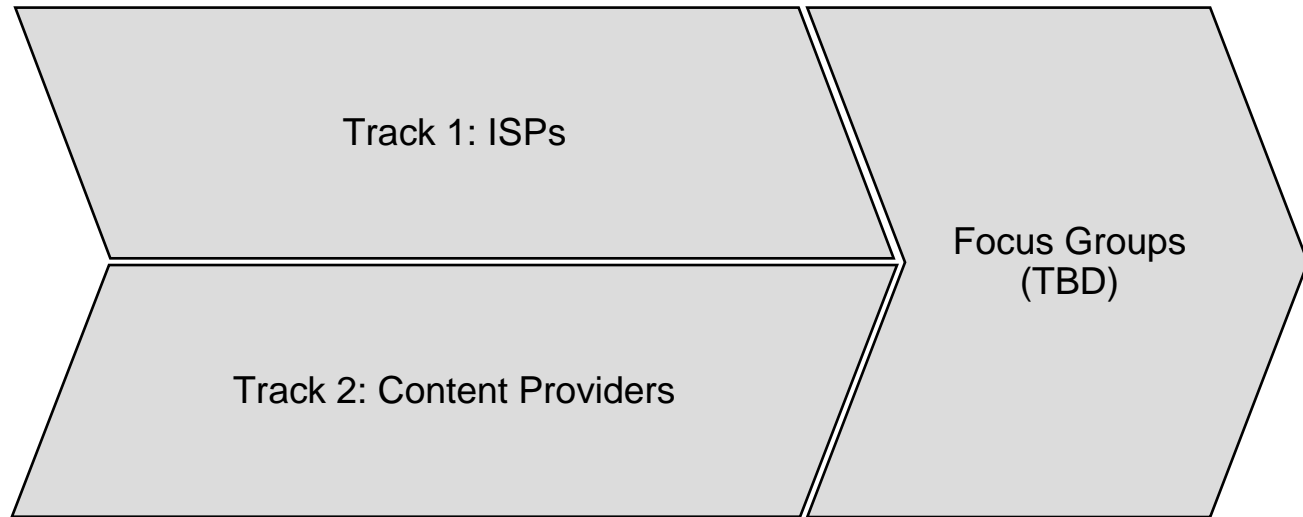
- > NAF: Service providers can subscribe to this single nationwide authentication platform, instead of building their own
- > Policy: Data protection and related policies to boost confidence

1C Thematic Workshops for ISPs and Content Providers

100 Mbps NGE Thematic Series Details

Structure and Objectives

100 Mbps Next Gen Thematic Series



Objectives: 100 Mbps Next Gen Thematic Series

- 1 Briefing on key strategic enablers and programmes that are being put in place
- 2 Discussion on potential bottlenecks
- 3 Delivery of 100 Mbps Next Gen Experience services and content by Q2 2010



Workshop for Service Providers

Provisioning For 100 Mbps Next Gen Experience (for ISPs)

100 Mbps Next Gen Exp Content Delivery (for Content Providers)

- > **Topic:** Provisioning For 100 Mbps Next Gen Experience (for ISPs)
- > **Date:** 18 Nov 2009 (2 pm)
- > **Venue:** IDA HQ, Suntec Tower 3, #14-00

- > **Topic:** 100 Mbps Next Gen Exp Content Delivery (for Content Providers)
- > **Date:** 19 Nov 2009 (2 pm)
- > **Venue:** IDA HQ, Suntec Tower 3, #14-00

Kick Off Session Registration

> Admission by registration only

- Email registration to: broadband@ida.gov.sg
- Indicate in email subject header “*100 Mbps Next Gen Experience Workshop Registration*”
- Provide following details for registration:
 - Session that you are interested in
 - Name and designation of each attendee
 - Company name
 - Contact details (DID, Mobile Number, Email)

> **Deadline for registration: 15th Nov 2009**

2

Launch of Next Gen Services Innovation Programme (NGSIP) :: Call For Proposals (CFP)

