

SESSION 7: PLANNING AND IMPLEMENTING A CENSUS GEOSPATIAL PROGRAMME

Department of Statistics Malaysia

**REGIONAL WORKSHOP ON THE 2020 WORLD PROGRAMME ON POPULATION AND HOUSING CENSUSES:
INTERNATIONAL STANDARDS AND CONTEMPORARY TECHNOLOGIES
12-15 March 2019**



@StatsMalaysia



www.dosm.gov.my

1 Introduction

2 Geographic Information Systems (GIS)

3 Geospatial activities for 2020

4 Modernisation

5 Way Forward



MALAYSIA AT A GLANCE



@StatsMalaysia



www.dosm.gov.my

SUMMARY STATISTICS, MALAYSIA



Location:

Located between 2 and 7 degrees north of the Equator, Peninsular Malaysia is separated from the states of Sabah and Sarawak by the South China Sea. To the north of Peninsular Malaysia is Thailand while its southern neighbour is Singapore. Sabah and Sarawak are bounded by Indonesia while Sarawak also shares a border with Brunei.

https://www.statistics.gov.my/index.php?r=column/cone&menu_id=ZmVrN2FoYnBvZE05T1AzK0RLcEtiZz09

Malaysia	Census 2010	2018
Population (Millions)	28.33	32.36
Male	14.56	16.72
Female	13.77	15.66

Key Summary Statistics, Malaysia	2010
Population Density(per sq. km)	86
Average annual population growth rate, 2000-2010(%)	2.0
Urban population(%)	71.0

DEPARTMENT OF STATISTICS MALAYSIA (DOSM)



@StatsMalaysia



www.dosm.gov.my

Established in **1949** under the Statistics Ordinance 1949

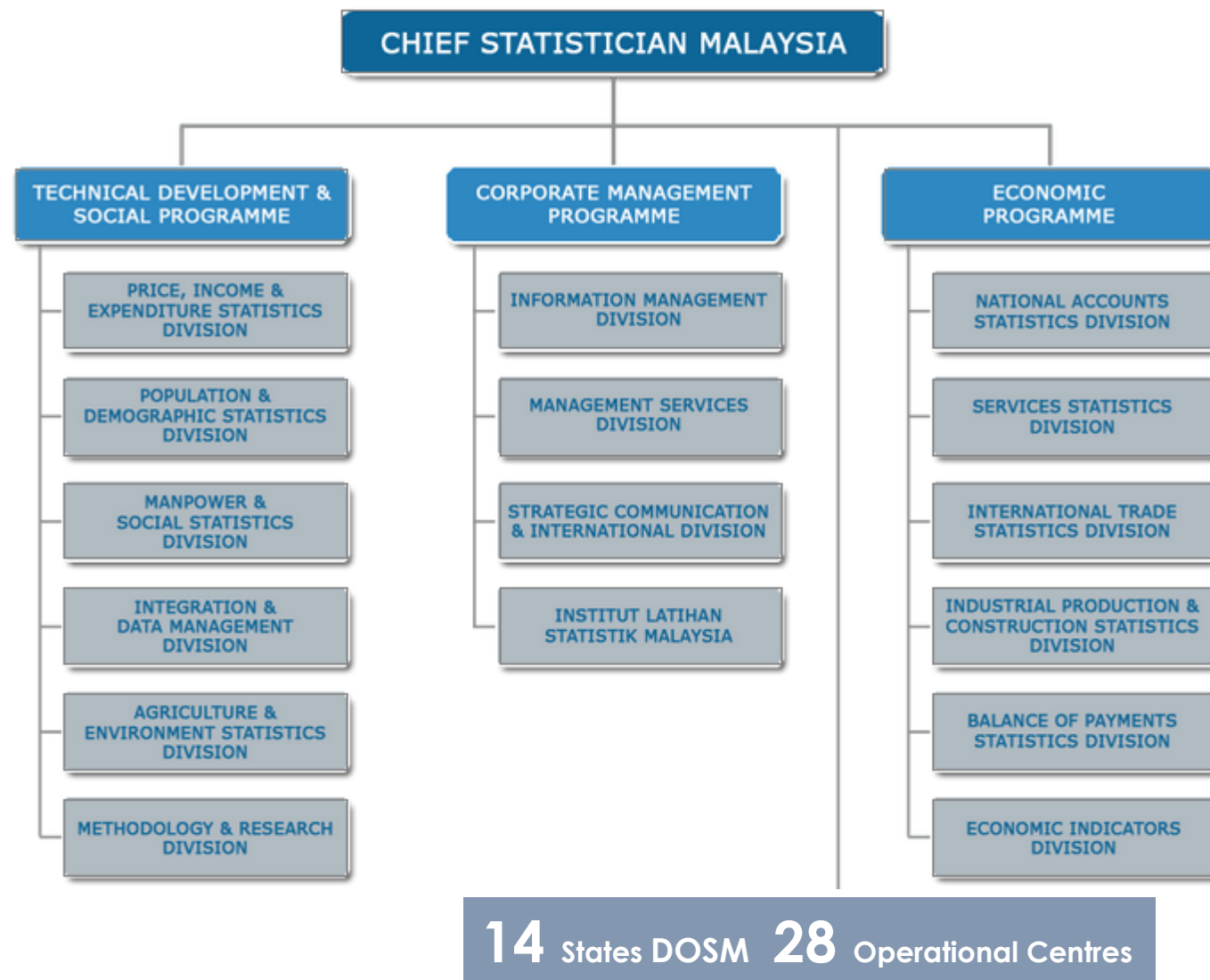
A premier government agency under the Ministry of Economic Affairs entrusted with the responsibility to **collect, interpret and disseminate** latest and real time statistics in the monitoring of national economic performance and social development.

