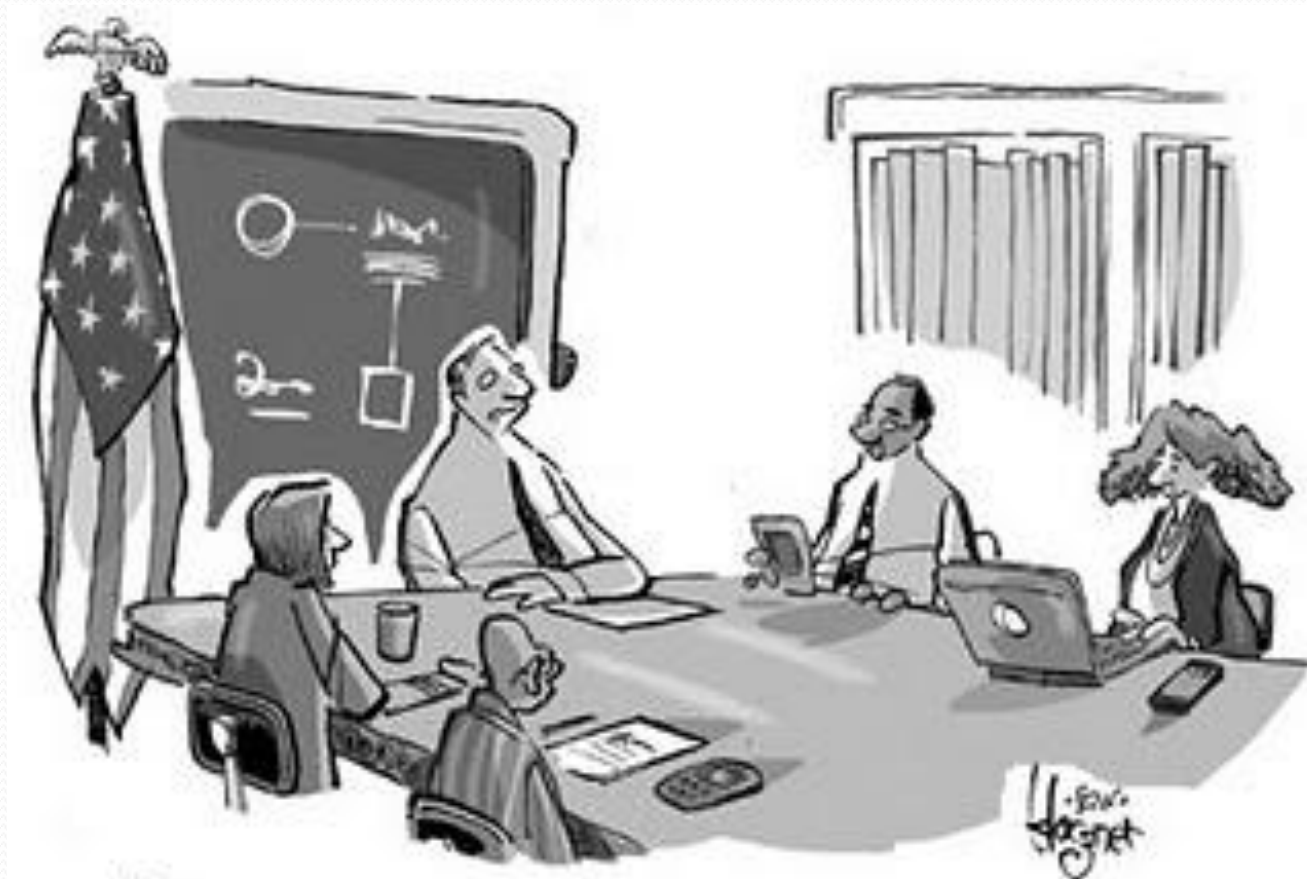# Week 2

Introduction

# Outline

- E-Government in Different Countries

- E-Government in Singapore

- Singapore eGov Masterplan

- Guest Speaker
  - Mr. Seah Chin Siong (CEO, IDA International)