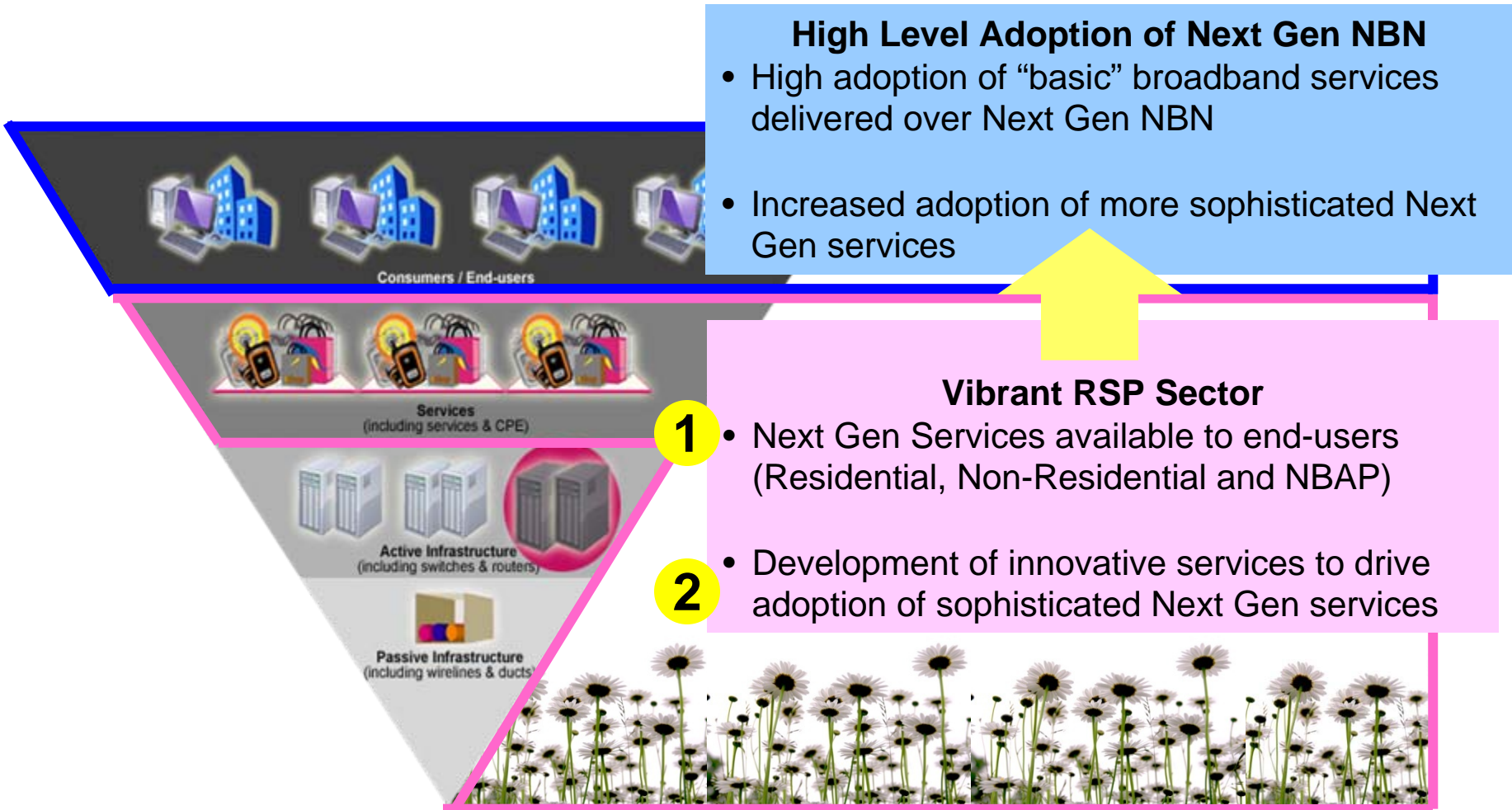
Agenda

- > **Objective of NGSIP**
- > **Targeted CFP Participants**
- > **NGSIP Approach**
- > **Next Steps**

2a Objective of NGSIP

Objective of NGSIP

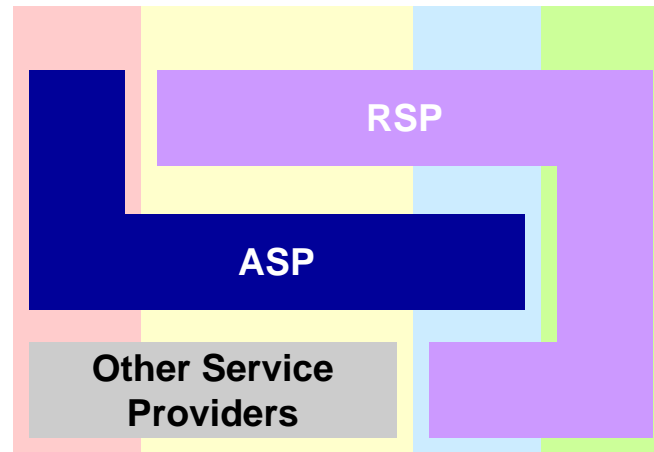
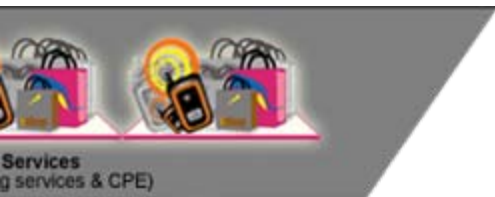
Promote High Level Adoption of Next Gen NBN



