

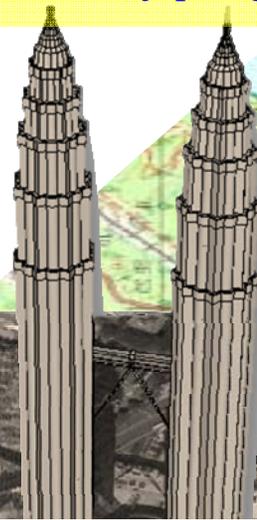
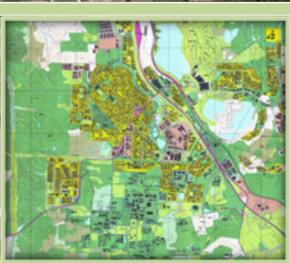
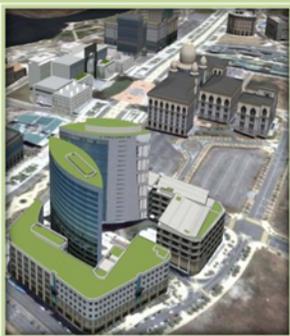


Building a National Geospatial Information System: Malaysian's Experiences

By

Datuk Prof. Sr Dr. Abdul Kadir Bin Taib
Department of Survey and Mapping Malaysia

Email: drkadir@jupem.gov.my



Second High Level Forum on Global Geospatial Information Management
4th – 6th February 2013, Doha, Qatar

Presentation Outline

1

Introduction

2

**Geospatial Information System
Initiatives**

3

**Malaysian Government ICT Initiatives
and National Transformation Agenda**

4

**Achievements and Developments in Geospatial
Information Management**

5

**The Use of Geospatial Information in
Development Projects in Malaysia**

6

Concluding Remarks

The background of the slide is a bright yellow color with a torn paper effect. The top and bottom edges are jagged and irregular, while the middle section is a clean white space where the text is located.

Introduction



Malaysia

Land Area : 329,000 sq. km

Marine Area : 574,000 sq km

No. of Island : 827 islands

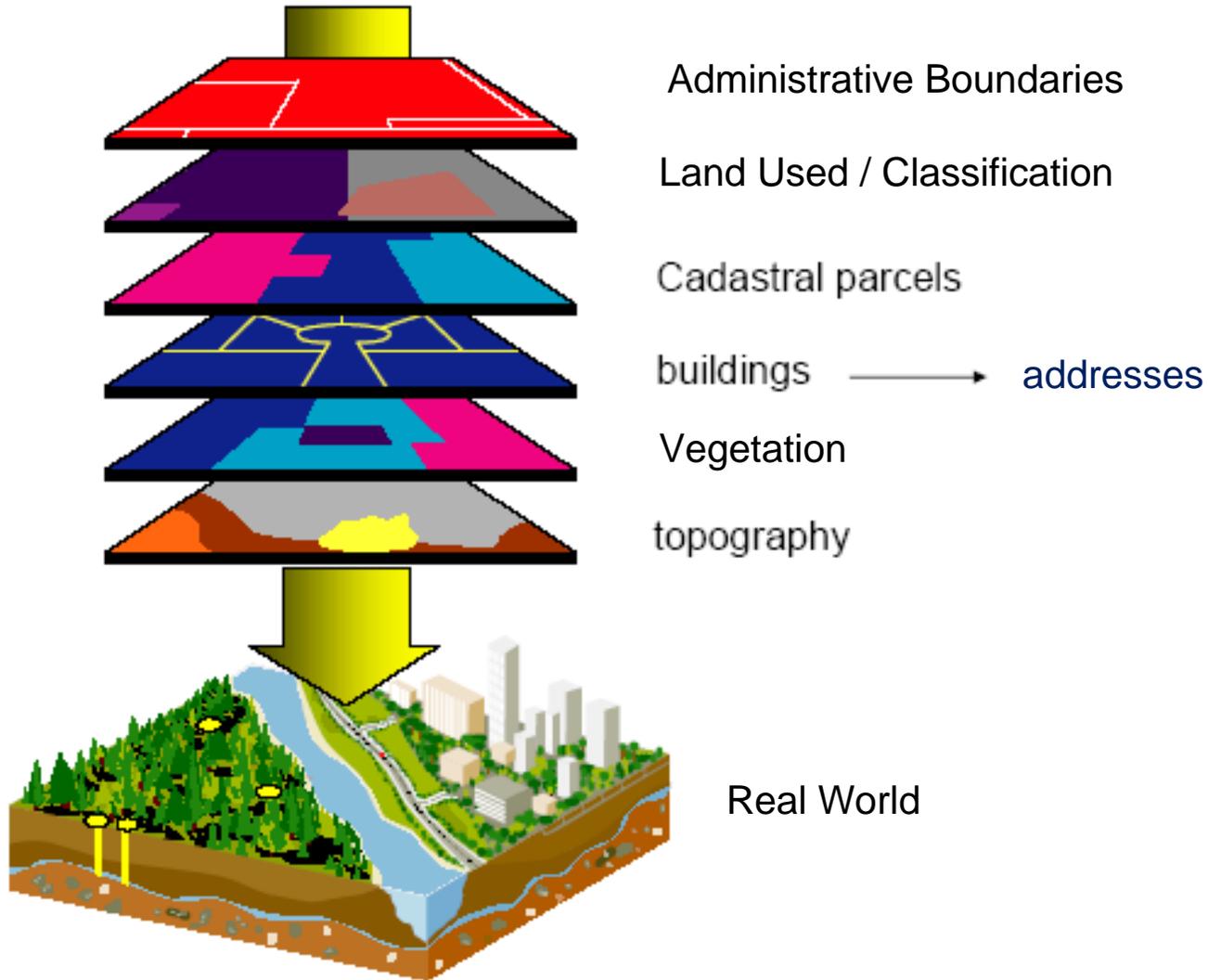
No. Geographical Entity : 273 entities

Population : 28 Millions

Geospatial Data Is Critical to Governments and Businesses

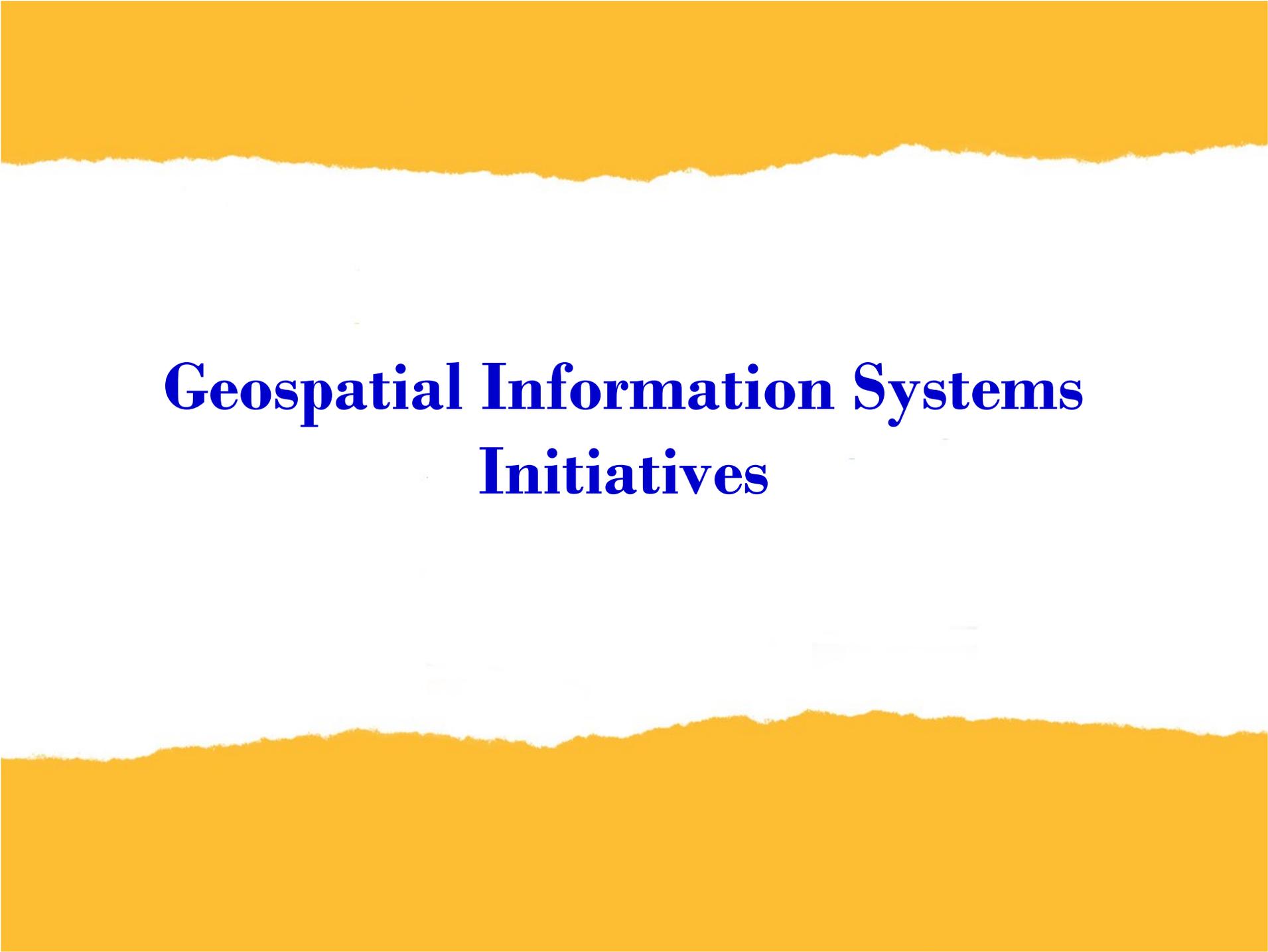
- **Government and business information is a valuable resource in all nations**
- **Estimated 80% of government data has a spatial (geospatial) component**
- **Also as much as 80% of public and private decision making is based upon some geospatial aspects**
- **Geospatial serves as the common thread to address diverse issues**
- **Can't effectively address Electronic Government, National Security or Sustainable/Livable Communities without geospatial information**