# Adoption of e-Government

# E-Government in Different Countries

# e-Government Ranking



♦ The 2011 Waseda University World e-Government Ranking

- 7th consecutive year of monitoring development of e-Government worldwide by Institute of e-Government @Waseda University
  - Surveys e-Government development in 50 countries
  - Assessment based on
    - Relevant web pages & reports
    - Interviews of Institute member who attended e-Government conferences
    - Meetings with government & research institutions in major countries
- Conclusion
  - ICT can be a powerful tool to current economic issues
  - Governments are key actors in this process in building towards a citizen-oriented state

# e-Government Ranking

The 2011 Waseda University World e-Government Ranking

# 7 Indicators

1. Network Preparedness

2. Management Optimization

3. Require Interface – Functioning Applications

4. National Portal

5. Government CIO

6. e-Government Promotion

7. e-Participation

# e-Government Ranking

## Table of Ranking 2011

| No | Countries | Score |
|----|-----------|-------|
| 1 | Singapore | 92.14 |
| 2 | USA | 92.13 |
| 3 | Sweden | 88.32 |
| 4 | Korea | 87.50 |
| 5 | Finland | 86.90 |
| 6 | Japan | 86.85 |
| 7 | Canada | 85.13 |
| 8 | Estonia | 84.10 |
| 9 | Belgium | 83.55 |
| 10 | UK | 82.40 |
| 10 | Denmark | 82.40 |
| 12 | Italy | 81.20 |
| 13 | Taiwan | 79.31 |
| 14 | Australia | 78.50 |
| 15 | Norway | 77.61 |
| 16 | Spain | 75.30 |
| 17 | Germany | 73.15 |
| 18 | France | 72.05 |
| 19 | Switzerland | 71.88 |
| 20 | Netherlands | 70.75 |
| 21 | New Zealand | 70.21 |
| 22 | Portugal | 69.02 |
| 23 | Thailand | 67.67 |
| 24 | Malaysia | 67.37 |
| 25 | Philippines | 65.10 |
| 26 | Hong Kong SAR | 63.50 |
| 27 | Tunisia | 62.10 |
| 28 | Mexico | 62.05 |
| 29 | China | 60.80 |
| 30 | India | 60.15 |
| 31 | South Africa | 59.71 |
| 32 | Israel | 58.80 |
| 33 | Turkey | 57.50 |
| 33 | Macau SAR | 57.50 |
| 35 | Russia | 57.10 |
| 36 | Indonesia | 56.88 |
| 37 | Egypt | 56.13 |
| 38 | Vietnam | 55.70 |
| 39 | Czech Republic | 51.80 |
| 40 | Romania | 49.15 |

# e-Government Ranking

The 2011 Waseda University World e-Government Ranking

| 41 | Brazil | 48.80 |
|----|--------|-------|
| 42 | Brunei | 46.50 |
| 43 | Chile | 42.15 |
| 44 | Kazakhstan | 38.14 |
| 45 | Peru | 35.20 |
| 46 | Pakistan | 32.81 |
| 47 | Fiji | 30.10 |
| 48 | Iran | 26.10 |
| 49 | Uzbekistan | 25.11 |
| 50 | Georgia | 22.46 |

# New Trends in e-Government Development



e-Government Ranking

The 2011 Waseda University World e-Government Ranking

- Continued increase in Government 2.0 apps (e.g., social media) will improve e-participation
- Growing interest in green & smart-grid technology
- Increased interest in cloud computing, DC virtualization, & all-IP network
- Increased m-Government apps
- Review of BCP & disaster reduction
- E-Inclusion (inclusive ICT & use of ICT) to ensure participation of all citizens & communities
- Digital Divide – inequality of access remains high
- One-Stop Service – More diverse, advanced & comprehensive e-services
- Coordination & collaboration between central & local governments for better delivery of services
- Citizen-centric e-Participation –Re-connecting citizens with politics & policy-& decision making

# E-Government in Singapore

# e-Government Governance

**MOF**
MINISTRY OF FINANCE
SINGAPORE

## MOF is the e-Government owner

Sets the policy direction on use of ICT in Government

Provides funding for whole-of-government programmes and projects

Champions whole of the government ICT initiatives

**iDA**
SINGAPORE

## IDA is the Government CIO

Provides technology advice, masterplanning and projects management service to MOF & government agencies