2b Targeted NGSIP Participants

Targeted CFP Participants

Retail Service Providers & Application Developers



RSPs:

- Offer services to end-users
- **Telecom or broadcasting licensees**



ASP:

- Develop software applications and content
- **Need not be telecom or broadcasting licensee**



Other Service Providers:

- Providers of value-added services



NBN OpCo

nucleus
connect

Other OpCos

OpCo:

- Service provider of bandwidth connectivity



NBN NetCo

OpenNet

NetCo:

- Service provider of dark fibre connectivity

Example of RSP Services and ASP Applications

Examples of RSP Services:

- Interactive IPTV
- Home Surveillance
- Telemedicine
- Remote Learning
- HD Video Conferencing
- VoIP
- Etc...

Examples of ASP Applications:

- Authentication tools
- Collaborative tools
- Portals
- Security software
- Payment platform
- Video platform
- TV widgets
- Learning Management Systems
- Etc...

Example: Learning Service

Authentication

Learning Management System

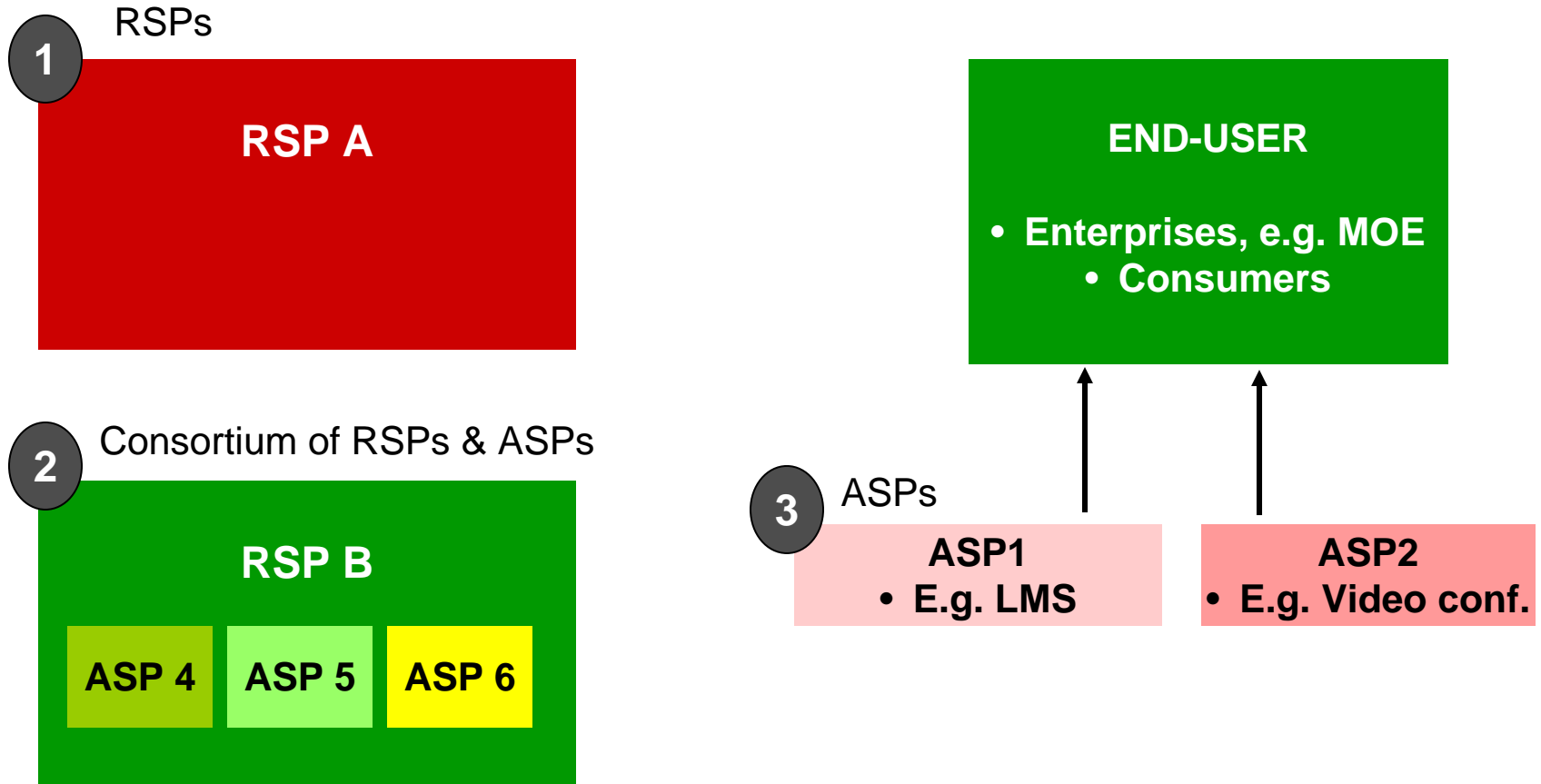
Collaborative tools

Video comms platform

TV widgets

Targeted CFP Participants

NGSIP Supports Proposals from RSPs and ASPs



Pre-requisite

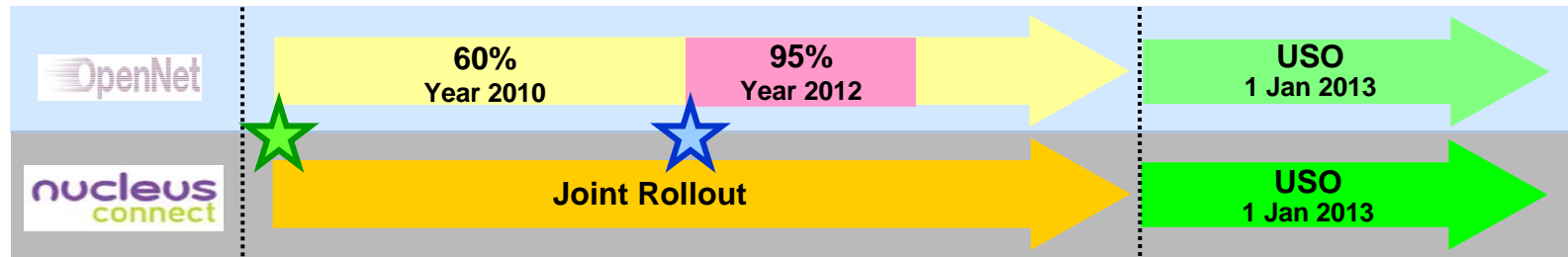
- Developed services and applications must be deployed over or leverages Next Gen NBN optical fibre network

2c **NGSIP Approach**

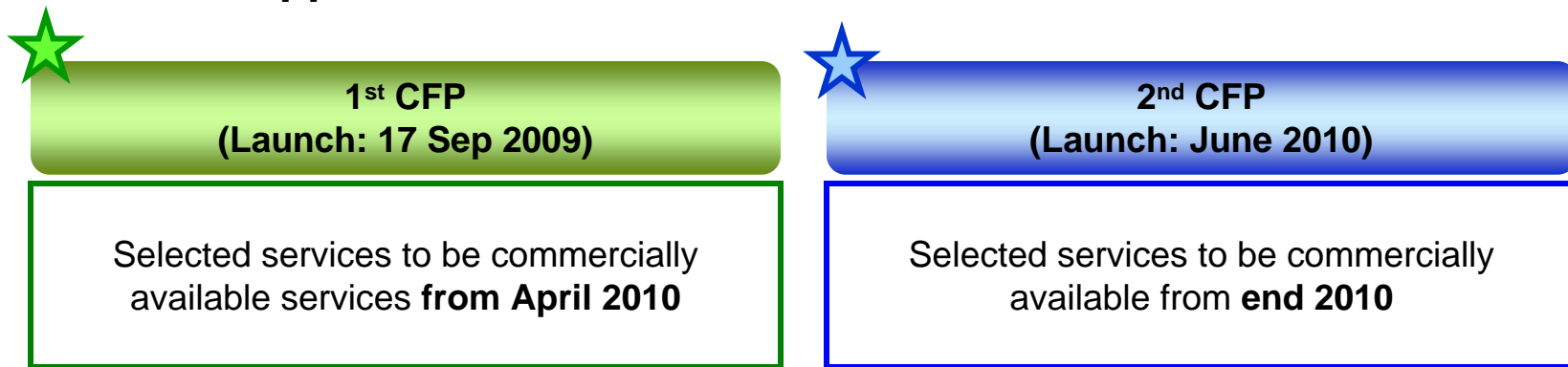
NGSIP Approach

Two (2) Call for Proposals (CFP)