VISION

To Become A Leading Statistical Organisation Internationally by 2020

MISSION

Producer of National Statistics of Integrity and Reliability



Statistics Act 1965 (Revised-1989)



LAWS OF MALAYSIA

Act 415

STATISTICS ACT 1965

(REVISED-1989)

Under the **Statistics Act 1965** (Revised – 1989), the functions of DOSM [Section 2] are:

To collect and interpret statistics for the purpose of formulation or implementation of government policies....



LAWS OF MALAYSIA

REPRINT

Act 16

CENSUS ACT 1960

Incorporating all amendments up to 1 January 2006

Under **Census Act 1960**:

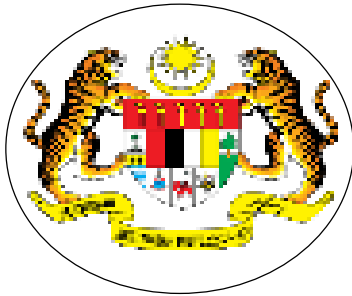
The Yang di-Pertuan Agong may, by notification in the Gazette, from time to time direct that a census to be taken throughout Malaysia of the Population, Agriculture, Trade, Labor, Industry, Commerce....

Census Act 1960





Stakeholders



Ministry / Government Agencies



**International
Users**



Public

- ❖ Researcher
- ❖ Universities
- ❖ Embassy
- ❖ Private Sectors

SOCIAL/DEMOGRAPHY

- ❖ Salaries & Wages Survey Report
- ❖ Current Population Estimates
- ❖ Labour Force Survey Report
- ❖ Household Income & Basic Amenities Survey Report
- ❖ Vital Statistics



- ❖ Statistics on Women Empowerment In Selected Domains, Malaysia
- ❖ Labour Productivity
- ❖ Social Accounting Matrix
- ❖ Children Statistics, Malaysia

ECONOMIC

- ❖ Quarterly & Annual Gross Domestic Product
- ❖ Consumer Price Index
- ❖ Monthly External Trade Statistics
- ❖ Index of Industrial Production, Malaysia
- ❖ Domestic Tourism Survey
- ❖ Balance of Payment





DOSM SAS Certified Data Scientist

Tuesday, 16 January 2018



STATSBDA Development Review

Tuesday, 16 January 2018



Courtesy visit by Monash University Malaysia

Wednesday 03, January 2018



Courtesy Visit by Vice Chancellor UNITEN

Thursday 04, January 2018



**Courtesy Visit by Mr. James Lochhead, Consultant
for Gender Mainstreaming Project**

Wednesday, 10 January 2018



6th CENSUS 2020

The Population and Housing Census in Malaysia is conducted every 10 years. Since the establishment of Malaysia, 5 census has been implemented.



MAIN OBJECTIVE

To have a total coverage and to accurately count and measure the numbers and key characteristics of the population, households and living quarters in Malaysia at a point in time



LEGAL BASIS

- Census Act 1960 (Revised 1969).
- Statistics Act 1965 (Revised 1989).



RESOLUTION

Resolution on 2020 World Population and Housing Census Programme adopted by the ECOSOC (10 June 2015) to ensure the member states to conduct a census during 2015–2024 period.

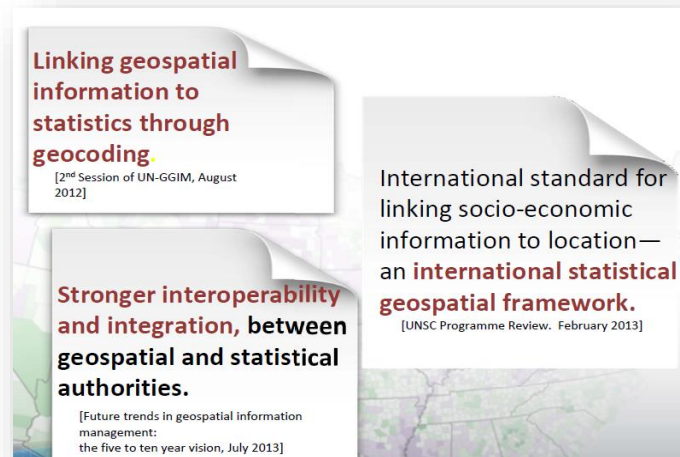


MANUAL

Principles and Recommendations for Population and Housing Censuses, Revision 3, UNSD (2015).