Identifies and conceptualizes e-Gov programmes and projects

Drives the development and implementation of e-Gov programmes and projects

# Singapore's Infocomm Journey since 1980

Leveraging Infocomm for Innovation, Integration and Internationalisation
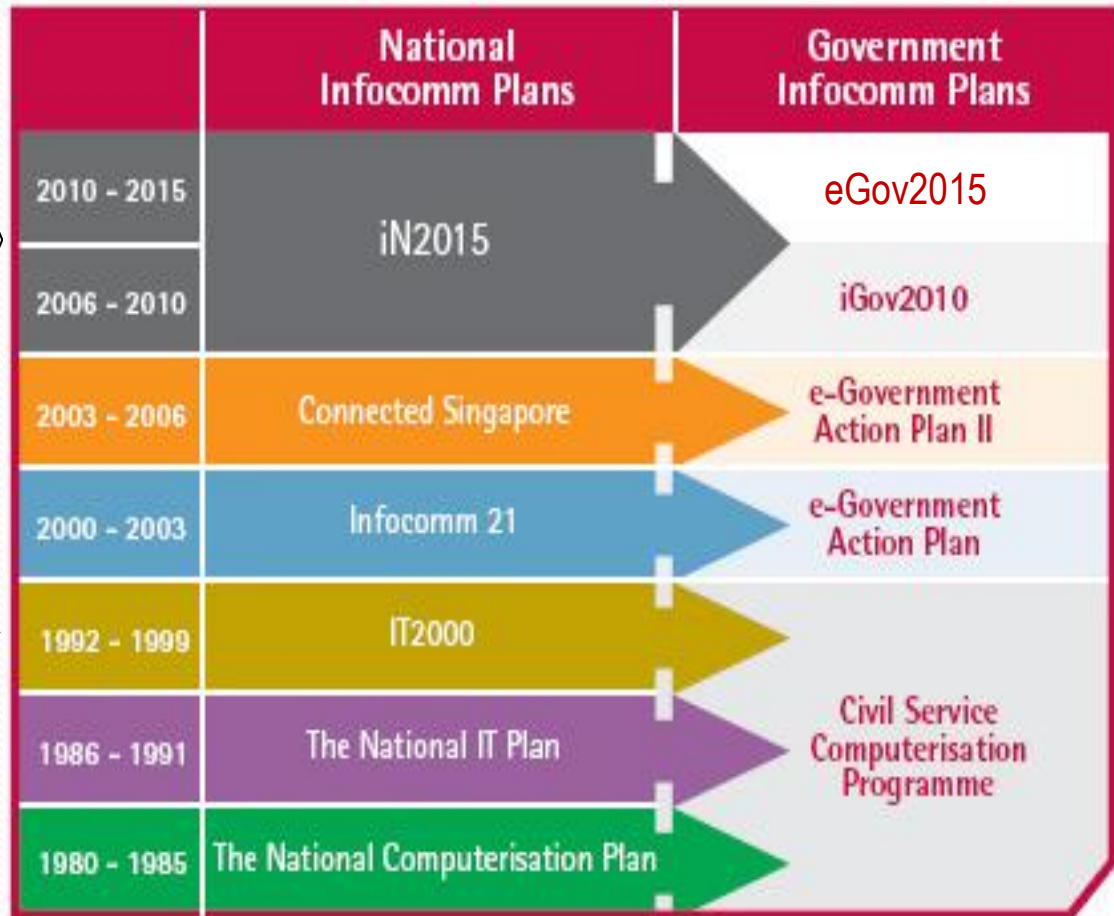
Unleashing potential of Infocomm to create new values, realise possibilities & enrich lives