Geospatial Information Layers



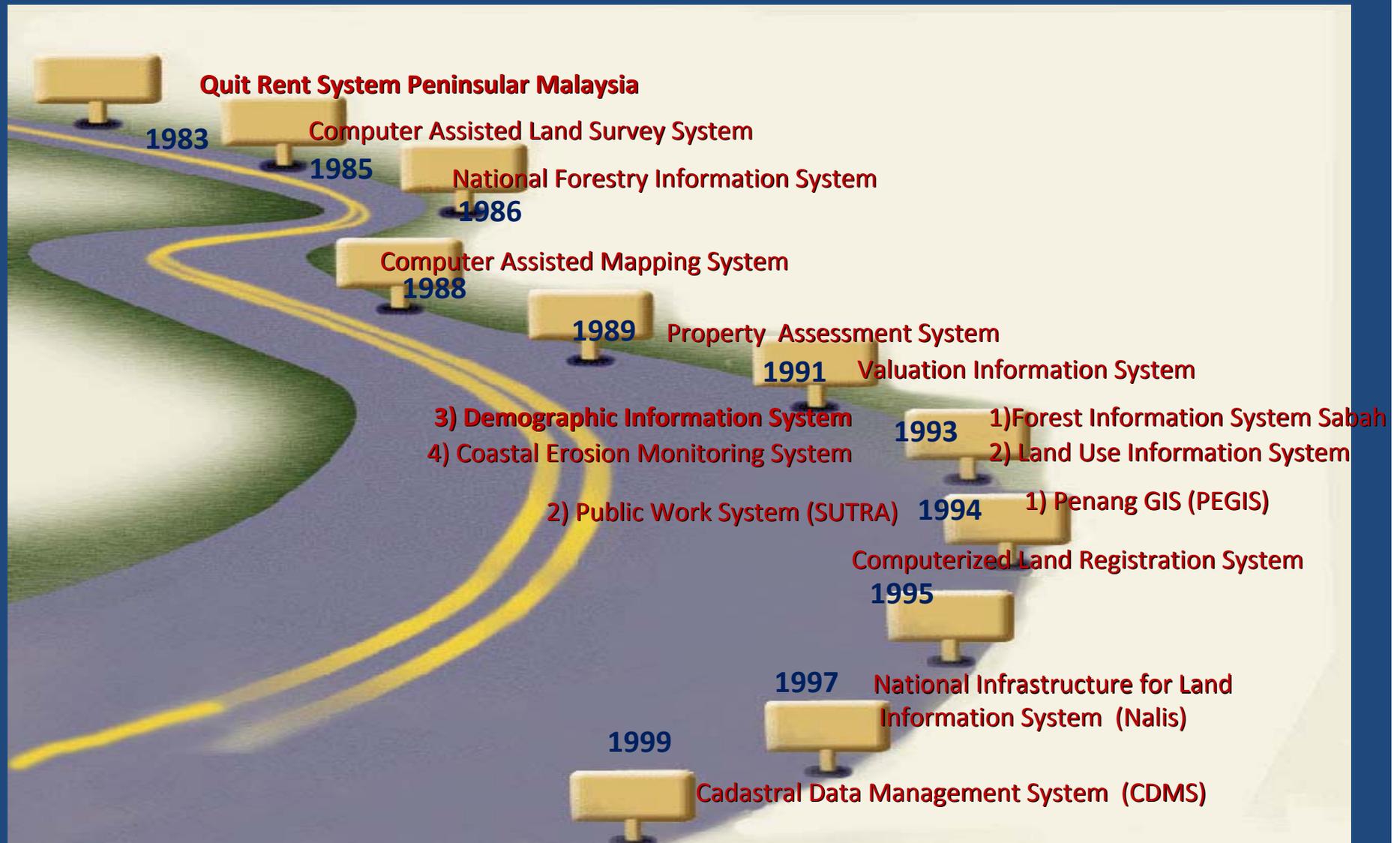
Geospatial Information Technology

- GIS / LIS
- Remote Sensing & Photogrammetry
- Surveying and GNSS
- LIDAR, IFSAR and UAV
- Mapping and Cartography
- CAD, GPR and PCL
- 3-D Imaging and Other Visualization Tools
- Information and Communication Technology

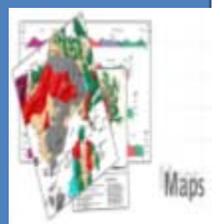
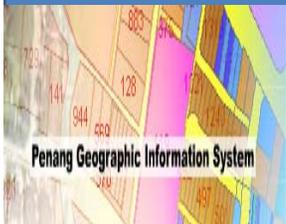
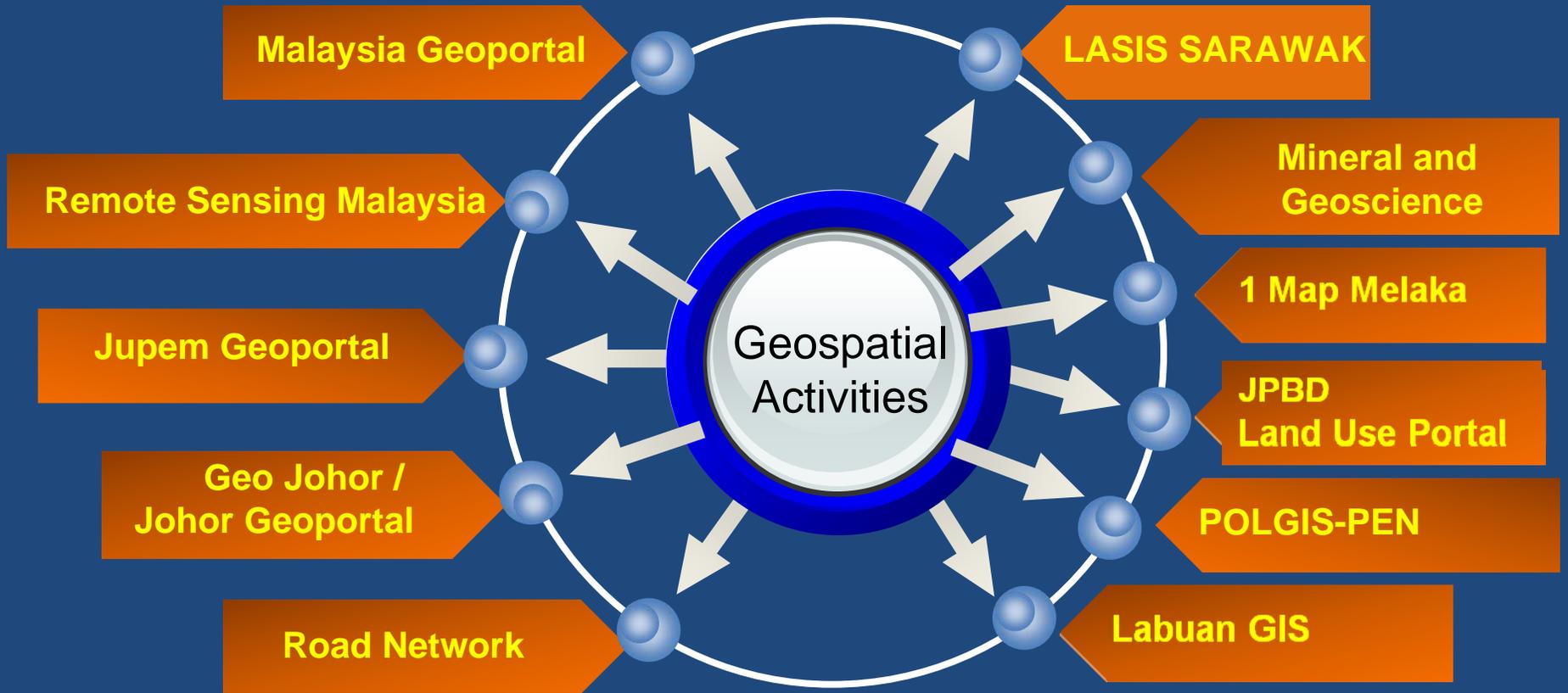
The background of the slide is a white page with a yellow border that has a torn paper effect. The yellow border is at the top and bottom, with irregular, jagged edges. The text is centered on the white page.

Geospatial Information Systems Initiatives

Before Year 2000



After Year 2000



POLICY

Digital Signature Act 1997 (Act 562)

Communication and Multimedia Act 1998 (Act 588)

Consumer Protection Act 1999 (Act 599)

Electronic Commerce Act 2006 (Act 658)

Government Electronic Activities Act 2007 (Act 680)

Personal data Protection Bill 2009

National Geospatial Act ????



GEOSPATIAL INFORMATION STANDARDISATION

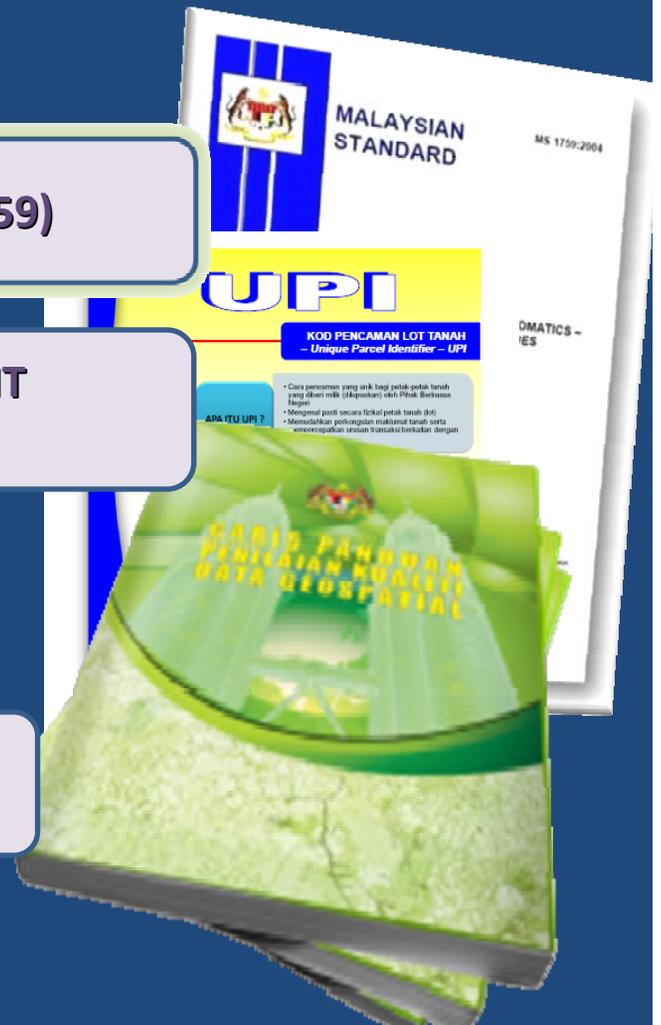
Unique Parcel Identifier (UPI)

FEATURE AND ATTRIBUTE CODES 1759 (MS1759)

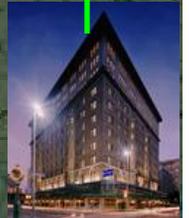
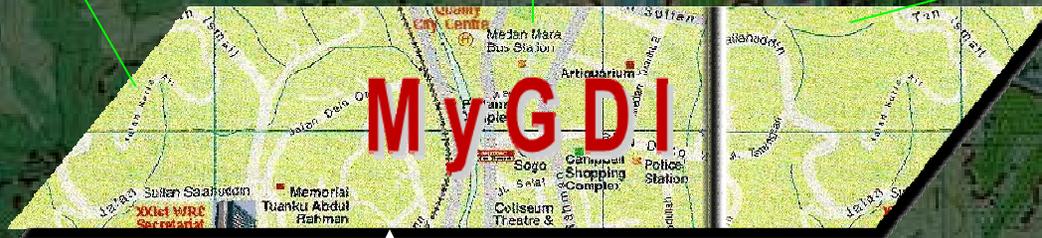
MyGDI METADATA STANDARD DEVELOPMENT
(MMS)

Dataset Quality for Geographic Information
(DQ)

Standardisation of Geographical Names (Geoname)



APPLICATIONS USING MyGDI



MyGDI Explorer

<http://mygdix.mygeoportal.gov.my/>

The screenshot displays the MyGDI Explorer website interface. At the top, there is a navigation bar with links for 'MyGeoportal', 'Login', 'Register', 'About', and 'Feedback'. The main header features the 'MYGDI Explorer' logo and the tagline 'Serving Your Geospatial Information Needs'. Below the header, there are navigation tabs for 'HOME', 'SEARCH', and 'MYGDIX VIEWER'. The main content area is divided into several sections:

- Metadata Tool:** Describes the MyGDI Metadata Editor (METAFOR) as a 'MyGDI Metadata Standard' compatible metadata editor. It includes an image of the METAFOR logo.
- You can simply..:** A central section with a search bar and a 'Search' button. Below the search bar, there are two columns of options: 'Become a Member' (with an image of two stylized figures) and 'Publish Content' (with an image of a globe on a platform). Below these are the actions 'Create an Account', 'Create Metadata', 'Upload your Data', and 'Publish Data'.
- Related Updates:** A section with three update notices: 'METAFOR v1.1.1 released', 'METAFOR v1.1.0 released', and 'Taklimat Pengisian MMS Metadata Kedah'.
- About Us:** A section with a magnifying glass icon and text describing the MyGDI Explorer as a metadata catalogue for GIS users, developers, and data suppliers.
- Latest Resources From Our Catalogue:** A section listing three resources: 'Lokasi Empangan di bawah Pemantauan JPS', 'Agricultural Drainage Reserve Area SGDC Sabah 2009', and 'Baseline SGDC Sabah 2009'.
- MyGDIX@Facebook:** A section for social media links.