- UN *Principles and Recommendations for Population and Housing Censuses*, , **recommended the use of Geospatial technologies for improving traditional methods of census mapping** (adopted by UNSC in 2007).
- Other recommendations derived from UN EGM on GIS and Census Mapping emphasized:
 - the need for countries to consider the **census geography programme as a continuous process**
 - the use of and application of geospatial technologies and information is **beneficial at all stages of population and housing census process** (GI improves the efficiency in the preparatory, enumeration, processing and dissemination phases of the census)



Main Objectives Of Census

01

To compile the total coverage and profile of the population, households and living quarters in Malaysia with a wide range of demographic and socio-economic characteristics **to the smallest area**

02

To provide input for planning, formulation and implementation of government policies and development programmes as stated in the Legislation

03

To provide a reliable basis for the estimation and projection of the population and living quarters

04

To provide input for the development of new socio-economic key indicators

Perimeter for census

LIVING QUARTERS



OCCUPANCY



CONNECTIVITY



UTILITIES



LOCAL AREA



TYPES OF LIVING QUARTERS

POPULATION



AGE



SEX



ETHNICITY



MIGRATION



MARITAL STATUS



RELIGION



EDUCATION



CITIZENSHIP



ECONOMICS

HOUSEHOLD



TYPE OF HOUSEHOLD



AGRICULTURE ACTIVITIES



OWNERSHIP STATUS



GIS TECHNOLOGY MALAYSIA'S EXPERIENCE AND PRACTICE



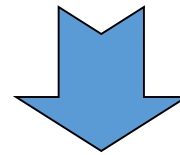
@StatsMalaysia



www.dosm.gov.my

1989-1991

Preparatory Stage



After 1991 Census

Create a census cartographic database

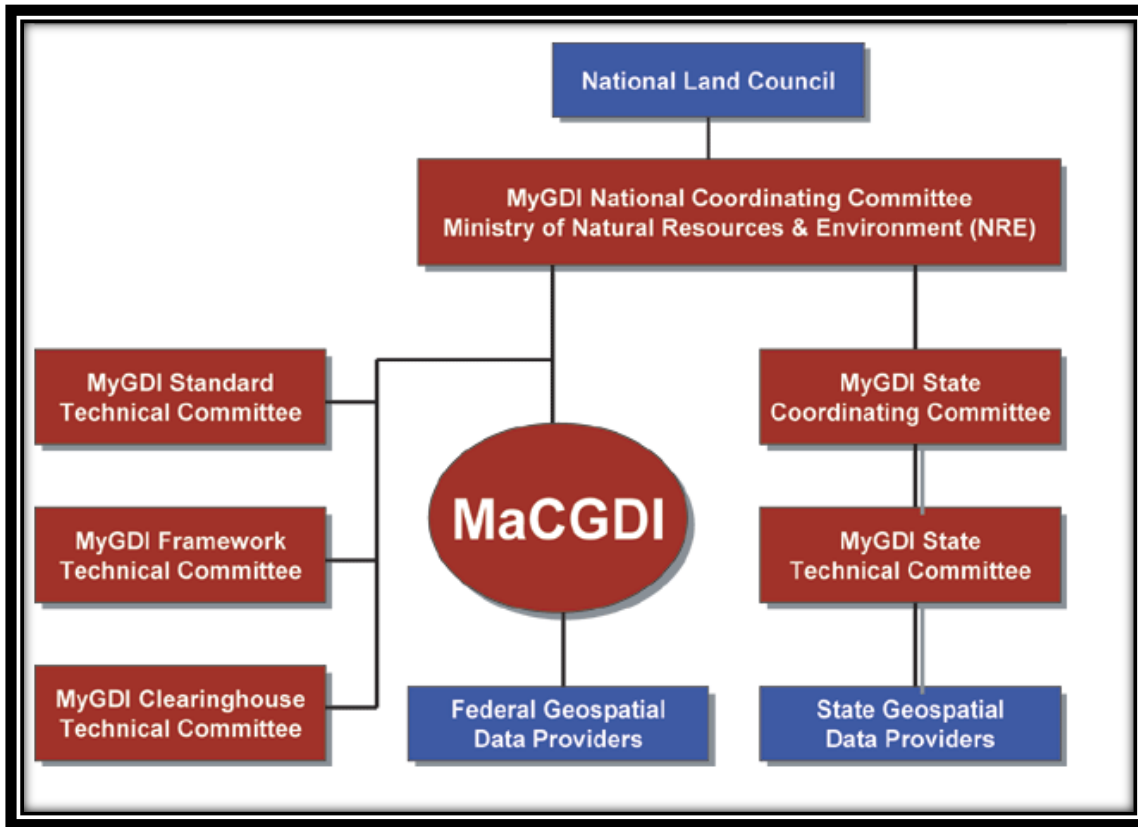
Malaysian Centre for Geospatial Data Infrastructure (MaCGDI) is a centre established by the government to manage and promote the development of geospatial data infrastructure for Malaysia (MyGDI). MaCGDI is also responsible for coordinating access and delivery of the geospatial information held by all government agencies.

The main role of MaCGDI is to continuously make available and accessible current and accurate geospatial data that promotes a sustainable living environment, economic growth and social progress for public.

Objectives:

- To provide mechanism/infrastructure in supporting the usage and sharing of current, accurate and reliable geospatial information among agencies by employing the latest geospatial technologies; and
- To avoid redundancy of duplicating effort in collecting, processing, maintaining, providing and dissemination of required geospatial information.