Next Gen NBN Rollout Schedule

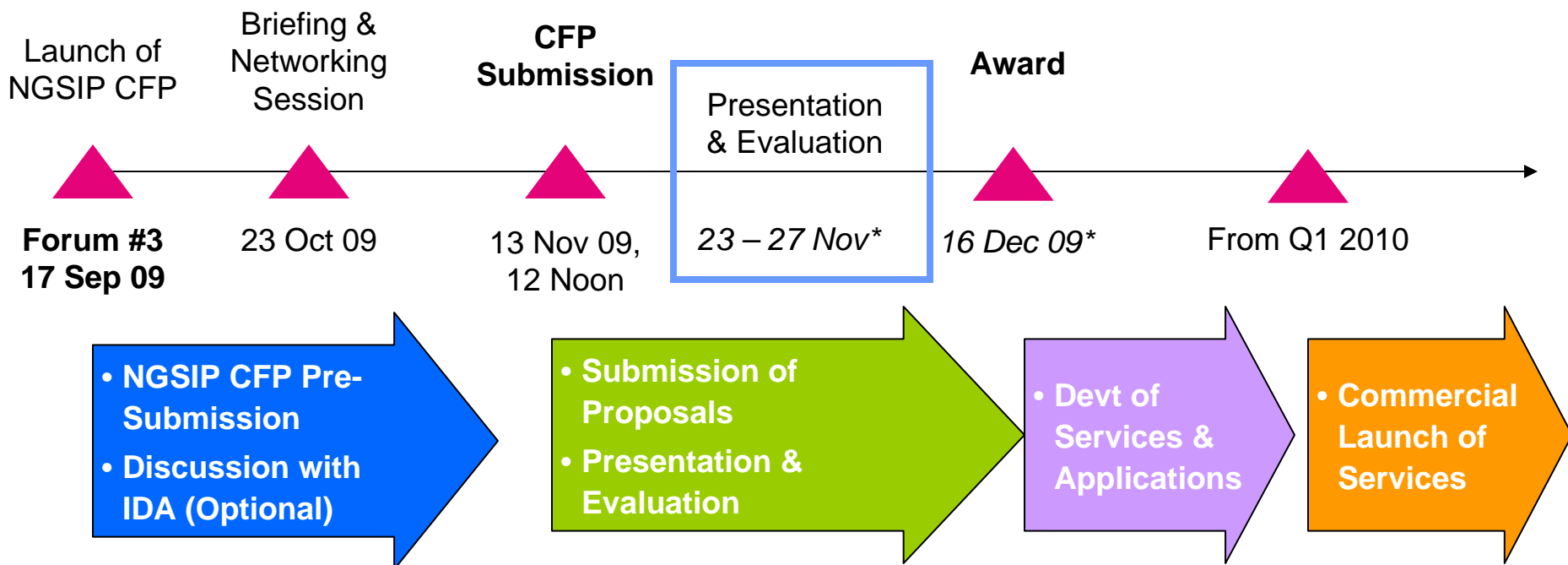


NGSIP Approach



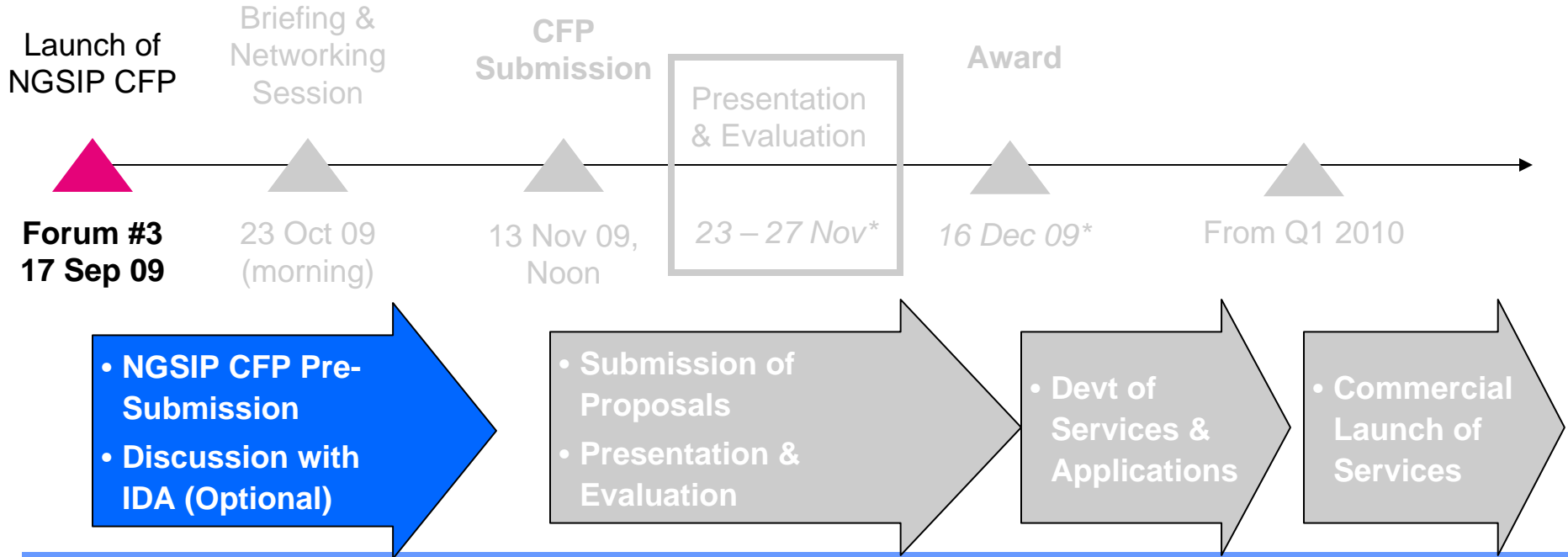
Today : Lighthouse Forum #3

NGSIP 1st CFP Schedule



*Dates are tentative. Exact dates to be confirmed.

Pre-CFP Submission Discussion with IDA



Interested Participants

- Submit **non-binding** preliminary proposals for 1-to-1 discussion with IDA
- Opportunity to shape proposals based on IDA's inputs
- Optional for participants

IDA

- IDA may invite company for discussion
- Provide early **non-binding** inputs to preliminary proposals prior to formal CFP submission
- IDA shall have absolute discretion whether to invite participant for discussion
- No obligation by IDA to accept proposal subsequently

2d **Next Steps**

Next Steps

23 Oct Public Briefing & Networking Session

> **Details:**

- Date: 23 Oct 2009 (Fri), 0900 – 1200
- Venue: To be confirmed

> **Registration*:**

- Email to broadband@ida.gov.sg
- Registration deadline: **16 Oct 2009, 12 noon**

> **Email Subject Title:**

- Registration for NGSIP 1st CFP Briefing & Networking Session

> **Email Body: Attendee's Details**

- Name
- Designation
- Department
- Organisation
- Telephone Number
- Email Address

- > More details of the briefing will be made known to registered parties via email

*IDA may limit the number of representatives from each company if there are seating constraints