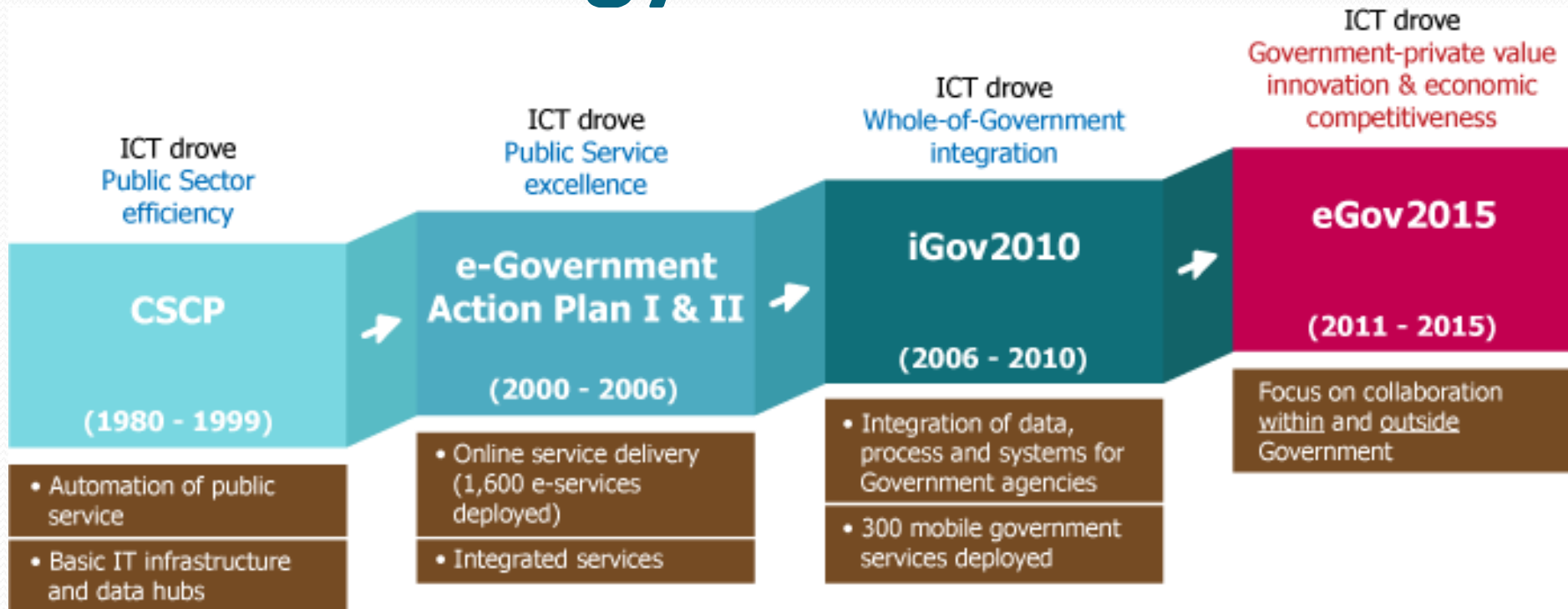Developing Singapore as global Infocomm Capital, e-Economy and e-Society

Transforming Singapore into an Intelligent Island

Extending government systems to private sector e.g. TradeNet, MediNet, LawNet

Civil Service Computerisation Programme Developing IT industry & IT manpower

| | National Infocomm Plans | Government Infocomm Plans |
|---|---|---|
| 2010 – 2015 | iN2015 | eGov2015 |
| 2006 – 2010 | | iGov2010 |
| 2003 – 2006 | Connected Singapore | e-Government Action Plan II |
| 2000 – 2003 | Infocomm 21 | e-Government Action Plan |
| 1992 – 1999 | IT2000 | |
| 1986 – 1991 | The National IT Plan | Civil Service Computerisation Programme |
| 1980 – 1985 | The National Computerisation Plan | |

# A Closer Look at Singapore's eGov Strategy



ICT drove **Public Sector efficiency**

**CSCP**

**(1980 - 1999)**

- Automation of public service
- Basic IT infrastructure and data hubs

ICT drove **Public Service excellence**

**e-Government Action Plan I & II**

**(2000 - 2006)**

- Online service delivery (1,600 e-services deployed)
- Integrated services

ICT drove **Whole-of-Government integration**

**iGov2010**

**(2006 - 2010)**

- Integration of data, process and systems for Government agencies
- 300 mobile government services deployed

ICT drove **Government-private value innovation & economic competitiveness**

**eGov2015**

**(2011 - 2015)**

Focus on collaboration within and outside Government

# SG e-Government

- E-citizen's portal (www.ecitizen.gov.sg)
  - One-stop access to government services
  - Divided into categories based on real-life needs of citizen
  - Offers over 1,600 e-services pertaining to business, health, education, recreation, employment & family

# Electronic Business Centre (GeBiz)

- E-Procurement portal was set up in June 2000
- Aim to simplify government procurement & tender activities
  - Achieves efficiency & cost savings
  - Consistency in procurement practice
  - Transparency in Transactions
- Stimulates e-commerce
- Within 1$^{st}$ year, tranx value was US$50M

