

Grid Services Provisioning

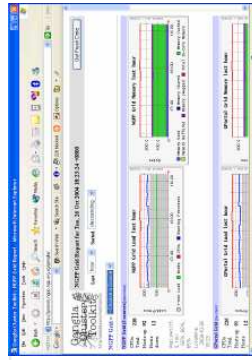
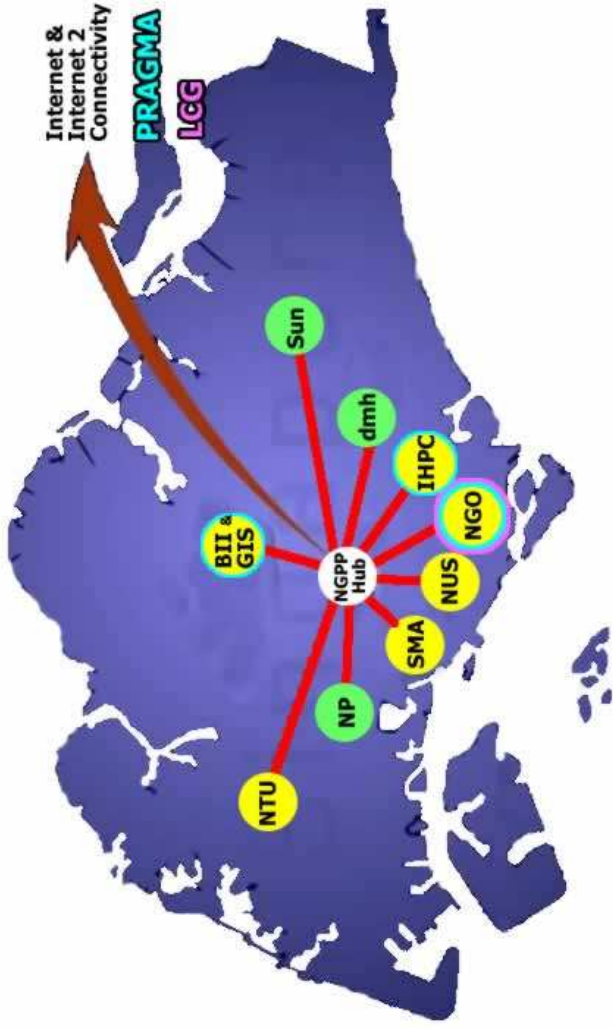
Hing-Yan Lee & Jon Lau
National Grid Office
Singapore



Relevance to iN2015 Master Plan

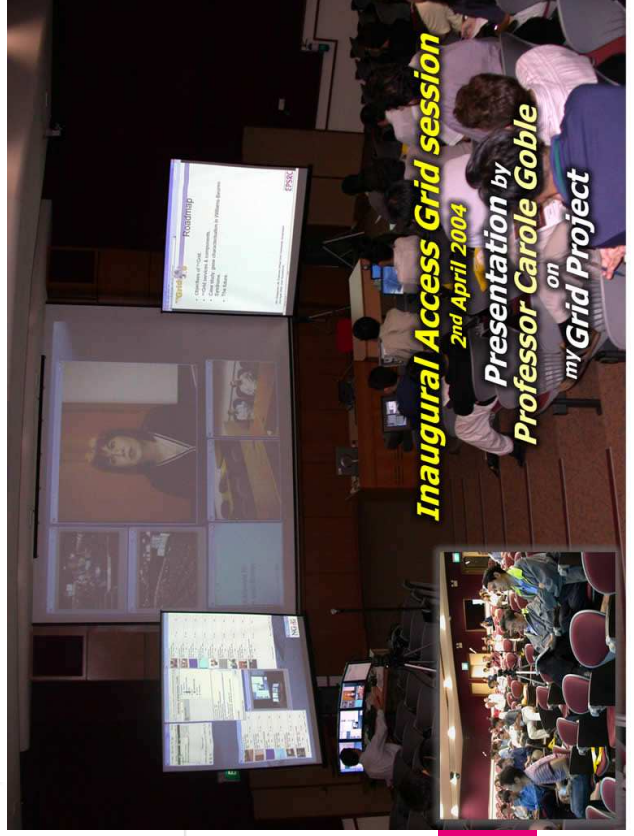
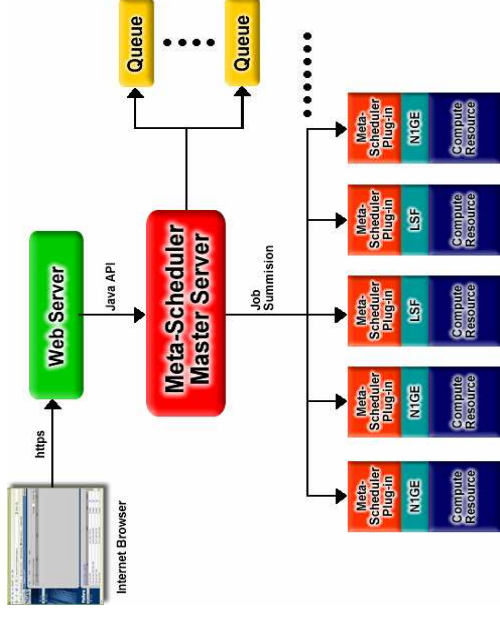
- > Infocomm Infrastructure, Services and Technology Development (IISTD) Sub-committee
 - Proposed establishing an Infocomm Resource Marketplace (IRM) that would allow businesses & companies to share, buy & sell infocomm resources such as software, computing & storage resources on an “on demand” basis
 - The flexibility would enable new business delivery models & encourage innovation of infocomm services