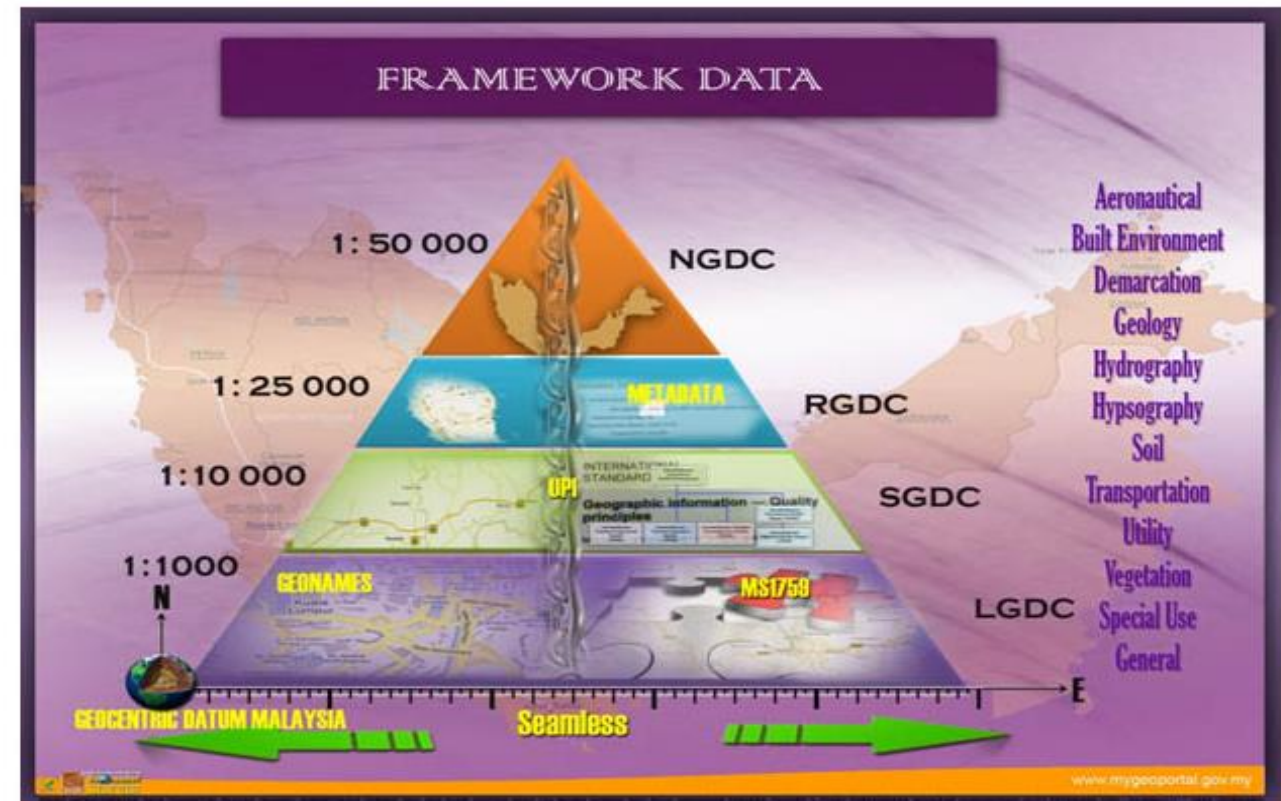
<http://macgdi.mygeoportal.gov.my/167.aspx>



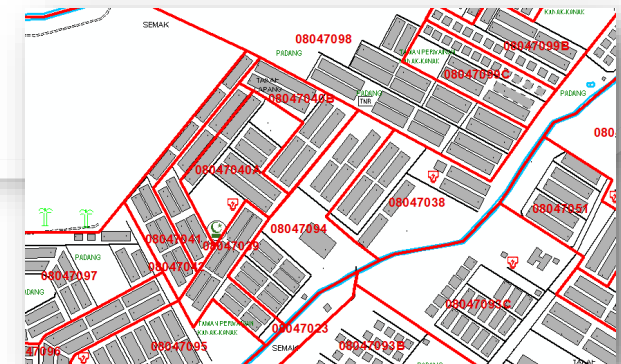
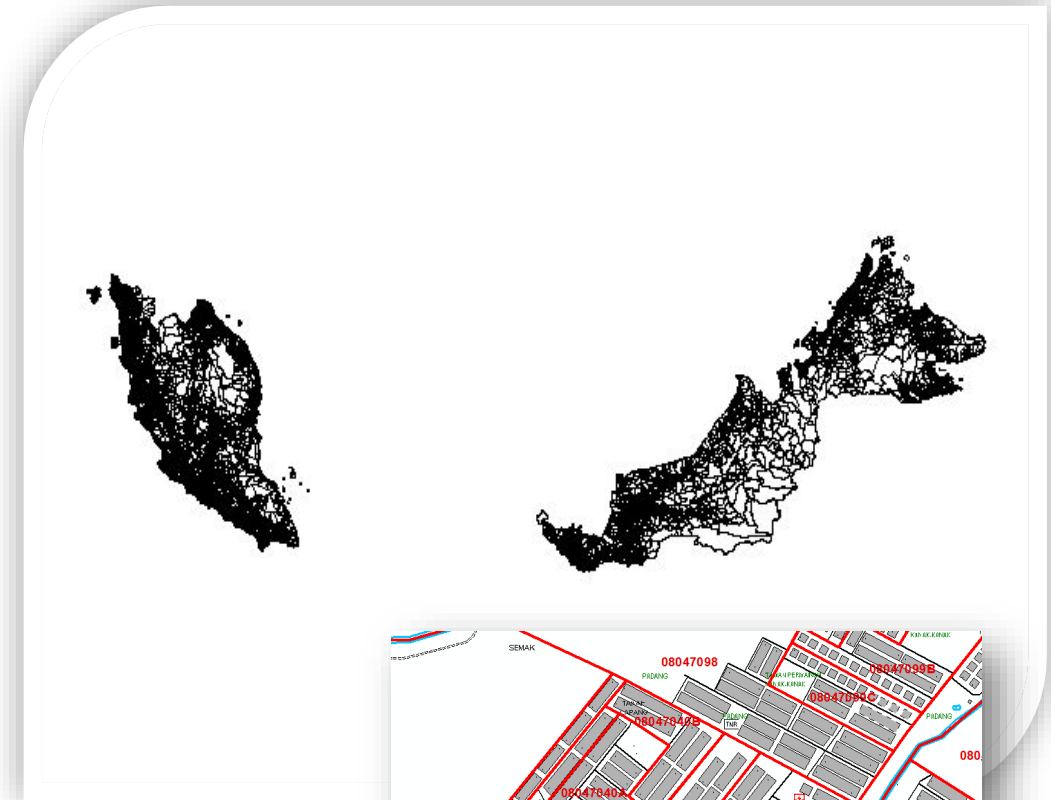
Framework Data refer to the coordinating data sharing within government agencies by establish fundamental dataset of National Geospatial Data Centre (NGDC) and State Geospatial Data Centre (SGDC). The objective is to prevent duplication of effort in data collection within government agencies.