# iGov 2010 Masterplan

- OneMap

- Unique Entity Number

- REACH (or Reaching Everyone for Active Citizenry@Home)
  - Official government e-engagement platform for improving channel of communication between citizens & Government

- Alliance for Corporate Excellence (ACE)
  - A shared HR, finance & procurement system for more than 11 agencies, leading to higher efficiency

# SG-SPACE



- Singapore Geospatial Collaborative Environment
- A WOG initiative to create a National Spatial Data Infrastructure (NSDI) environment in which public & private sectors & community can collaborate & create a wide range of innovative applications & services using geospatial or map-based info
- Budget: S$12M (over 3 years)
- Also addresses mechanism & policies to allow convenient access to quality geospatial info in usable form
- 2 major challenges in establishing NSDI
  - Getting good authoritative data
  - Convincing decision makers to invest in geospatial apps & info

- An integrated map system for improving citizen's experience of finding map locations & driving directions

- OneMap is 1st major application of SG-SPACE
- Launched in Mar 2010
- Commonly used services include
  - Driving Directions
  - Intelligent Search
  - Land Query
  - School Query
  - Mobile Maps
- Aims to spur innovation by facilitating & promoting use of geospatial info across public, private & people sectors
- Companies, organisations & individuals can tap on OneMap's advanced web mapping technologies to create useful & value-added services within their own websites

# OneMap

- Examples
  - Volunteering opportunities based on location
  - Interest & availability
  - Hot spots for bird watching
  - Driving directions
  - Retail promotions based on locations
  - Research on competition & market profiling for business at specific location

- A multi-agency collaborative initiative
- Participating agencies include

  - IDA, LTA, MCYS, MOE, MICA, MoLaw, NAC, NHB, NLB, NPB, PA, SLA, SSC, STB, URA

**Objectives**
- A common means of identifying establishments across public sector agencies, to facilitate effective sharing of basic non-confidential info on establishments across public sector agencies to enable delivery of better & more personalised services
- To make interactions with Govt simpler, faster & easier

- Establishments had to use different identification nos when interacting with different govt agencies
- Commonly used ids are ACRA no. issued by Accounting & Corporate Regulatory Authority (ACRA) to registered companies, businesses & limited liability partnerships
  - ROS no. issued by Registry of Societies (ROS) to registered societies
  - Central Registration (CR) nos. issued by Department of Statistics (DOS) to various categories of establishments as required for survey or statistical purposes
  - CPF employer no. issued by Central Provident Fund Board (CPF) to all employers

# Implementation of UEN

- To minimise changes needed, ACRA no. that was issued to about 85% of establishments, was leveraged as UEN for businesses & local companies registered with ACRA

- Remaining 15% of establishments such as societies, embassies, representative offices, & mutual benefit organisations etc which did not have ACRA nos. (as they are not registered with ACRA) have been issued with new identifier as their UEN

- By January 2009, all establishments were issued with their UEN

- All government agencies have adopted UEN with effect from July 2009

- To facilitate transition to UEN conversion software that maps UEN to existing identifiers were provided to public, private & social sector agencies

# UEN: Desired Outcome
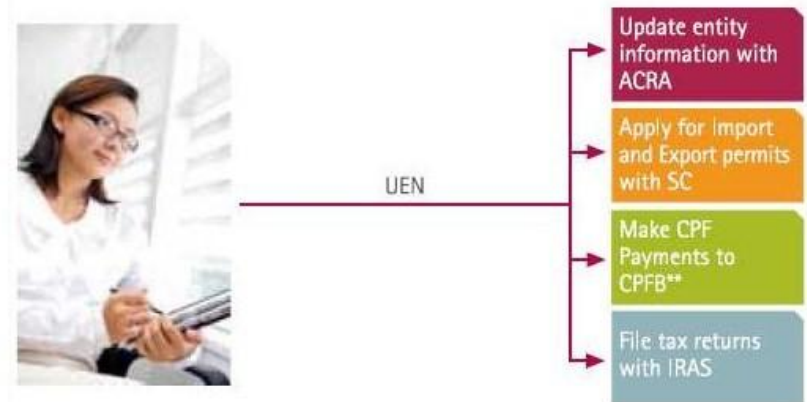
**Before**

**After**



■ **Example:**
Today, entities interact with the government using different numbers that are issued by different government agencies, such as ACRA, Department of Statistics (DOS), CPFB and IRAS.