National Grid Pilot Platform SINGAPORE



Netrust
Certification
Authority

NGPP Meta-Scheduler



Inaugural Access Grid session

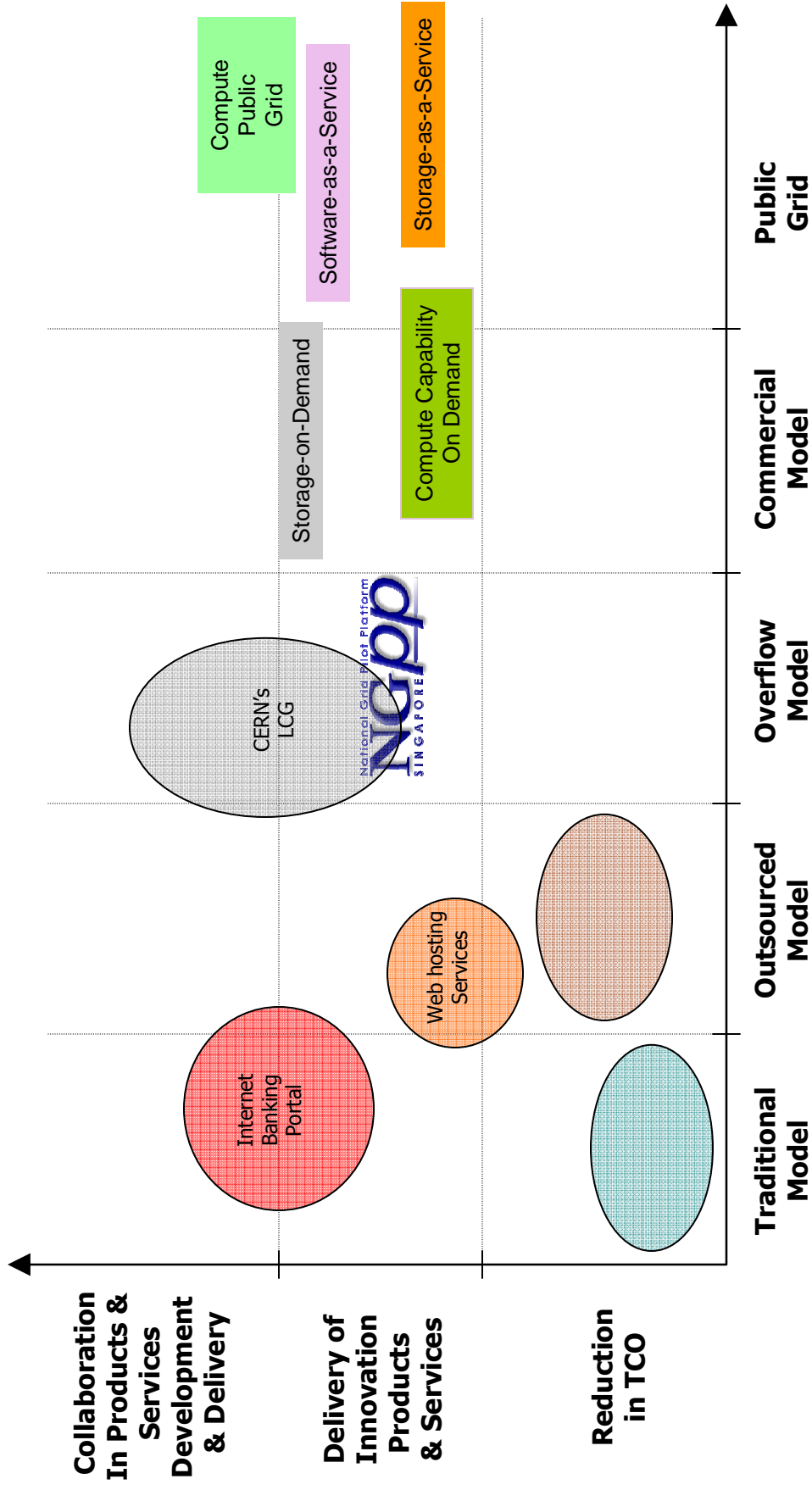
2nd April 2004

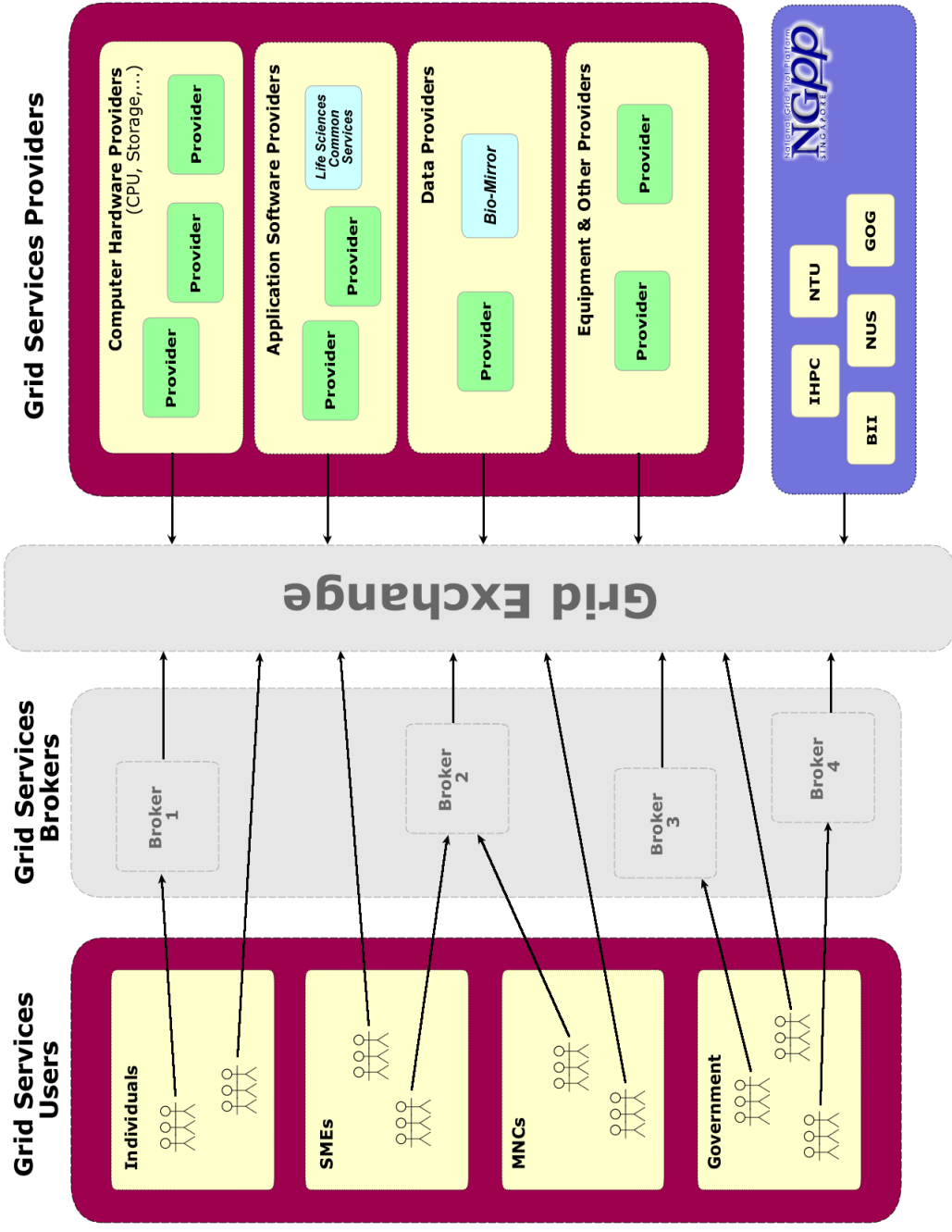
Presentation by
Professor Carole Goble

on
myGrid Project

NG Operations Centre

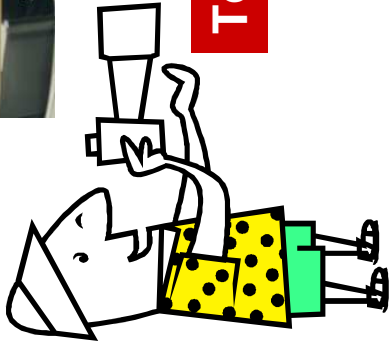
Resource Provisioning Spectrum



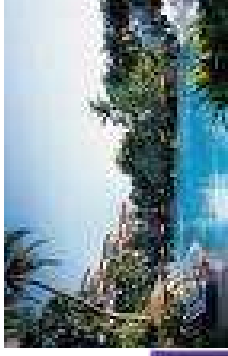


Analogy – Hotels

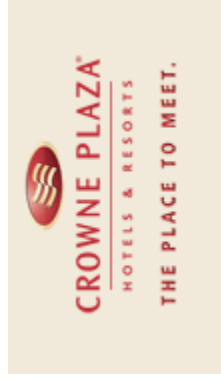
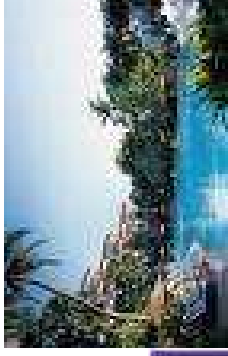
Business Travelers



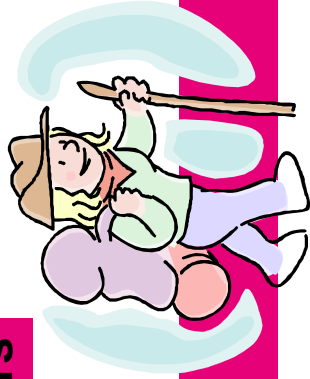
Tourists



Resorts,
6-star Hotels



Backpackers



Motels, Hostels,
Bed & Breakfast

Benefits to Users

- > Little upfront capital investment tied down with (depreciating) hardware & (obsolescing) software
 - Positive impact on balance sheet with shift from Capex to Opex
- > Improved price for performance
- > Improved flexibility, agility & time-to-market
- > Improved robustness
- > Improved scalability

Objectives of Nurturing GSPs

- > Accelerate deployment of software, hardware & storage utility provisioning for users in public & private sectors on a utility basis
- > Catalyse demand for utility model
- > Develop ISV ecosystem that enables SaaS to flourish

Strategic Objectives