MyGDI Governance

To manage the development and operation of MyGDI, a [MyGDI National Coordinating Committee](#) (MNCC) was formed with the role of a central policy and decision making body on matters pertaining to the implementation, development and operations of MyGDI programmes and MaCGDI as the coordinator



Statistical Areas



CENSUS MAPPING & DIGITAL MAPS

2000 - 2007

Dissemination Data

Statistical
boundaries

2007 - 2009

Development

- Statistical boundaries
- Vector data (topographic digital map)

2011 - 2012

Census Geodatabase

Integrating
census with
Statistical
boundaries

2010

National Enterprise wide Statistical System (NEWSS)

Internal GIS
Portal

2015

StatsDW

- Location intelligent
- Integration BI and GIS

2017 - 2020

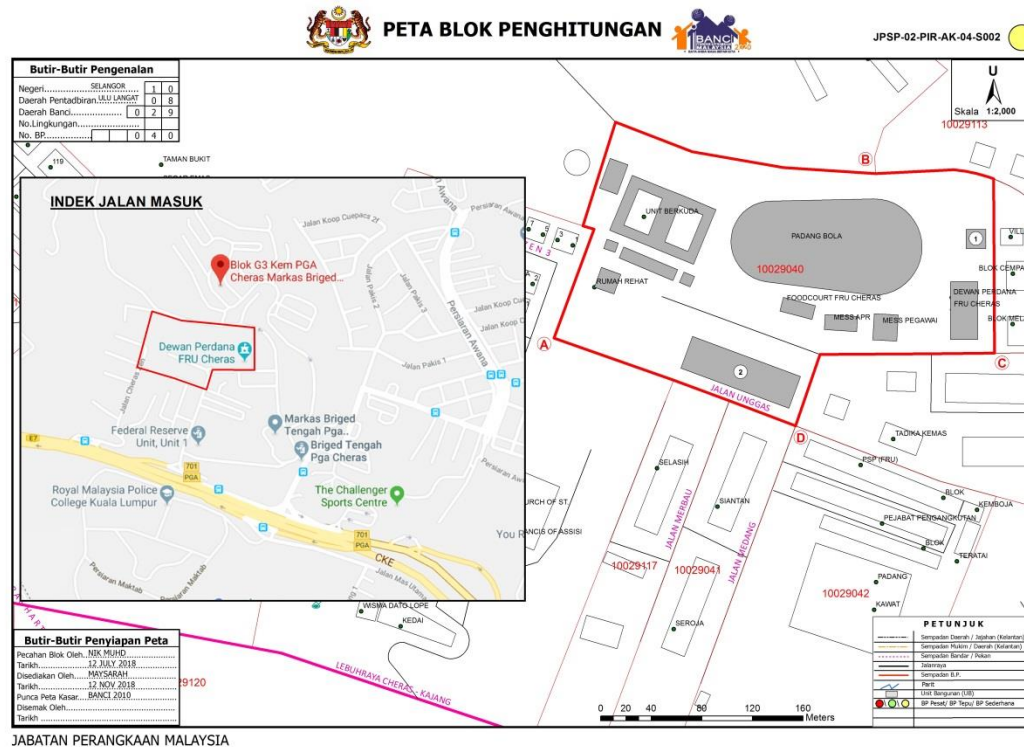
MyIPCS

- Smart Listing and Smart Map
- Integration Data and Map

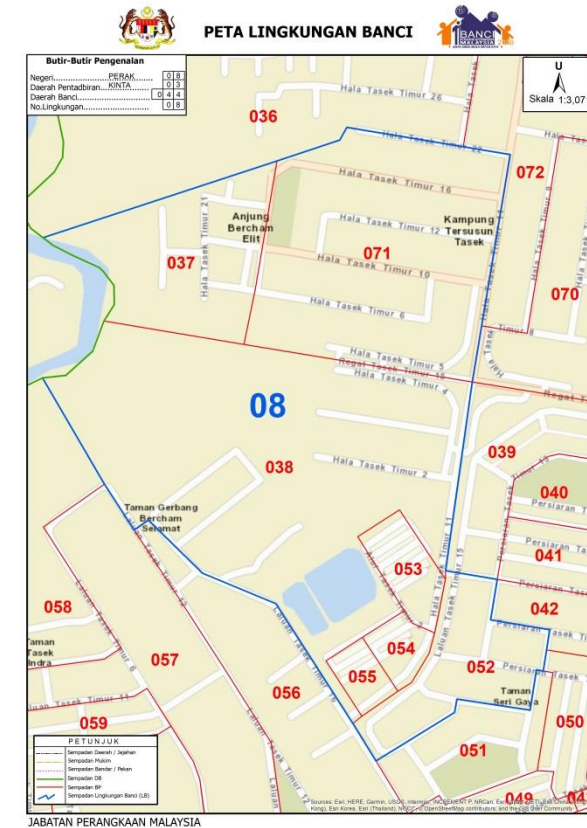
- **Delineation and digitizing of Enumeration Block (EB) boundaries for 2020 Census by using base maps from OGA.**
- **Establish the centralised geodatabase and internal GIS Portal for updating maps by State Office.**
- **Generating census data at small area statistics or specific area for the users.**
- **Producing thematic maps from various sources especially on Census and other data.**

- About 70% of statistical digital map were used for the 2010 census.
- All the map was produced using GIS software.
- EB's map -A3 sized maps up-dated based on base map from various resources