ISSUES AND CHALLENGES IN MyGDI

TECHNICAL

- Non-compliance of Standard MyGDI
- Reference Systems and Scales
- Data Quality
- Data Format

POLICY

- Custodianship
- Policy on Data Sharing
- Priority Issues
- Awareness

INSTITUTIONAL

- Organization / System
- Geospatial Experts
- Coordination and Cooperation
- Financial / Budget
- Human Capital/Resources
- Data Management

LEGAL

- Right, Security and Confidentiality
- Copyright, Royalty and Intellectual Property
- Data Pricing
- Data Access
- License and Permit

SOSIAL

- Social Issues
- Development of Human Capital



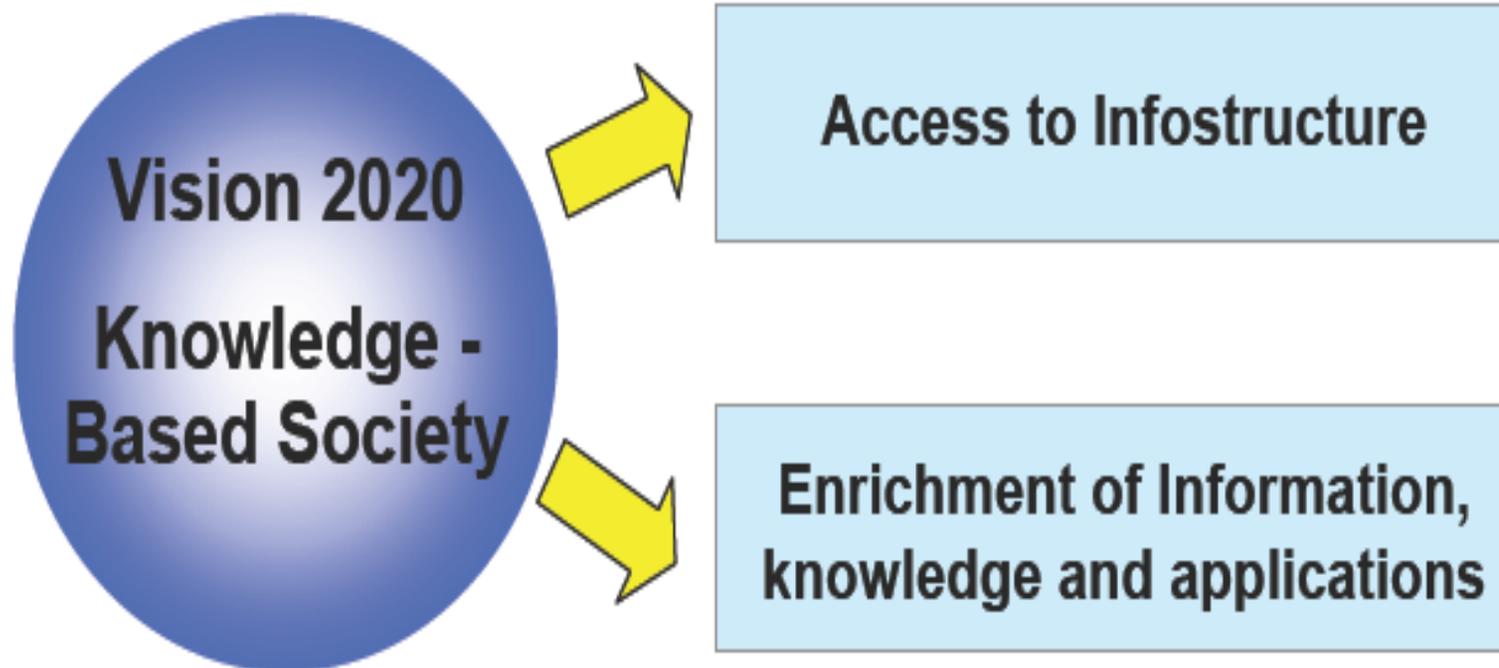
A photograph of a pond filled with green lily pads and several pink lotus flowers. The flowers are in various stages of bloom, with some fully open and others as buds. The background is a dense field of green lily pads. The text is overlaid on a semi-transparent black rectangular area in the center of the image.

**Malaysian Government Initiatives
and National Transformation Agenda**

NATIONAL VISION

Malaysia has set a vision to move towards a knowledge-based society and economy

- Where ICT as driver for restructuring of economy and employment
- Prerequisites include access to infostructure and development of Information, knowledge and applications



Vision 2020



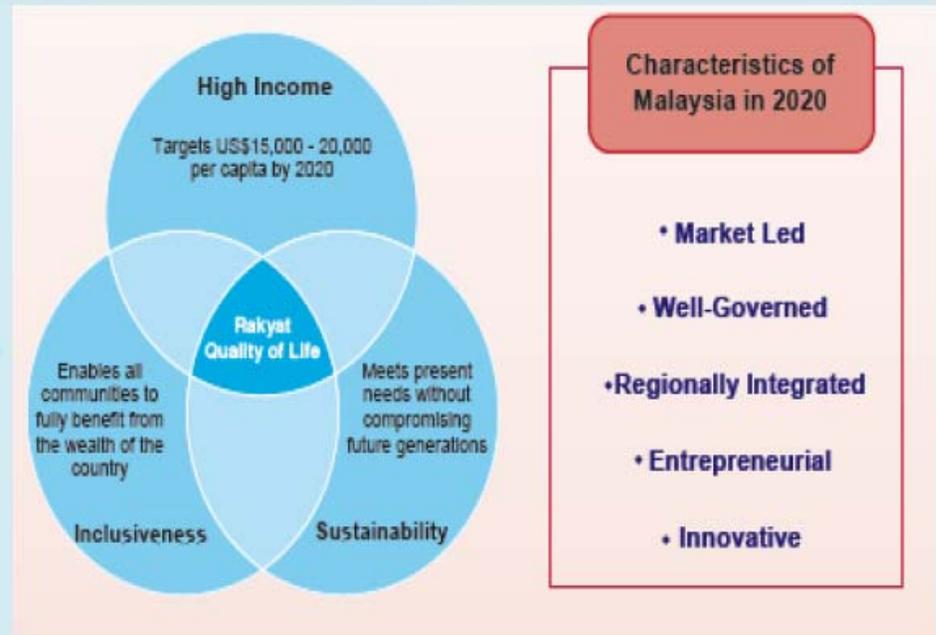
Government Transformation Programme (GTP)



New Economic Model (NEM)

8 SRI

1. Re-energising the Private Sector
2. Developing Quality Workforce and Reducing Dependency on Foreign Labour
3. Creating a Competitive Domestic Economy
4. Strengthening of the Public Sector
5. Transparent and Market friendly Affirmative Action
6. Building the knowledge base infrastructure
7. Enhancing the Sources of Growth
8. Ensuring Sustainability of Growth



Malaysia to become a high-income nation that is both inclusive and sustainable by 2020

National Transformation



1Malaysia – People First, Performance Now
Preservation and Enhancement of Unity in Diversity

Government
Transformation
Plan (GTP)



Effective Delivery of
Government Services

Economic Transformation
Programme (ETP)