Pre-CFP Submission Discussion (1/2)

- > Period of Pre-CFP Submission Discussion:
 - 17 Sep 09 – 10 Nov 09

- > Closing date for submissions for Pre-CFP Submission Discussion:
 - 10 Nov 09, 12 noon*
 - Pre-CFP Submission Discussion Proposal Form available on IDA website

- > **Pre-CFP Submission Discussion Proposal Format**
 - Available on IDA website from 23 Sep 09
 - Or email Cailin_Ng@ida.gov.sg for copy

*IDA reserves the right not to accept any request for Pre-CFP submission discussion after 10 Nov, 12 noon

Pre-CFP Submission Discussion (2/2)

> Submission Format

- Email:
 - To : broadband@ida.gov.sg
 - Cc: Cailin_Ng@ida.gov.sg, Tan_Kiat_How@ida.gov.sg
 - Subject Title: **“NGSIP 1st CFP – Pre-CFP Submission Discussion Proposal”**

- Hardcopy:
 - Clearly marked – **“NGSIP 1st CFP – Pre-CFP Submission Discussion Proposal”**
 - Infocomm Development Authority of Singapore
 - 8 Temasek Boulevard, #14-00, Suntec Tower Three, S(038988)
 - Attention:
 - Tan Kiat How, Assistant Director (NGSP), IDA

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For Enquiries on NGSIP

> Email:

- To: broadband@ida.gov.sg;
- Cc: Cailin_Ng@ida.gov.sg

> Contact Detail:

- Ng Cailin (Ms), Asst Manager, IDA
- DID: (65) 6211 0330
- Fax: (65) 6211 2213
- Email: Cailin_Ng@ida.gov.sg

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