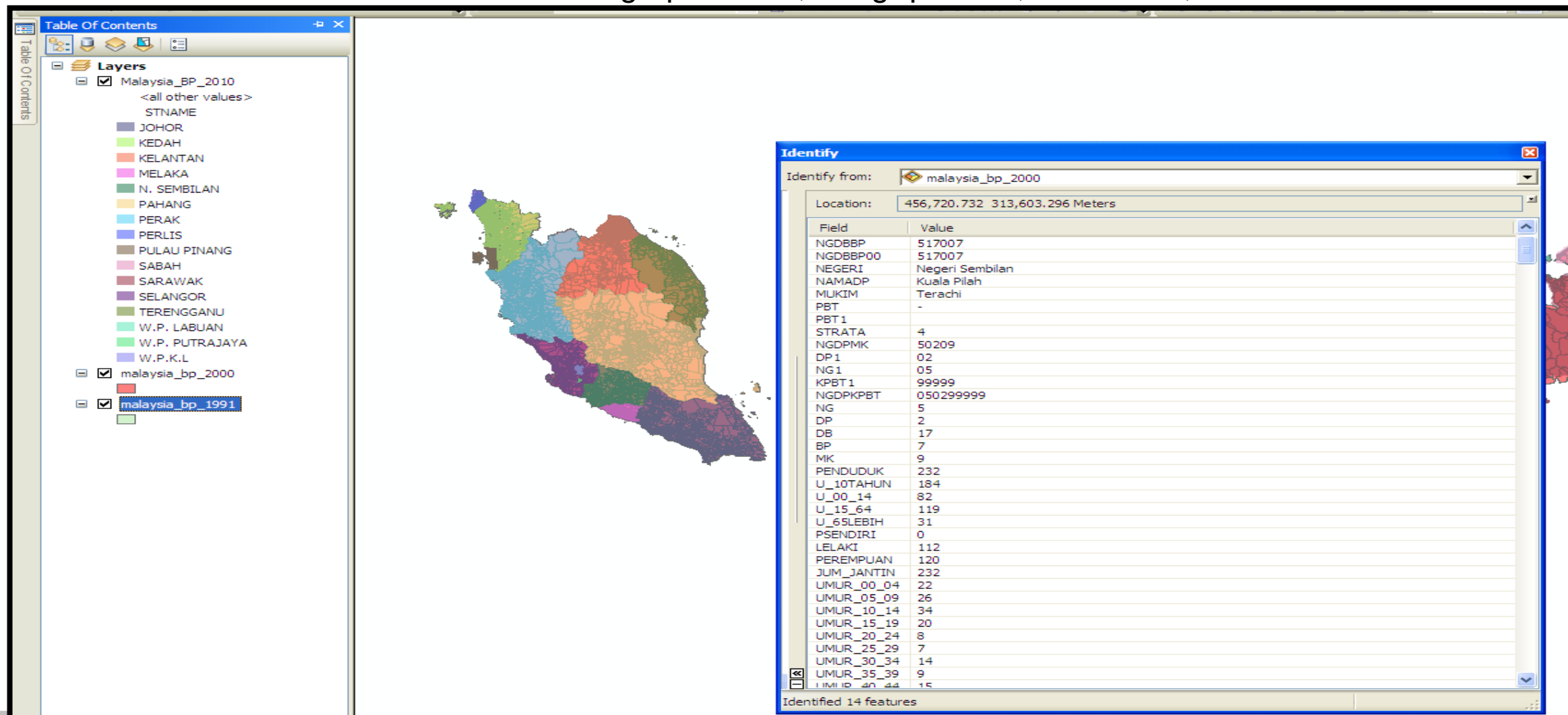
Enumeration Block(EB) Map



Census Circle Map

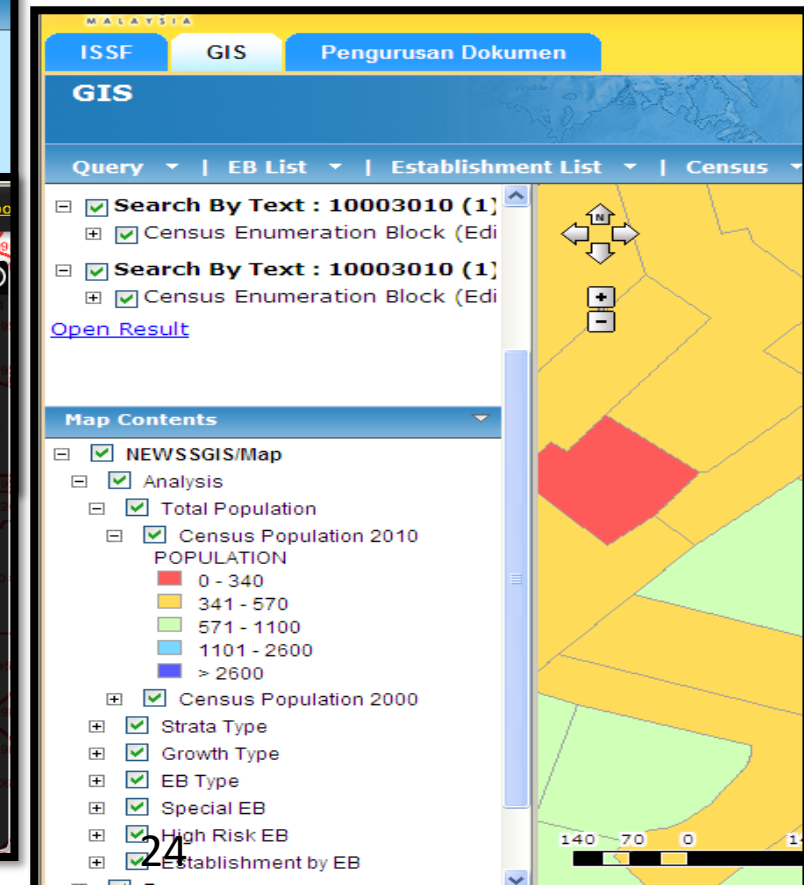
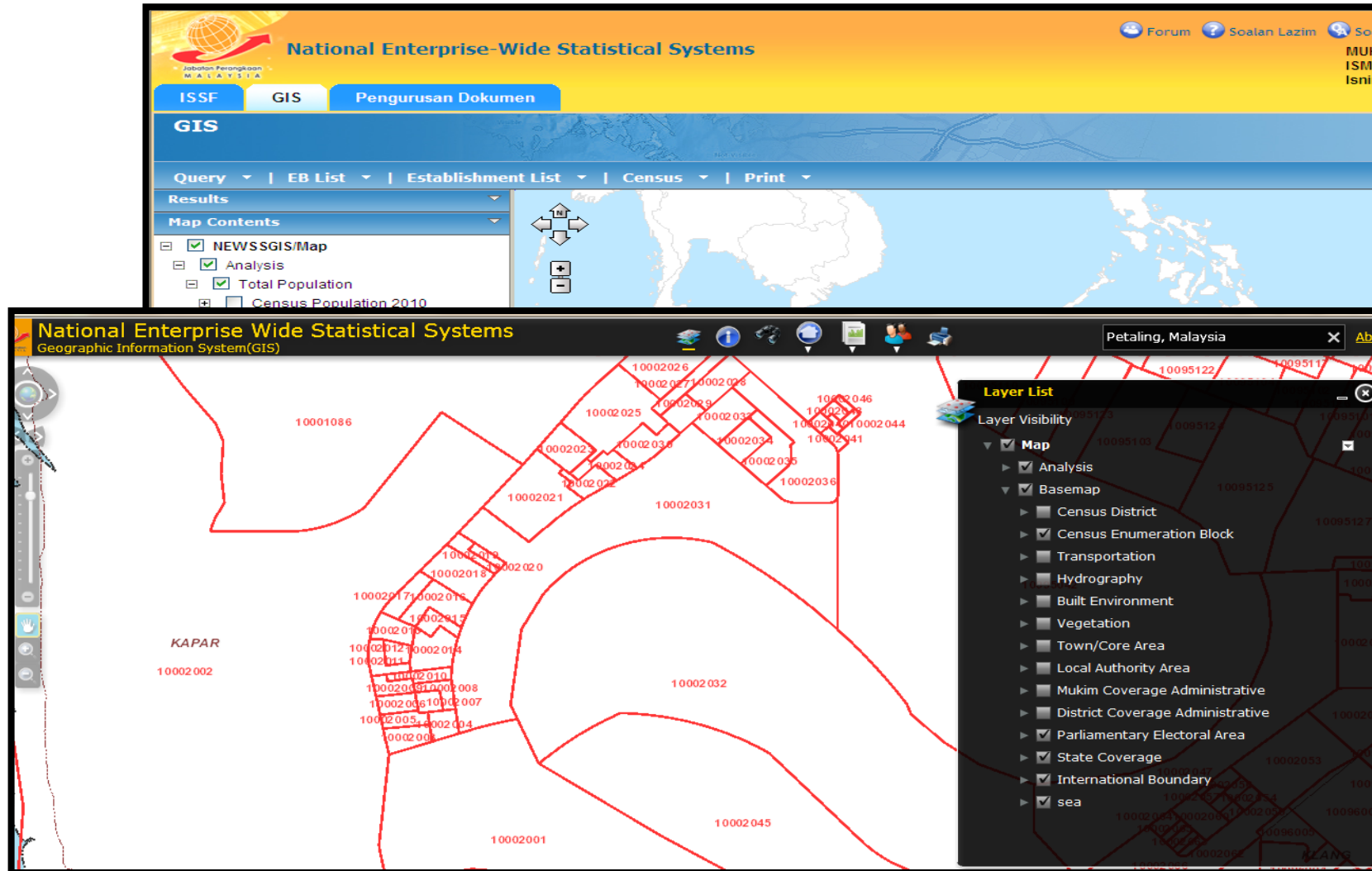


- Census geospatial database at difference levels of geography. Small area statistics from census data which consist of demographic data, living quarters, household, and others.