NEM
Strategic
Reform
Initiatives

National Key Economic
Areas



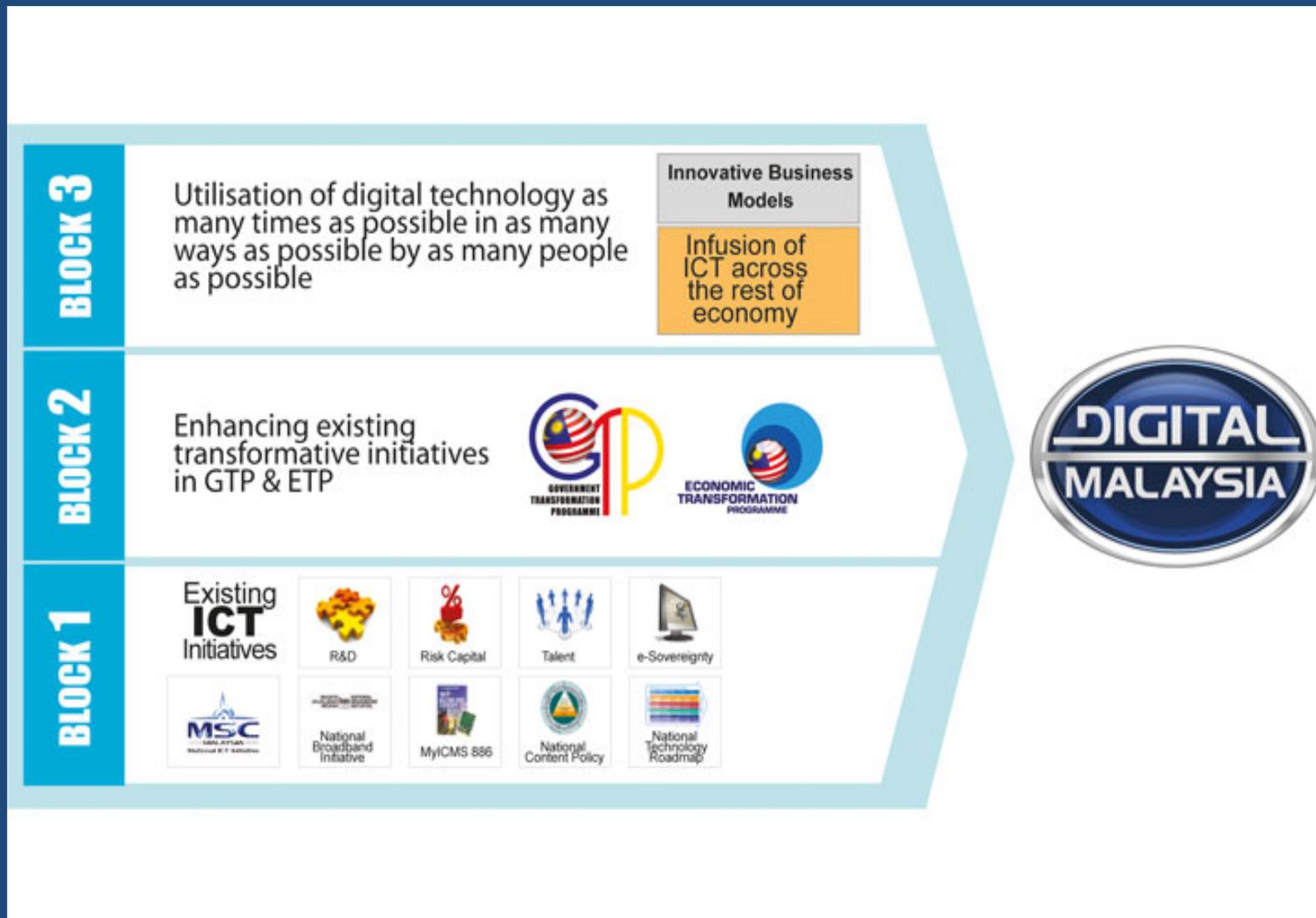
10 & 11 Malaysia Plan Roll-Out

Macroeconomic growth targets & expenditure allocation

Implementation of Government's Development Programmes



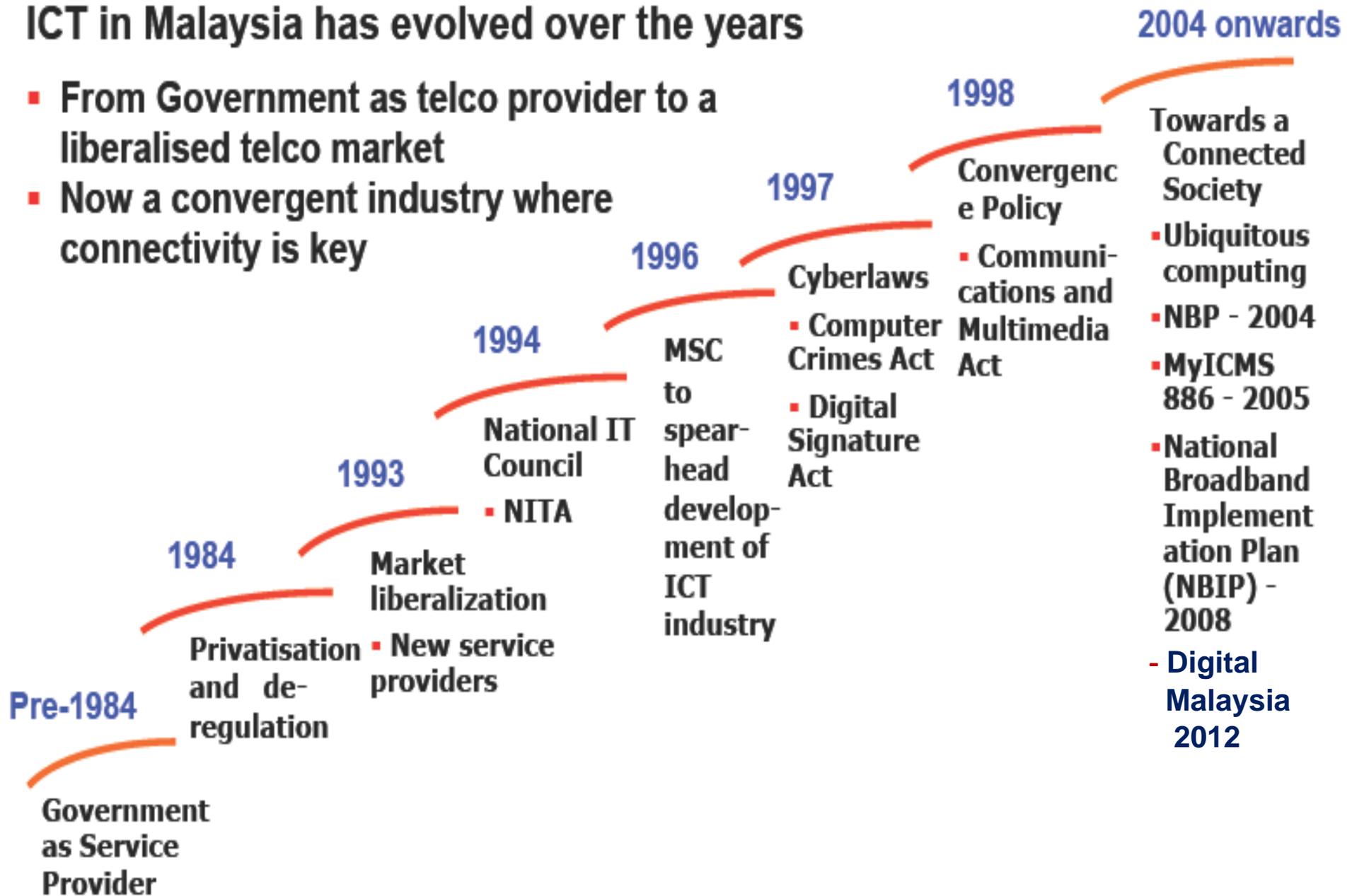
DIGITAL MALAYSIA



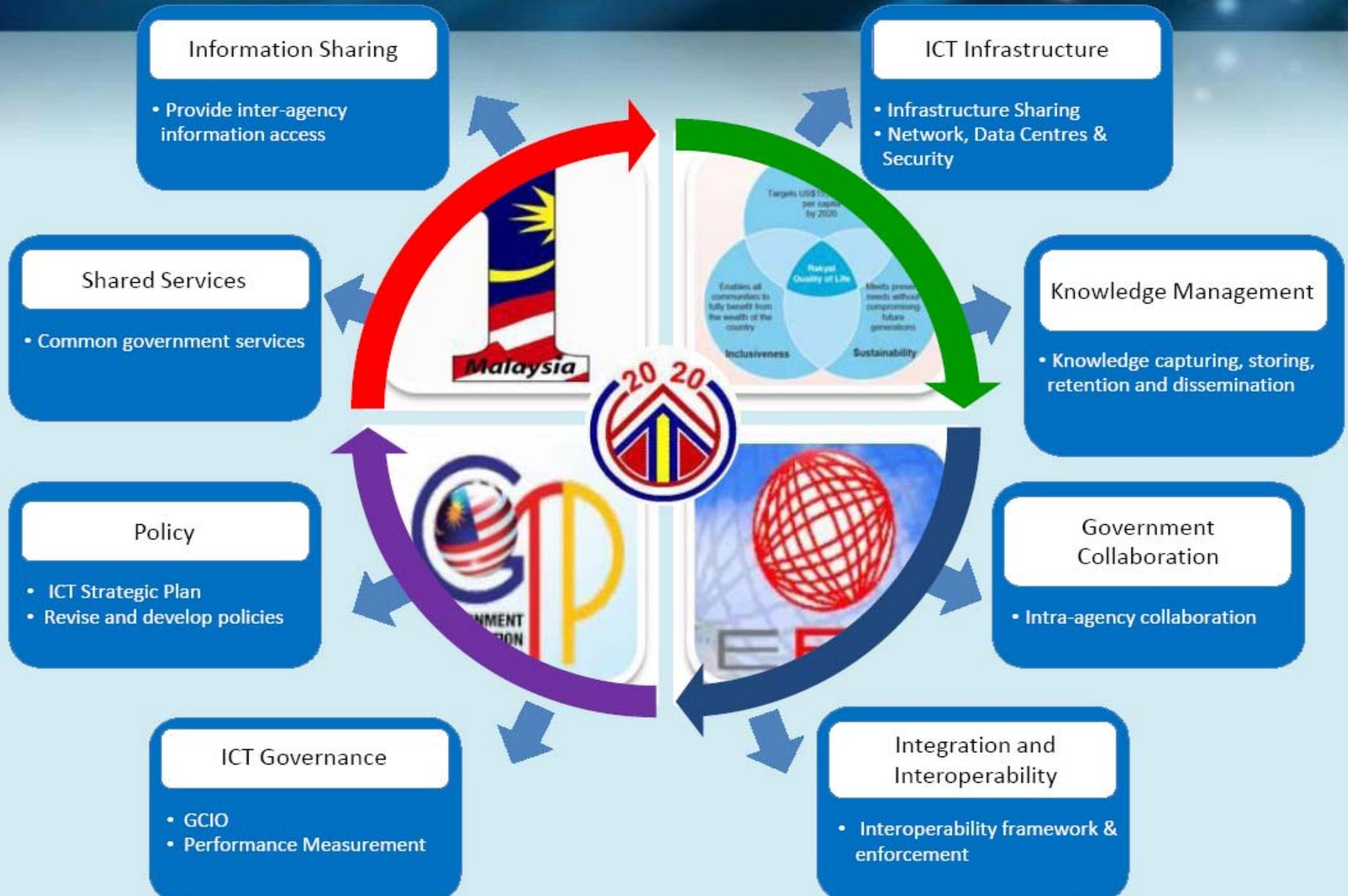
MILESTONES OF MALAYSIA'S ICT DEVELOPMENT

ICT in Malaysia has evolved over the years

- From Government as telco provider to a liberalised telco market
- Now a convergent industry where connectivity is key

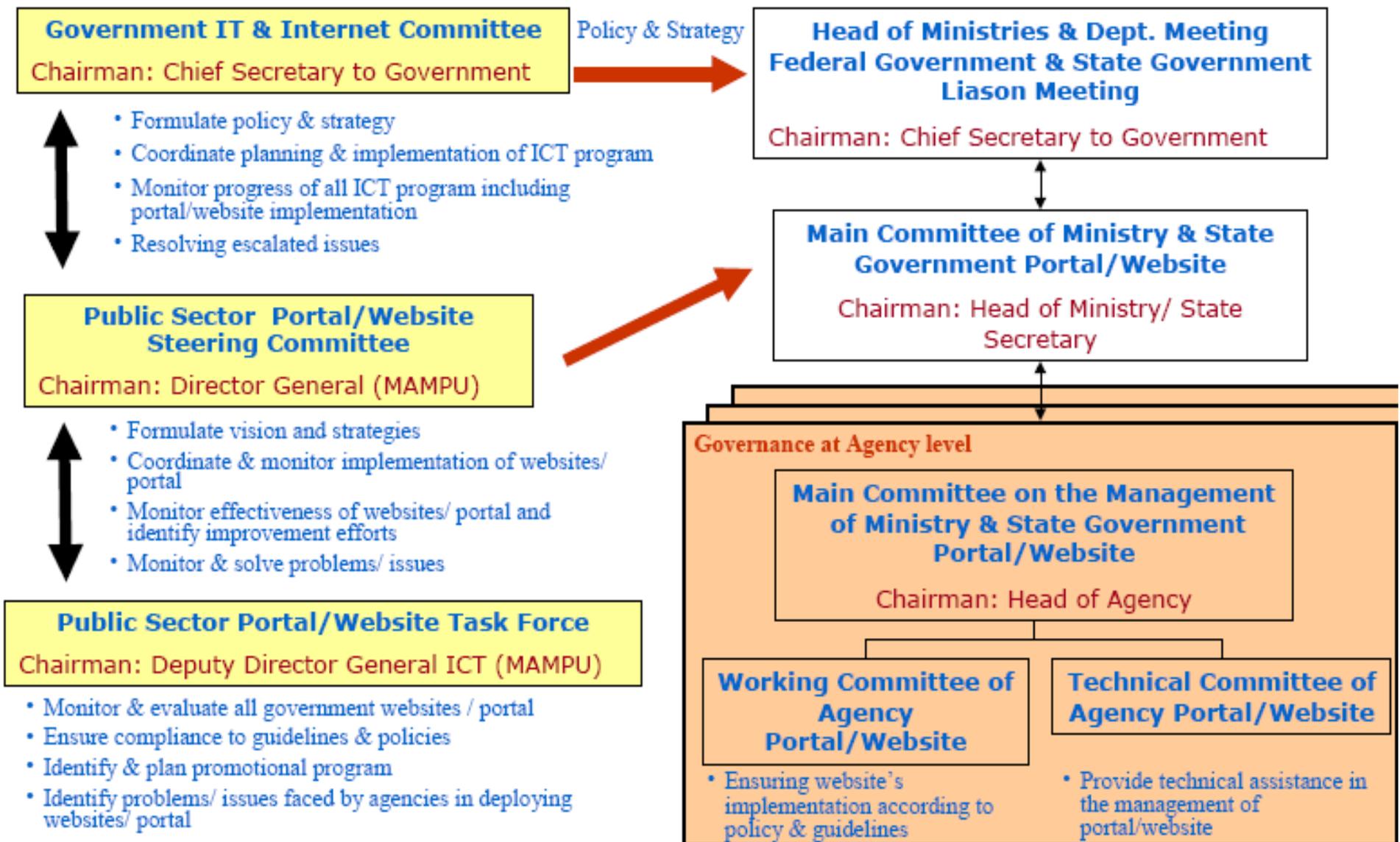


Public Sector ICT Challenges in Achieving 4 Strategic Thrusts of Transformation





PUBLIC SERVICES IT GOVERNANCE (WEBSITES & PORTALS)