ID #1: Business Registration Number → Update entity information with ACRA

ID #2: Central Registration Number → Apply for Import and Export permits with SC

ID #3: Employer Reference Number → Make CPF Payments to CPFB

ID #4: Tax Reference Number → File tax returns with IRAS



With UEN, entities only need to remember and use UEN as the one number for all these interaction.

UEN → Update entity information with ACRA

Apply for Import and Export permits with SC

Make CPF Payments to CPFB**

File tax returns with IRAS

** CPFB will be issuing an additional sub-code to entities for this purpose.

# Enhancing Internal Government Capabilities



**Alliance for Corporate Excellence**: A shared HR, finance & procurement system



**Vital.org**: Aggregating HR and finance services of government agencies under one roof



**SOE**: An integrated infocomm environment for all public officers

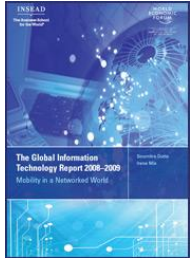Based on the 2010 e-Government Customer Perception Survey,

**87%**

87% of the people are satisfied with the quality of government's e-services.

**93%**

93% of the people will recommend others to transact with the government through e-services

# International Ranking

World Economic Forum Global Info Technology Rep Ranking

$2^{nd}$ (2011)

United Nations e-Government Development Index

$11^{th}$ (2010)

WASEDA University

Waseda University World e-Gov Ranking

$1^{st}$ (2009-2011)

United Nations e-Participation Index

$9^{th}$ (2010)

United Nations Special Award for Outstanding Progress (2010)

# Singapore eGov Masterplan

World of digital content

Knowledge Economy

The World Today

Pervasive connectivity

More savvy users

# eGov2015 Masterplan (2011-2015)

*Connecting People, Enriching Lives*

## Vision

- To be a Collaborative Government that Co-creates and Connects with Our People.

eGov2015 is about building an interactive environment where Government, private sector & people work together seamlessly, through enabling power of ICT

The vision of a Collaborative Government will be achieved through 3 strategic thrusts

- Co-creating For Greater Value
- Connecting For Active Participation
- Catalysing Whole-of-Government Transformation
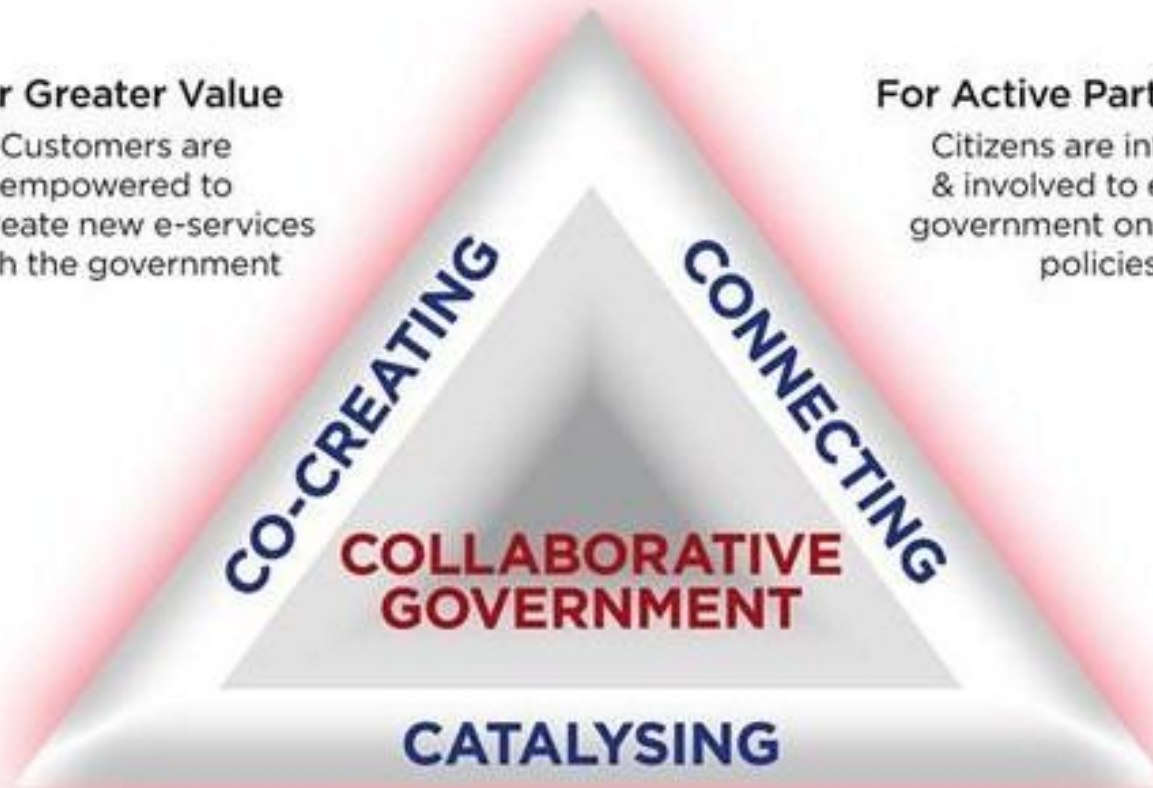
# Programmes for Citizens