- > Enable infocomm infrastructure development for vertical clusters
 - Work with GRPs to attract ISVs to deploy software on base infrastructure
 - iN2015 verticals
 - digital media, life sciences, manufacturing, financial services, retail & tourism, education, government
- > Establish Singapore as a Shared Services Hub
 - Enable local users, especially SMEs, to exploit SaaS for HR, finance, IT & other admin functions

Categories & SLAs

- > Compute Grids
- > Storage Grids
- > ISV Ecosystem

Service Level Agreements

- > Basic Service
 - Provided at lowest possible cost to encourage take-up in Year 1
 - Offered without conditions requiring user to subscribe to other services
 - Available for 3 years from commencement of commercial services
- > Premium Service
- > Academic Service

Approach

- > Mini Public Private Partnership
 - Not a procurement by tender
 - CFC specs describe desired outcomes
 - Design-Build-Own-Operate model
 - May have more than 1 GSPs
 - Depends on quality of proposals
- > Government
 - Fund by buying up to 40% of a successful GSP's capacity
 - GSP to supply an agreed base-load amount
 - Government to ensure that base-load amount will be consumed

Major Differentiations

- > CPUs & storage are given
- > ISV Ecosystem
 - No. of SaaS ISVs
 - SaaS ISVs relevant to Singapore & regional market
- > SLA
 - Basic, Premium & Academic
- > Variety of platforms supported
 - Windows, Linux, Unix (AIX, HP UX, Solaris), Windows
- > Commercial viability
 - Stability of consortium
 - Ability to execute
- > Plans for servicing the regional markets

Issues & Challenges

- > Mitigating risks
 - Financial, timing, ...
- > Aggregating demand from Government
- > Readiness of users from business & industry
- > Readiness of SaaS ISVs
 - Licensing on pay-per-use basis
 - Right mix for each GSP
 - Maturity of supporting technology for resource monitoring, billing, ...



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Abstract

> The National Grid initiative in Singapore is currently in its Phase 3 (2008 – 2010), after its move to the Infocomm Development Authority. While the National Grid Pilot Platform continues to be used by the R&D community and as a testbed by business users, a concerted effort to establish industry-strength grid services provisioning commenced in late 2007 through the issue of a Call-for-Collaboration. This presentation will share the objectives, desired outcomes, and plans to enable business and industry users to tap upon grid computing based on a utility pricing model.