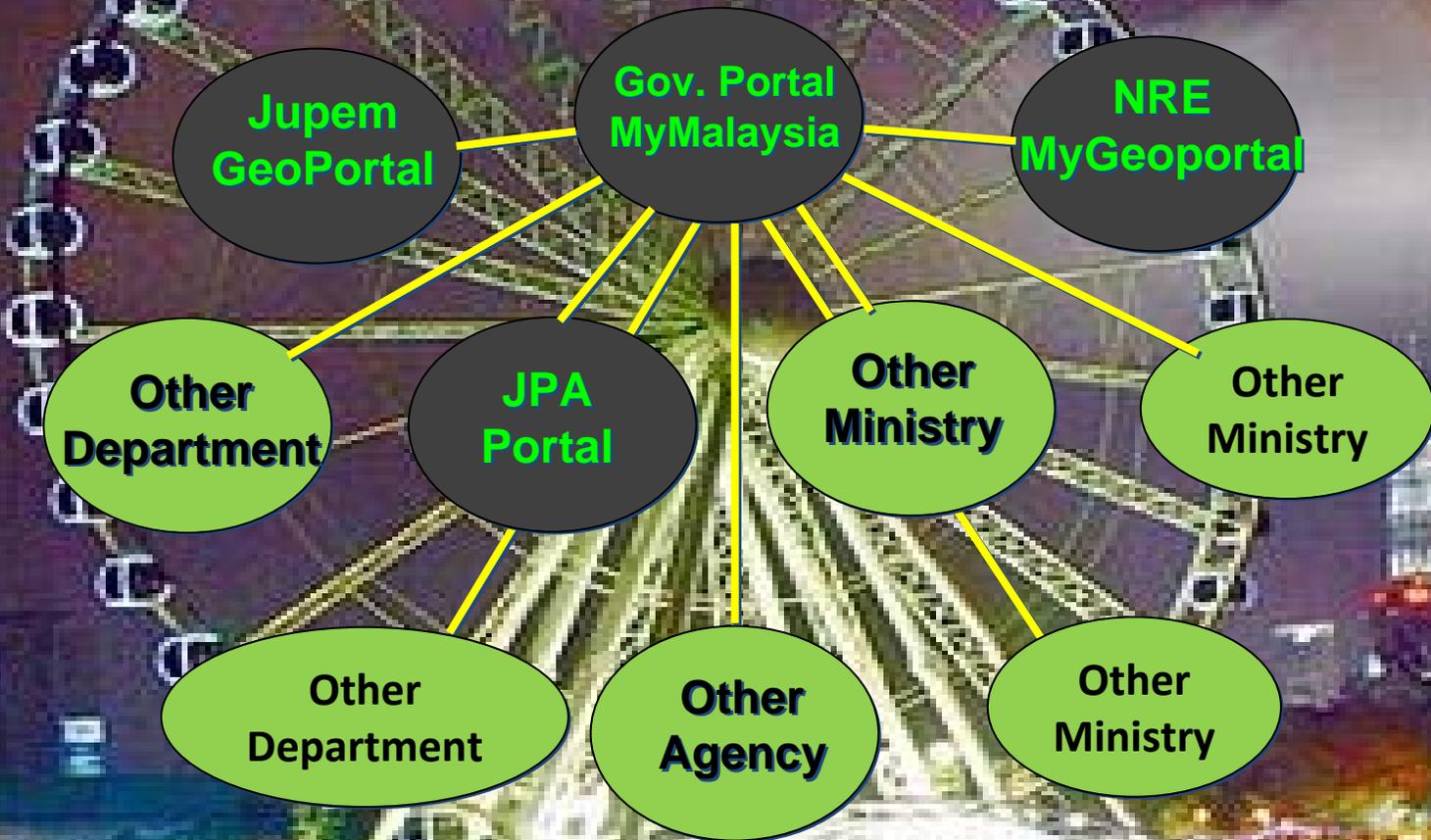
e-Government

The establishment of **e-Government** is another initiative towards improving information flows and processes, and focusing on the effective and efficient delivery of Government services to the people as well as enhancing transparency and accountability.

e-government



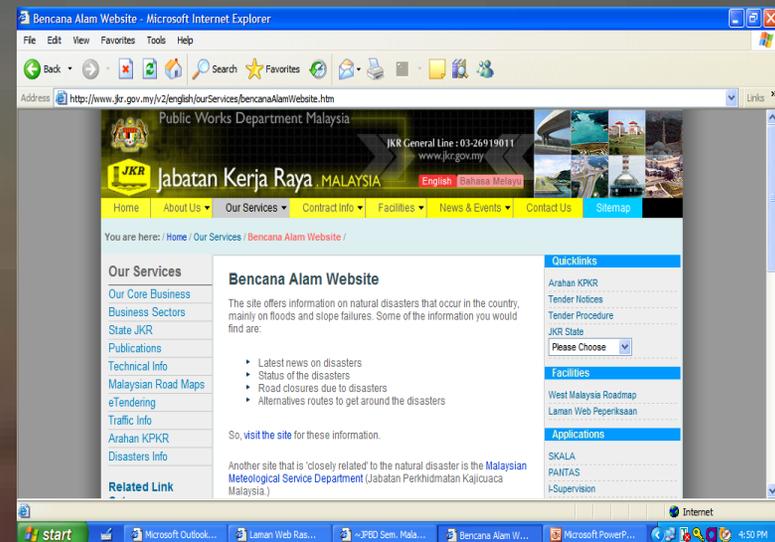
PORTAL



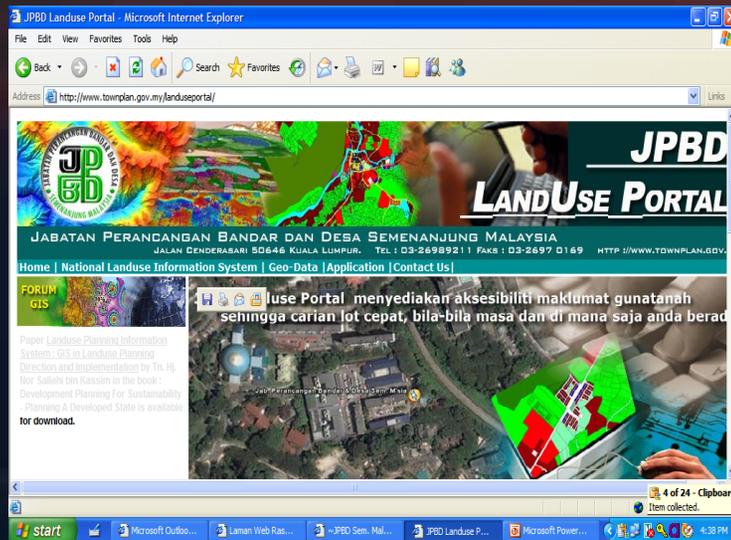
Examples of Government's Portal



www.jupem.gov.my



www.jkr.gov.my



www.townplan.gov.my



www.ekl.gov.my



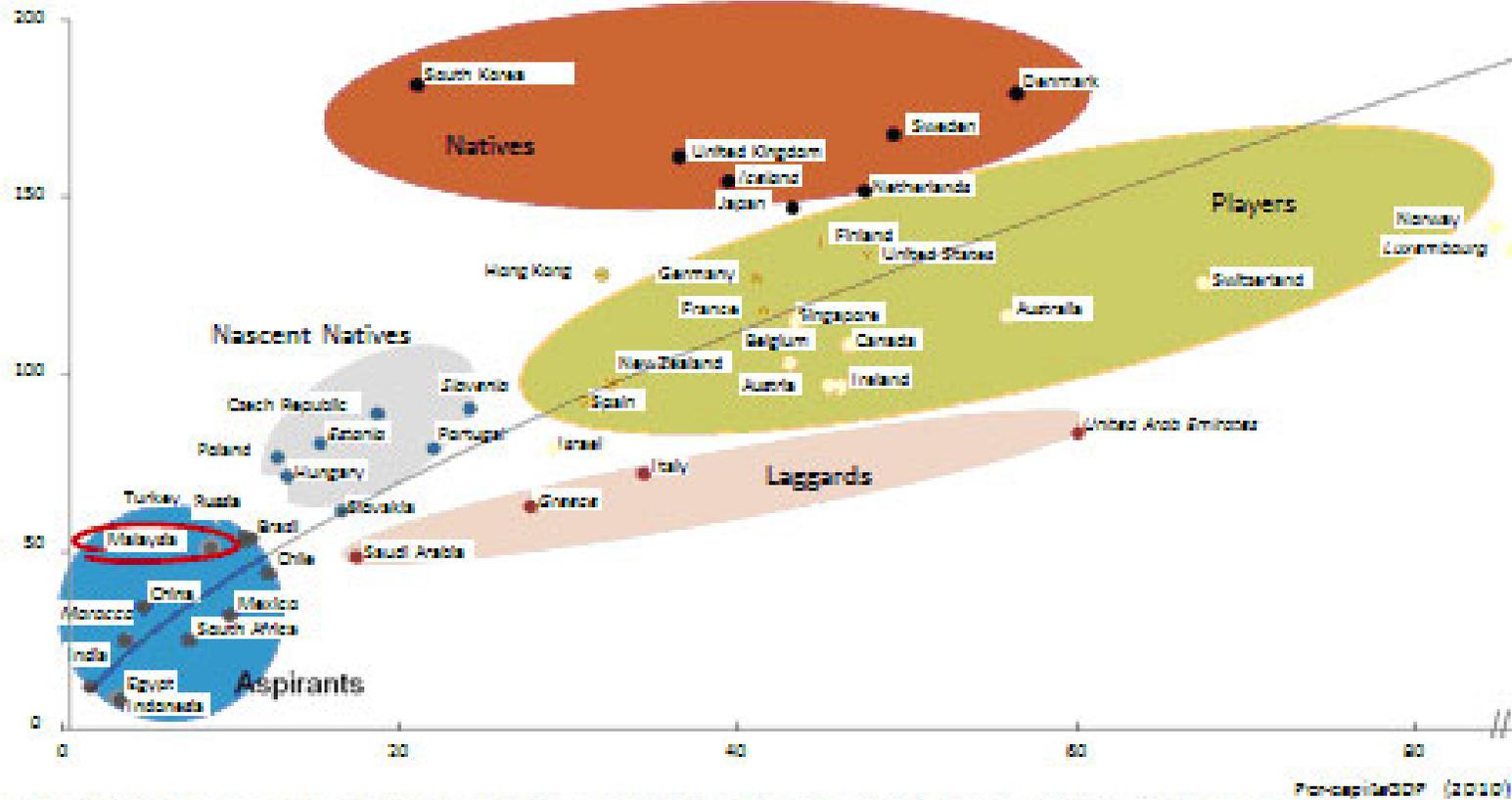
**Achievements and Developments
in Geospatial Information
Management**





WHERE IS MALAYSIA – A GLOBAL SNAPSHOT

BCD intensity score



Sources: Economist Intelligence Unit (EUI), International Telecommunication Union (ITU), World Bank, Pyramid, United Nations, World Economic Forum, Cambridge Judge Global Business School, BCD analysis.

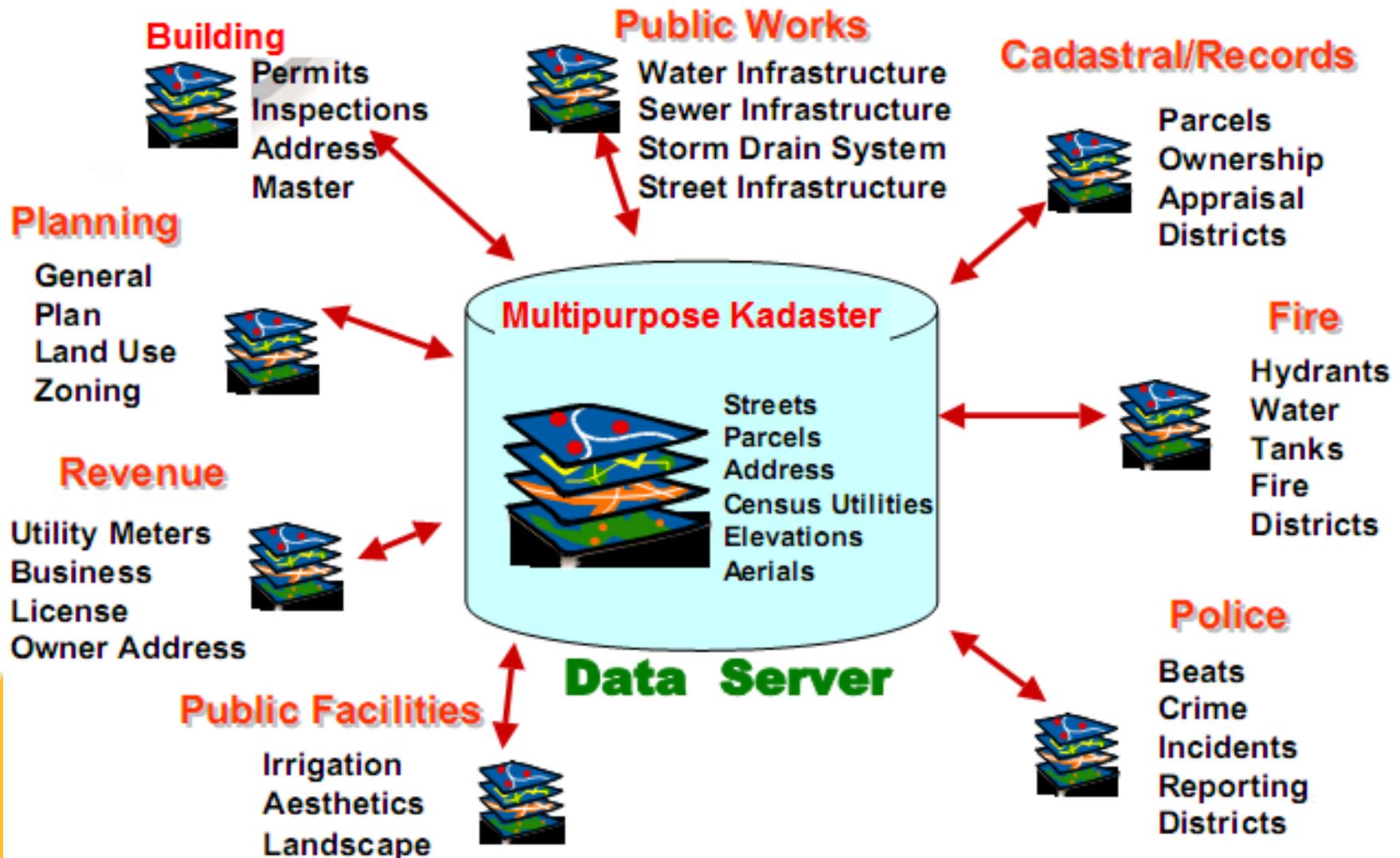
Note: Several countries omitted due to lack of available data. R² = 0.8013