**data.gov.sg**

**data.gov.sg**
discovering data,
inspiring ideas

**mGov@SG**

m-Gov@SG

**OneInbox**

ONEInbox
Anytime
Anywhere

data.gov.sg provides easy discovery of and access to publicly-available government datasets.

mGov@SG is a one-stop mobile site that allows individuals and businesses to easily search for, identify, and access m-services provided by the Government.

OneInbox is a one-stop official and trusted platform for individuals and businesses to receive electronic correspondences from the Government, in place of hardcopy letters.

## Objective

- Provides easy discovery of & access to publicly-available government datasets

**Today**

- Agencies share publicly available data & statistics on websites & publications
- Not always easy for public & researchers to locate them

**Data.gov.sg**

- Seeks to provide convenient access to data through easy-to-use Data Catalogue
- Seeks to make more data available in machine-readable formats for developers to develop innovative apps & services
- Developers can list apps at Applications Showcase for sharing with wider audience

**Objective**

- mGov@SG is a one-stop mobile site that allows individuals & businesses to easily search for, identify, & access m-services provided by Govt

- Today, different types of m-services are made available through various mobile platforms (such as agencies' Internet websites, App stores such as iTunes, Android Market & Telco App stores)

- Launched on 20 June 2011 with ~40 m-services

- Brings together mobile browser-based, native application-based & SMS-based m-services

# mGov@SG

Several ways for users to find m-services

1. **Categories**: Can locate m-services through one of 9 categories of "Business", "Community & Housing", "Travel & Leisure", "Defence & Security", "Education & Learning", "General", "Health", "Jobs & Money" & "Transport"

2. **Organisations**: Can first look up agency under "Organisations" to browse through agency's m-services

3. **Quick Search**: Can perform a search for a specific government m-service with search tool provided

4. **Discover All**: Can view all the m-services

**ONEInbox**
**Anytime**
**Anywhere**

**Objective**

One-stop official & trusted platform for individuals & businesses to receive electronic correspondences from Government, in place of hardcopy letters

- Launch date in 2nd half of 2012

- Based on results from surveys & polls, most individuals & businesses prefer to receive electronic correspondences instead of hardcopy letters

- Will make it easier for individuals & businesses to file & track their correspondences from a single aggregated platform

- Will provide a trusted & guaranteed delivery of correspondences, free from spam

- Those who travel frequently or are living overseas will be able to access correspondences from Govt anytime, anywhere

# Programmes for Government

Cloud Computing for Government

Whole-Of-Government Enterprise Architecture (WoG EA)





The Government Cloud (G-Cloud) provides a resilient and secure ICT shared environment that allows government agencies to procure computing resources on-demand, with greater ease and speed.

The programme aims to establish a federated view of all government agencies' enterprise architectures to optimise government ICT assets for greater cost savings or avoidance.