eKADASTER

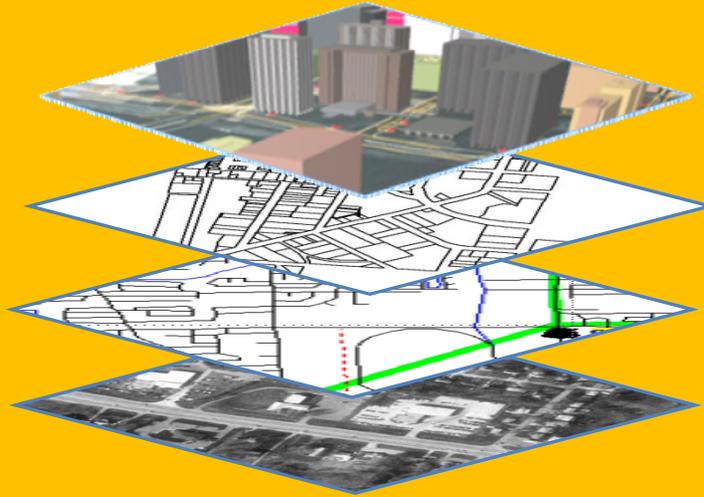
Expediting the B1 plan preparation from 2 years to just 2 months (Required for Final Title)



From Single Purpose eKadastre To Multipurpose Kadastre



Multipurpose Cadastre Infrastructure



3-Dimensional City Models

Street Addresses

Building/Facilities

Satellite Images

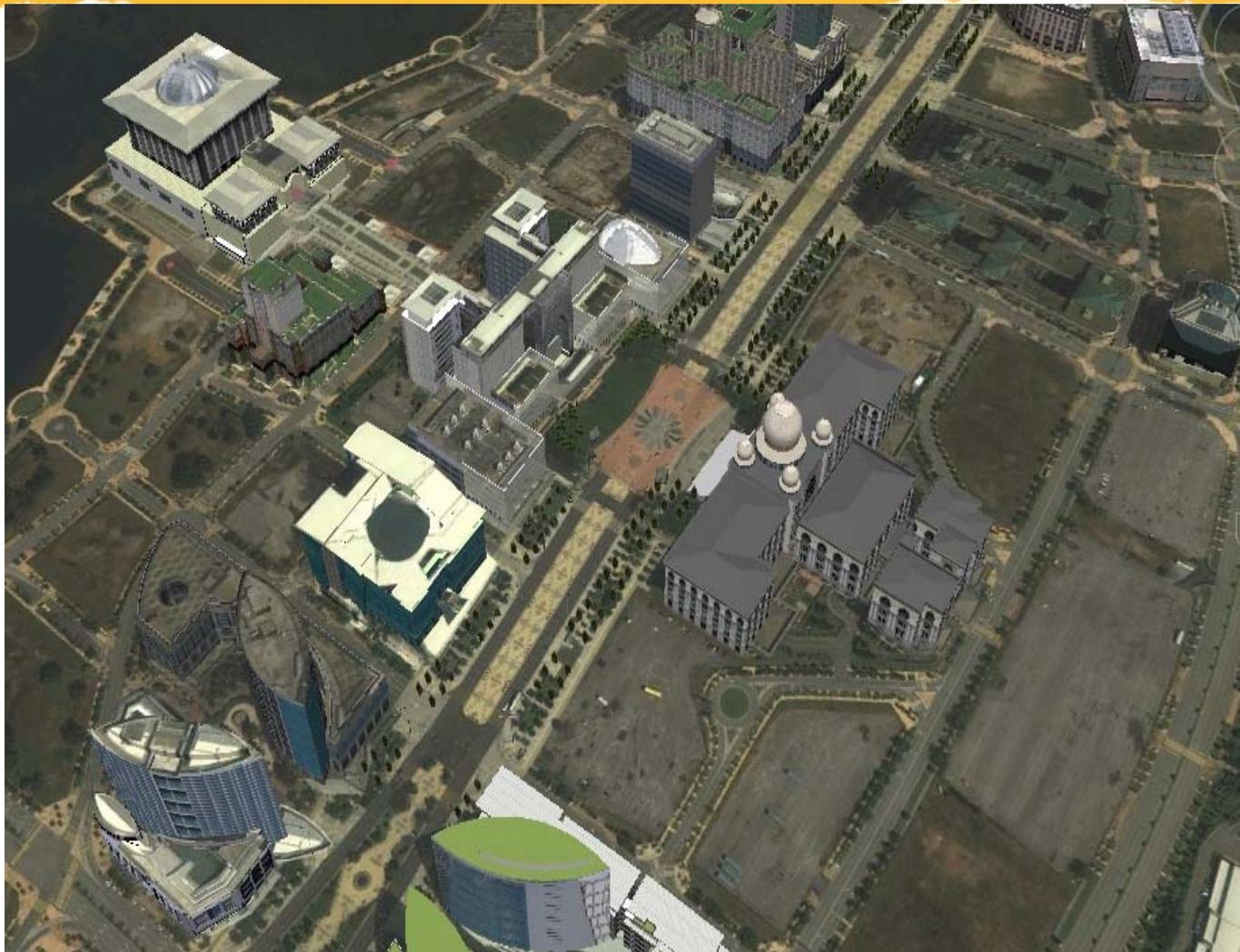
**NGDC/SGDC
(GDM2000)**

National / State Geospatial
Database
(Server MyGDI National/State)

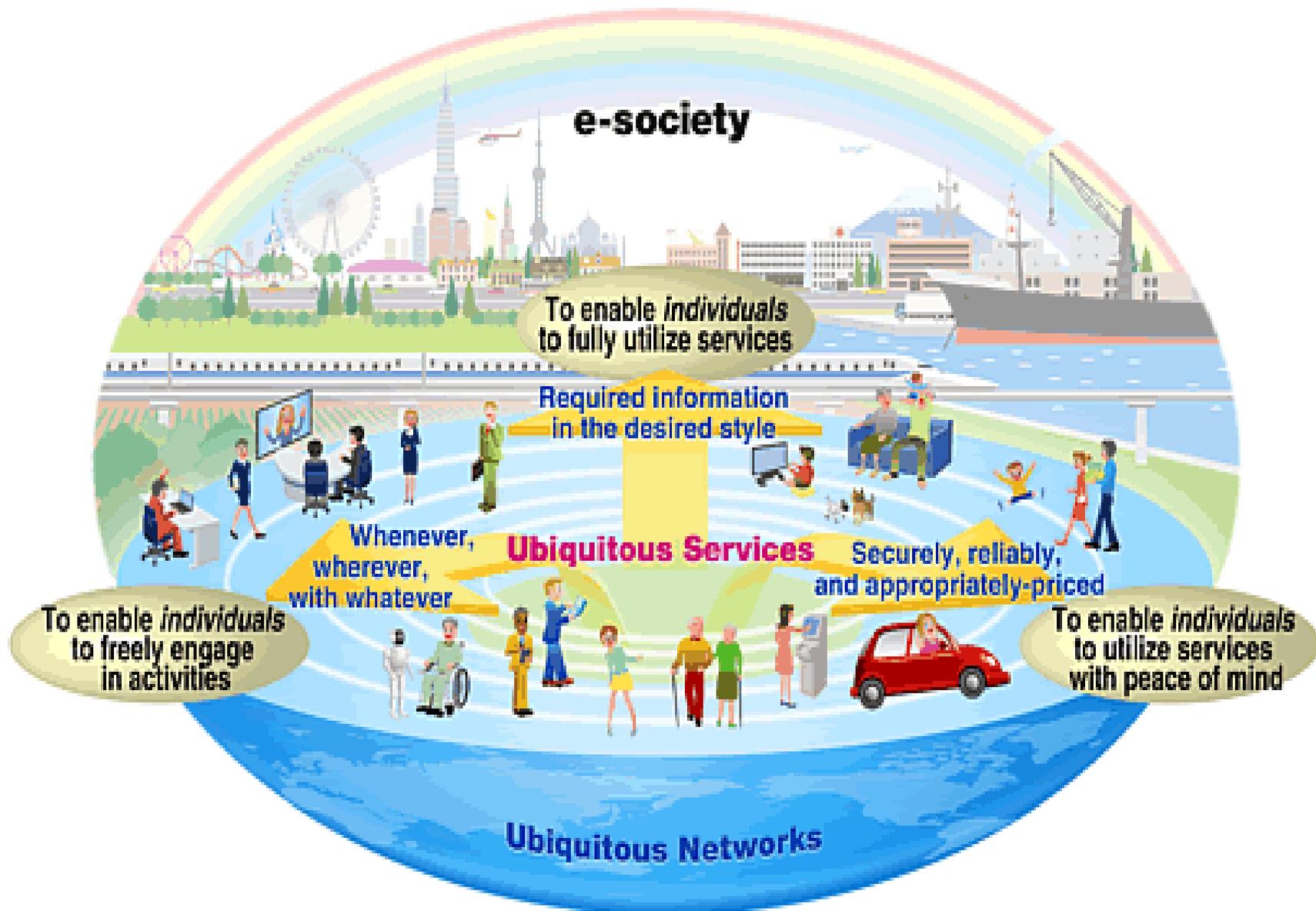
**NDCDB
(GDM2000)**

National / State NDCDB
(JUPEM HQ / State)

3D City Model of Putrajaya (3D MPC Database Overlay with Orthophoto)



Multipurpose Cadastre – “Ubiquitous Environment”