# Cloud Computing for Government

**Objective**

Provides a resilient & secure ICT shared environment that allows govt agencies to procure computing resources on-demand, with greater ease & speed



• Acknowledges that each cloud computing model provides its own level of assurance & benefits

• Cloud strategy aims to leverage appropriate cloud for appropriate need by adopting a multi-prong approach to cloud computing
  • Leverage public CSPs for appropriate needs so as to benefit from lower cost of computing resources
  • Implement a private govt cloud (Central G-Cloud) for WOG use where security & governance requirements cannot be met by public clouds
  • Enable interoperability between Central G-Cloud and Agency G-Clouds through a set of internal G-Cloud standards

# Central G-Cloud

• Will provide efficient, scalable & resilient cloud computing resources

• Will be designed to meet 2 levels of security & governance requirements:

> • High Assurance Zone – a physically dedicated computing resource pool which will only be used by Govt to serve its high assurance needs
>
> • Medium Assurance Zone – a computing resource pool which will be shared with non-govt cloud users to lower cost computing resources for Govt
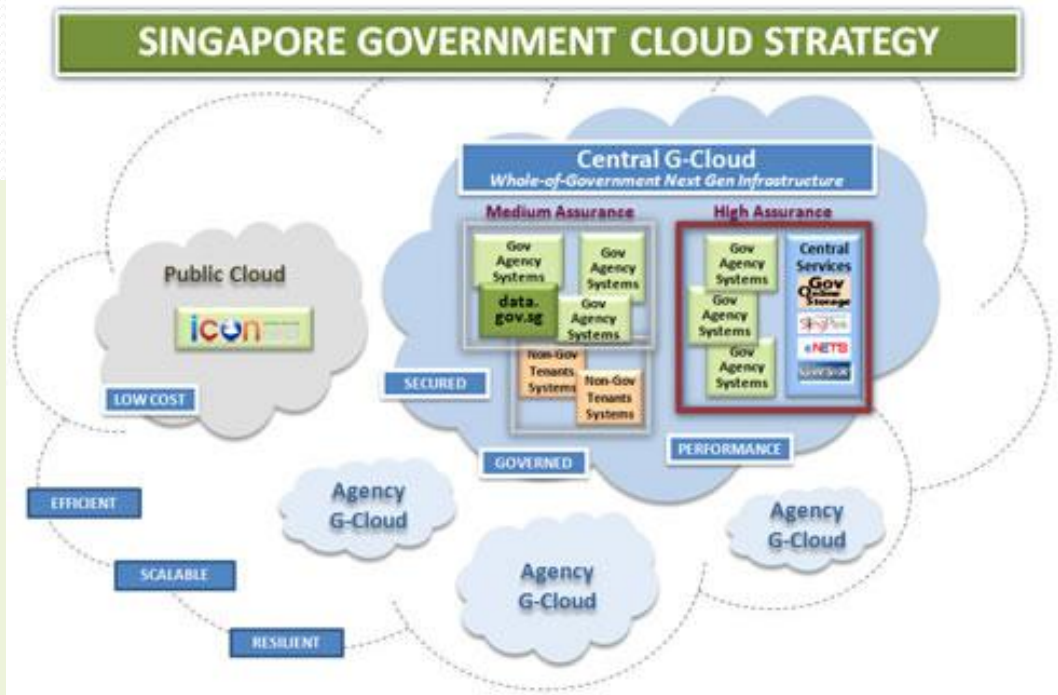


• Will provide central services

> • govt web service exchange
>
> • gateways to SingPass & e-Payment services

• Will identify & provide common services, such as CRM & web content management, as SaaS offerings on G-Cloud

• Enables standardisation, & sharing of computing resources & apps at WOG level

# WOG Enterprise Architecture (WOG EA)

**Objective**

Aims to establish a federated view of all govt agencies' enterprise architectures to optimise govt ICT assets for greater cost savings or avoidance



- Aims to achieve
  - Identify opportunities for end-to-end service integration for a seamless govt, leading to greater synergy & efficiency
  - Identify shared systems that can be used by multiple govt agencies to minimise duplicative efforts
  - Improve clarity on application resilience requirements to achieve robust solution designs
  - Improve impact analysis on technology adoption to attain better technology planning & policy development
  - Improve transparency of WOG initiatives & government agencies' various ICT investments, as well as their policy alignment with business goals to reach better investment decisions

# Revised Plan

<u>26 Jan</u> – No class



<u>02 Feb - Issues in Info Security Management</u>
a) Information Classification
b) Singapore Infocomm Security Masterplan
c) Guest speaker: Mr. John Yong (Director, Infocomm Security & Assurance, IDA)
d) Data Protection Policy