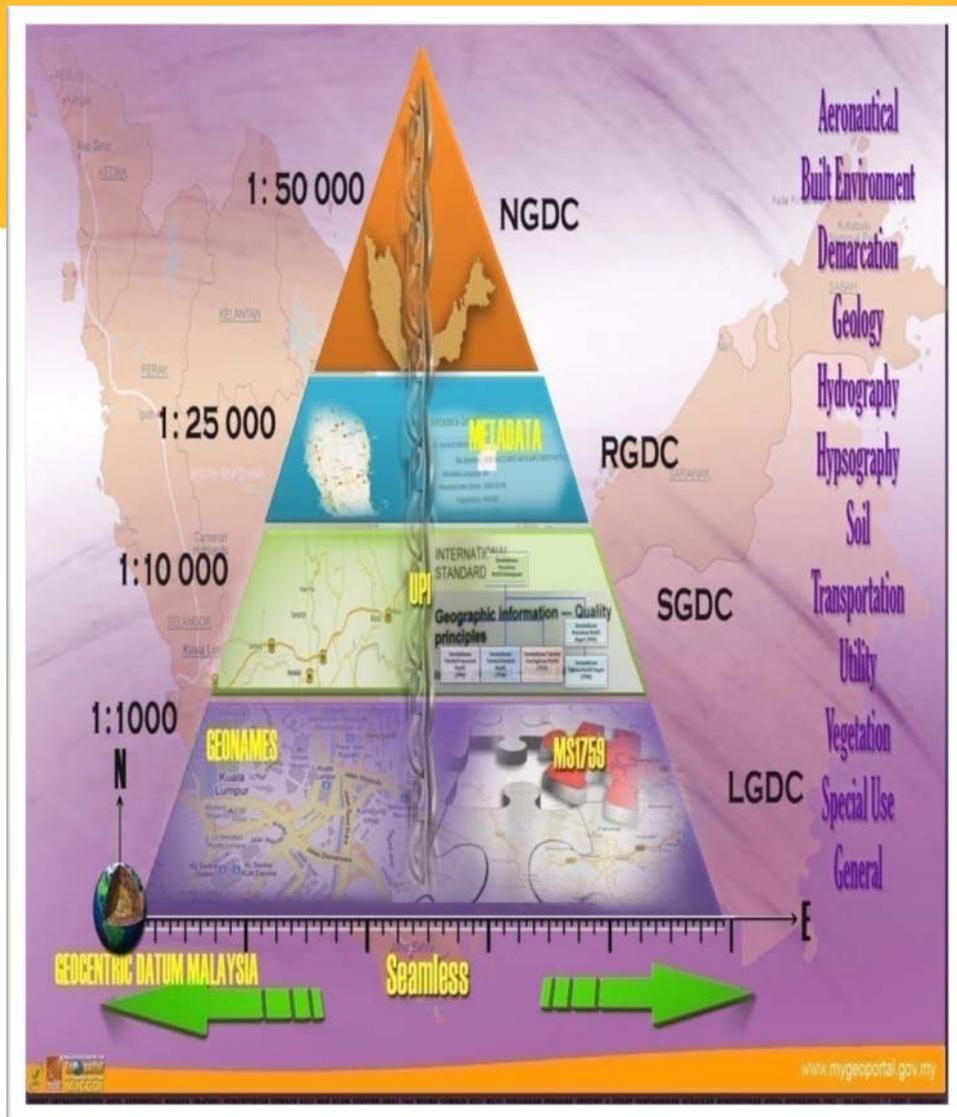
Malaysia Geoportal and MyGDI Explorer

- Map Services Integration
- Geospatial Information Sharing Via Services



A screenshot of the Malaysia Geoportal website. The header includes the logo and the text "Malaysia Geoportal" and "M Portal for Geospatial Data Information (MGDI)". The main content area features a search bar, a "Geographic Information / Geospatial - Features and Attribute Codes Search Engine" section, and a "Geospatial Events 2012" calendar. The footer contains a "Latest News & Event" section with several news items.

A screenshot of the MyGDI Explorer website. The header includes the logo and the text "MyGDI Explorer" and "Serving Your Geospatial Information Needs". The main content area features a search bar, a "Search" section, and a "WHERE" section with radio buttons for "Anywhere", "Intersecting", and "Fully within". The search results list several road network datasets, including "LOCAL AUTHORITIES ROAD NETWORK FOR MARAN" and "WIDENING ROAD PLAN OF PENANG ISLAND".



MyGIS

Catatan Persendirian

Jenis dan No Hakmilik	: RW0011192 0011192
Bender/Pekan/Mukim	:
Keluasan	: 143.0000
Nombor Syil Piaswai	: 0059
Taraf Pejangan	: Pakatan
Tarikh Daftar	: 10 January 1991
Nombor Lot	: 0003524
Tempat	: 10 January 1991
Daerah	: WILAYAH PERSEKUTUAN KUALA LUMPUR
Nombor Polan Akui	: 14-102959
Tarikh Luput Pajakan	: 09 January 2090
Cukai Tanah	: RW 0 33
Dutir-butir tanah	
Kategori Tanah	:
Syarat Nyata	: 2160363
Catatan Khas	: RW00000

Search Form:

Category : **PROPERTY ASSESSMENT**

State : **WILAYAH PERSEKUTUAN KUALA LUMPUR**

Agency : **Jabatan Penilaian dan Pengurusan Harta DBKL**

District : **Kuala Lumpur**

Mukim/Town/District : **MUKIM HULU KELANG**

Section : **No record**

Lot : **23435**

Type of Title : **Select Title**

Title Number :

House Number :

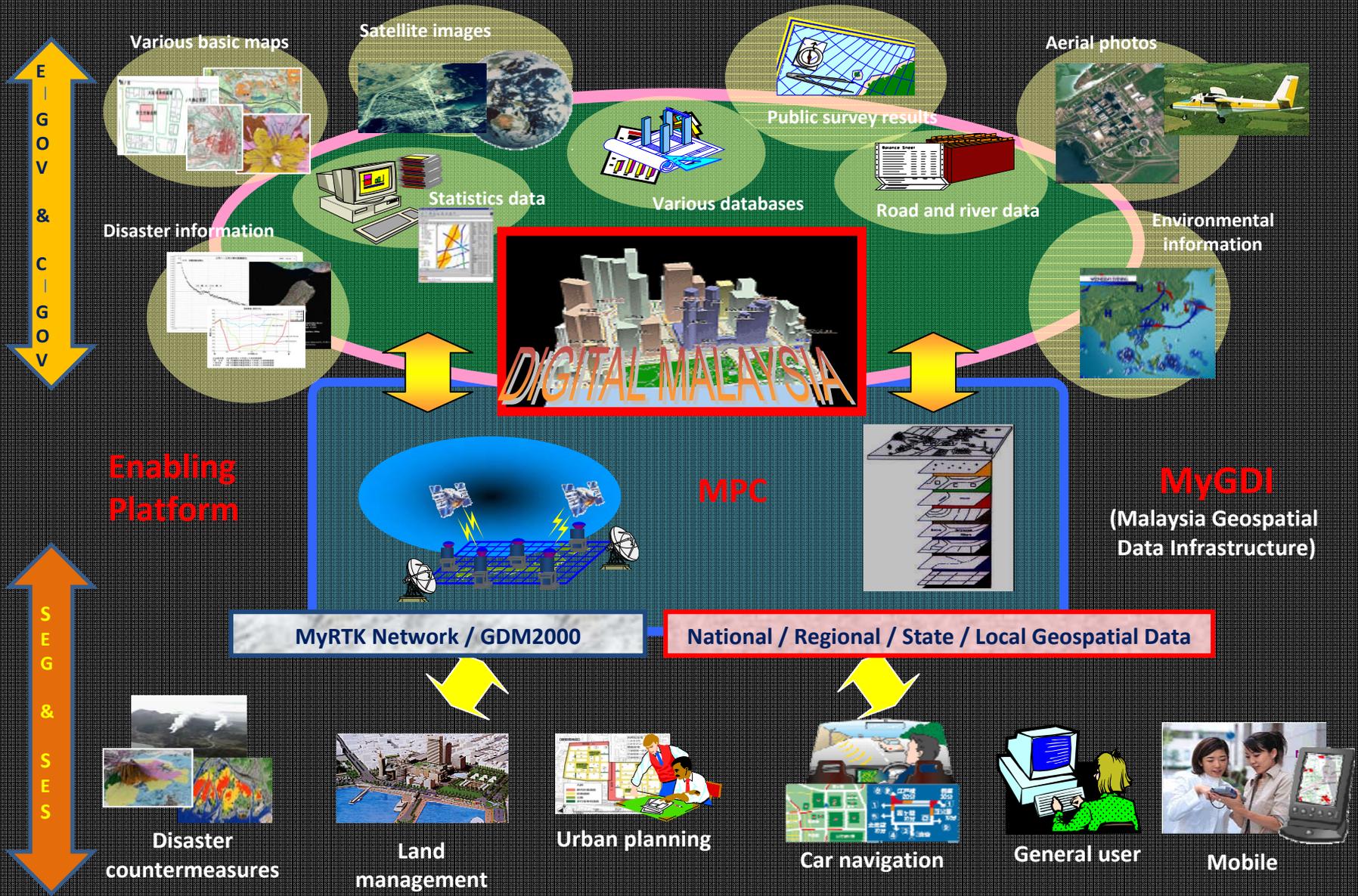
Building Name :

Street Name (eg: Jalan, Lorong) :

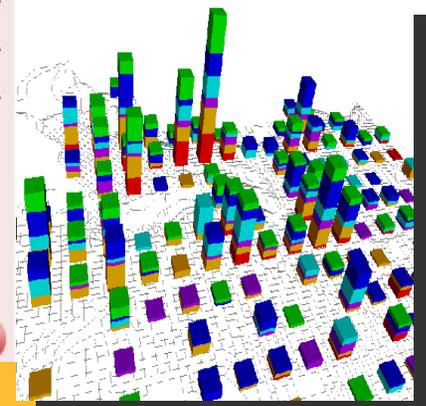
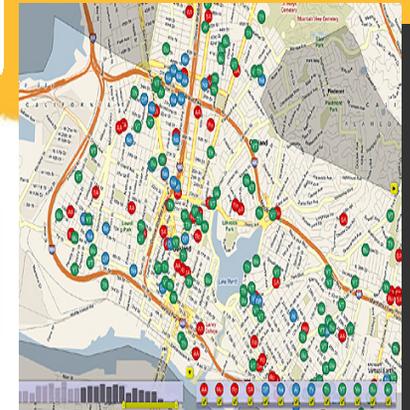
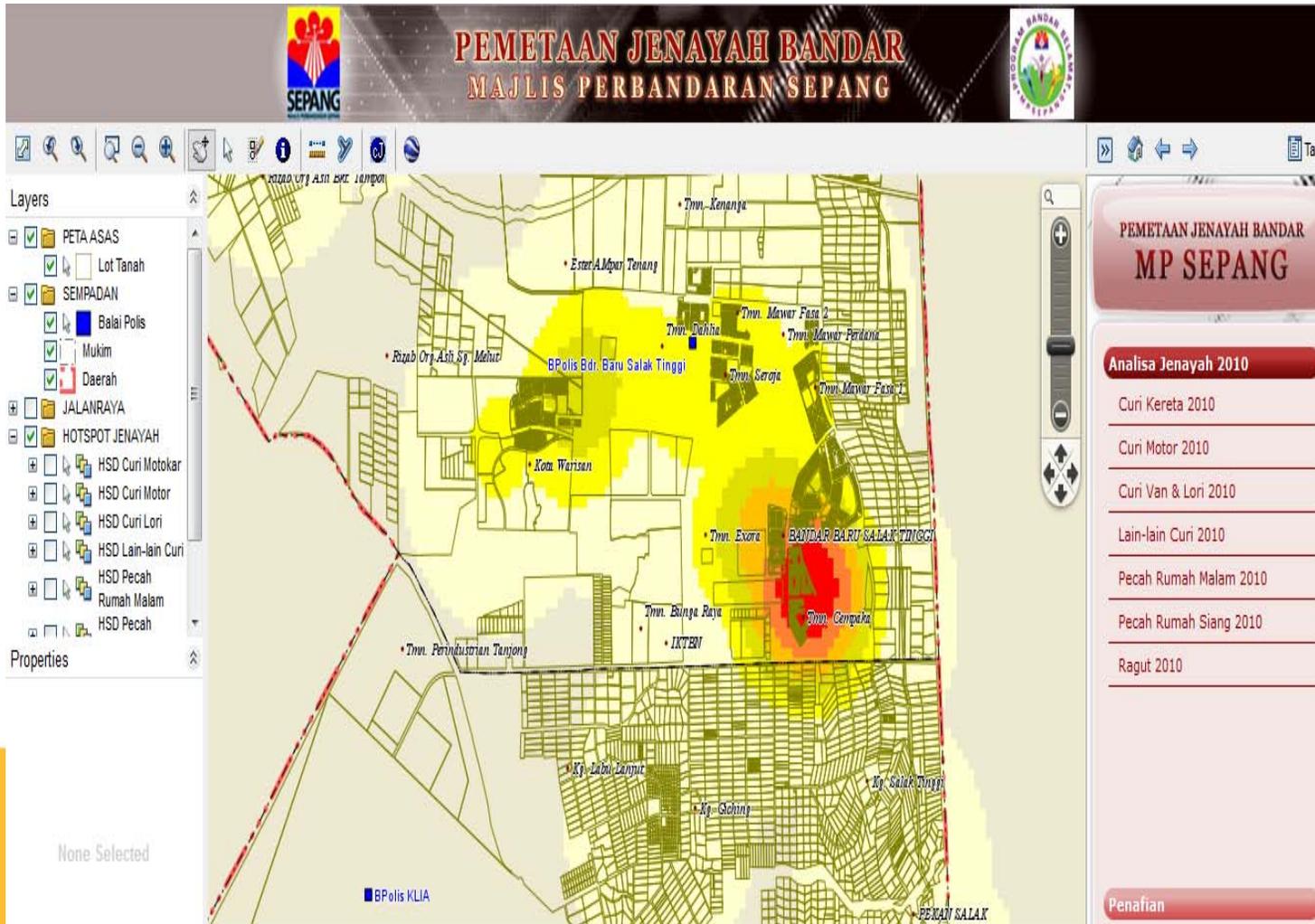
Area (eg: Taman Kampong) :

National, Regional, State and Local Geospatial Data Centres (NGDC, RGDC, SGDC, LGDC)

Spatially Enabled Government and Society



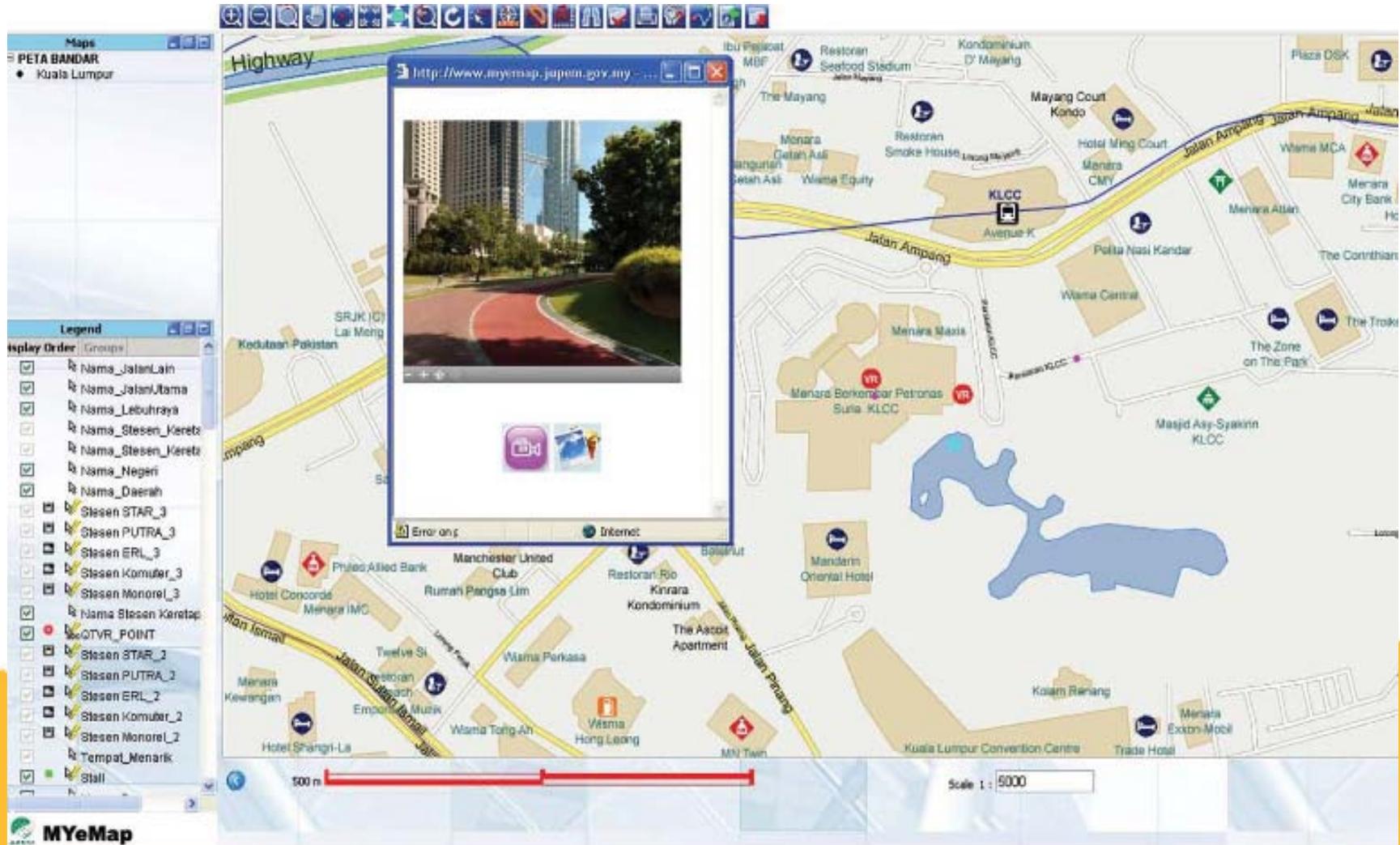
Geospatial Data: Reducing Crime



Geospatial Data: Urban Planning



Geospatial Data: Navigation



Improving Urban Public Transport: Foundation For Public Transport Infrastructure

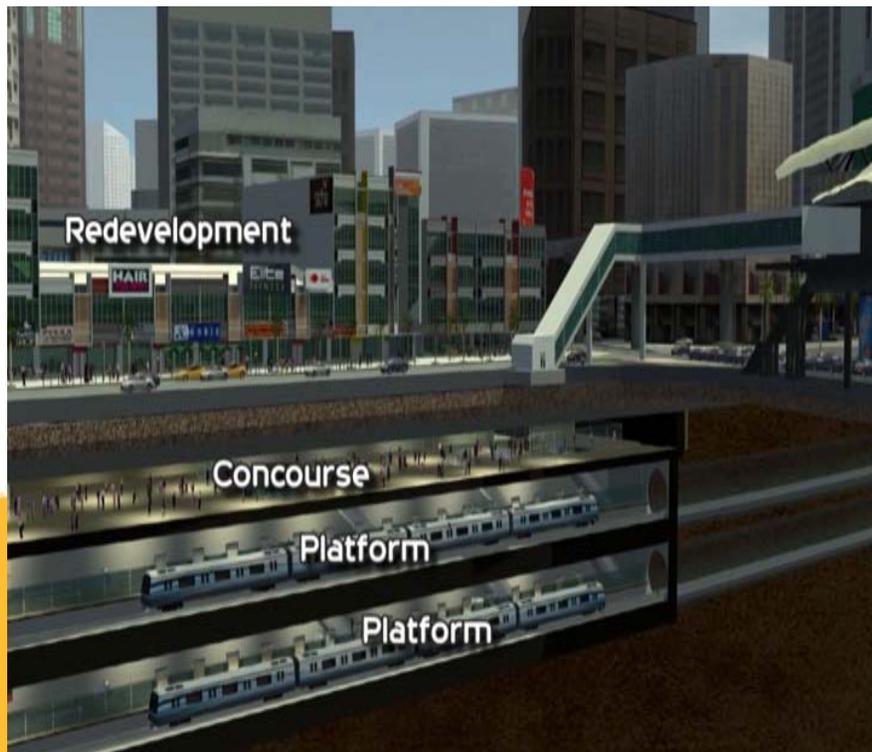


Road Map



Kuala Lumpur Metropolis





The Use of Geospatial Information in Development Projects in Malaysia

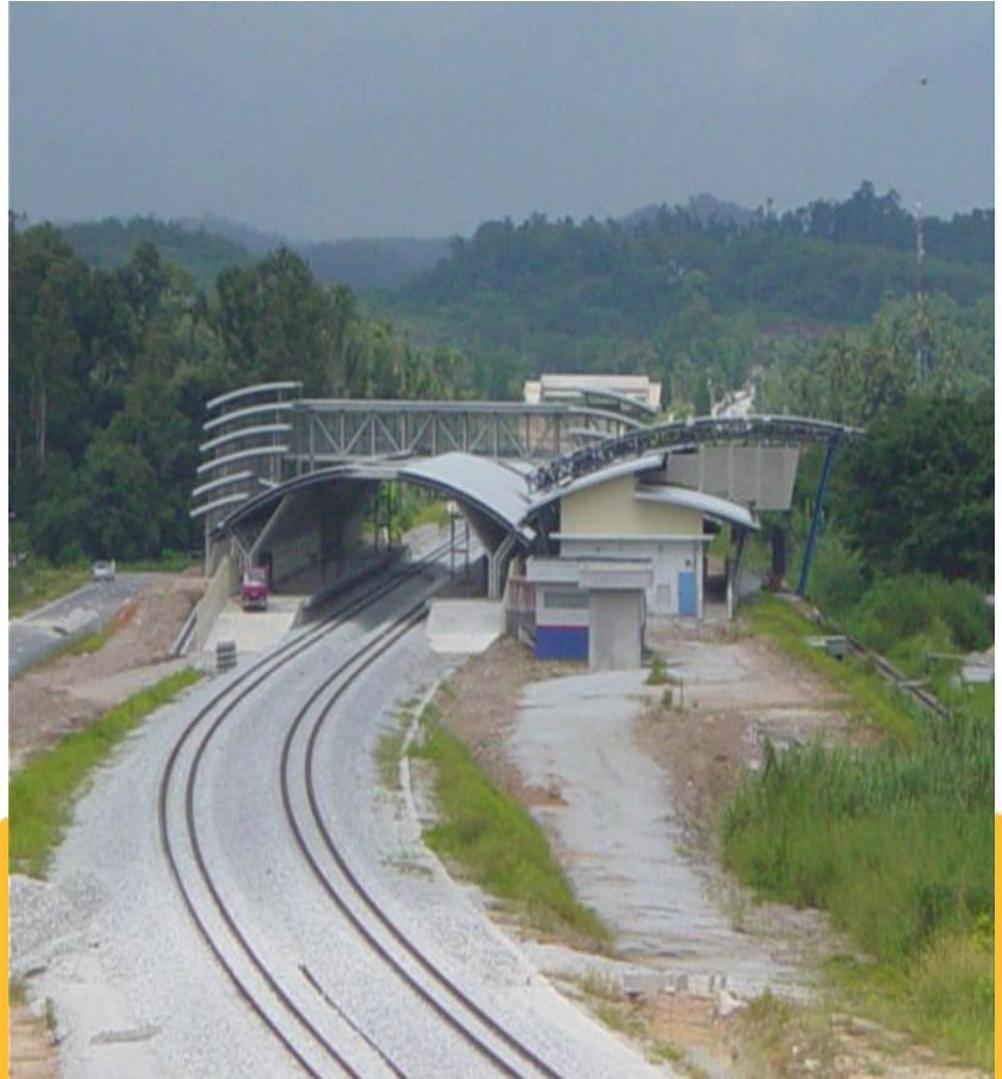




Housing Project



Electrification of Double Track Project (EDTP)



The Penang Second Bridge



Dam Development



Group Settlement Planning



State & Federal Roads



National Sovereignty



Federal Administrative Centre Development



Concluding Remarks



Concluding Remarks

“ ...we must transform to achieve Vision 2020.

Transformations are seldom easy – they involve conquering our own fear of the unknown while also winning over those who defend the status quo and attempt to obstruct our affords. In this journey, we will be transparent.”

Government Transformation Programme

Concluding Remarks

“ True transformation requires a fundamental change to the way things are done in the organization, and through this new way of acting, the character of the organization is change.”

Government Transformation Programme



Concluding Remarks

- ❖ **Spatially Enabled Government will increase efficiency, effectiveness and competitiveness of government and enhance government's delivery systems**
- ❖ **Spatially Enabled Government requires MyGDI as an "enabling platform" to provide appropriate technology, standards, policies, governance and legal structure to link geospatial information, products and services.**
- ❖ **The Malaysian Government has envisioned a technologically advanced society and implicitly, a technologically enabled government through its Vision 2020.**

End of Presentation
Thank You