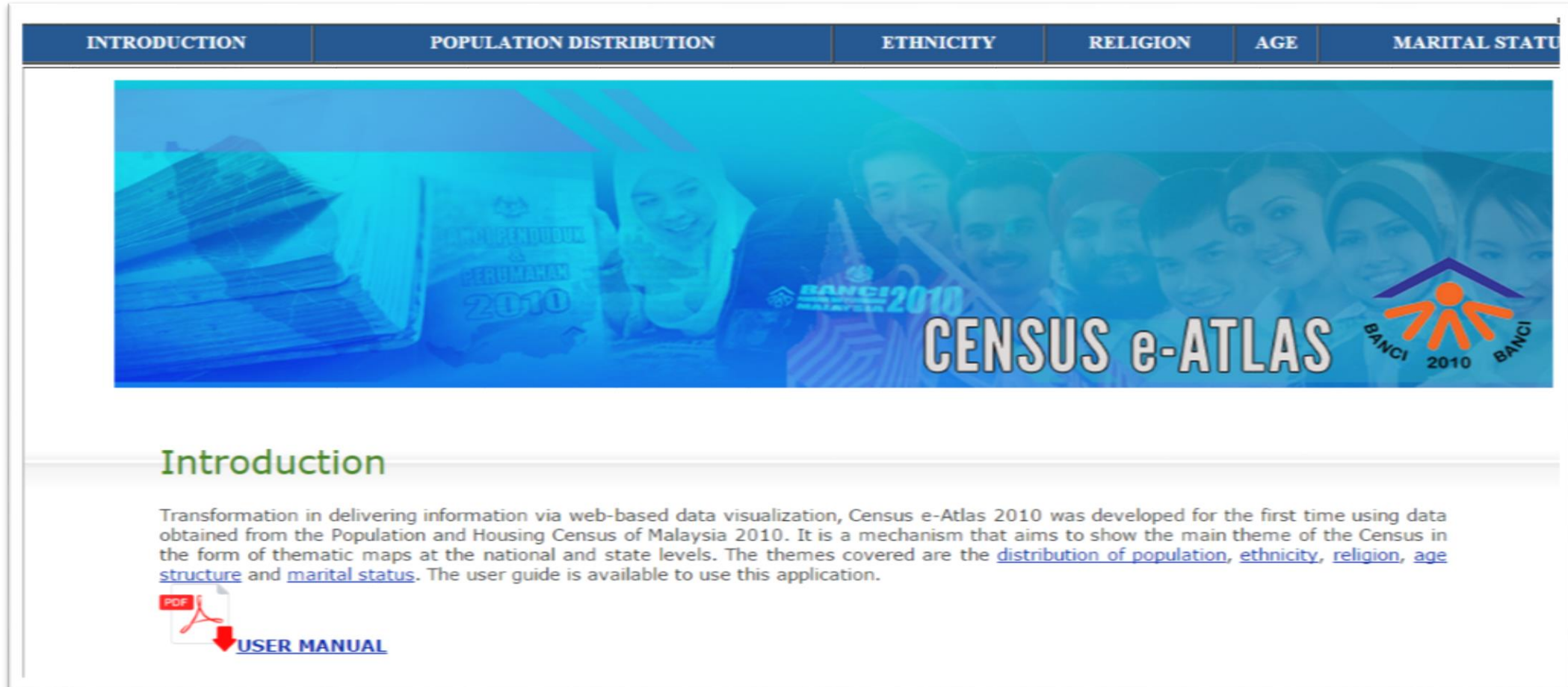
PRODUCTS

- GIS internal portal; developed under National Enterprise Wide Statistical System (NEWSS).



PRODUCTS

- Census e-Atlas developed using ArcGis Online **platform- Changed to Stats Geo Portal**
- It shows thematic maps of selected census data.





LATEST RELEASES



28 Feb 2019

Annual Economic Statistics 2018: Mining of Petroleum and Natural Gas

28 Feb 2019

Annual Economic Statistics 2018 Water Supply; Sewerage, Waste Management & Remediation Activities

COMING SOON

[Advance Release Calendar](#)

- **07 Mar 2019**
Annual Economic Statistics - Manufacturing
- **07 Mar 2019**
Annual Economic Statistics - Construction



Highlight

Online Services

Procurement

Statistics



Application

Survey

DOSM Community

- eStatistik
 - Population Quick Info
 - Malaysia External Trade Statistics Online (METS Online)
 - Malaysia Informative Data Centre (MysIDC)
 - MalaysialInfo
 - MyLocal Stats
 - **STATS Geoportal**
- (No. of Transactions for Online Services)

ANNOUNCEMENT



[Latest DOSM's Newsletter 2018»](#)

LATEST EVENTS



**Asian Development Outlook 2019
Consultation Mission »**
Monday 18, February 2019



IPI FDI CPI
GDP Unemployment Population
Services Export PPI
Import



Department of Statistics
MALAYSIA

Welcome to Stats Geoportal



Malaysia @ a Glance



Population



Social & Economy



Time Series



Small Area Population



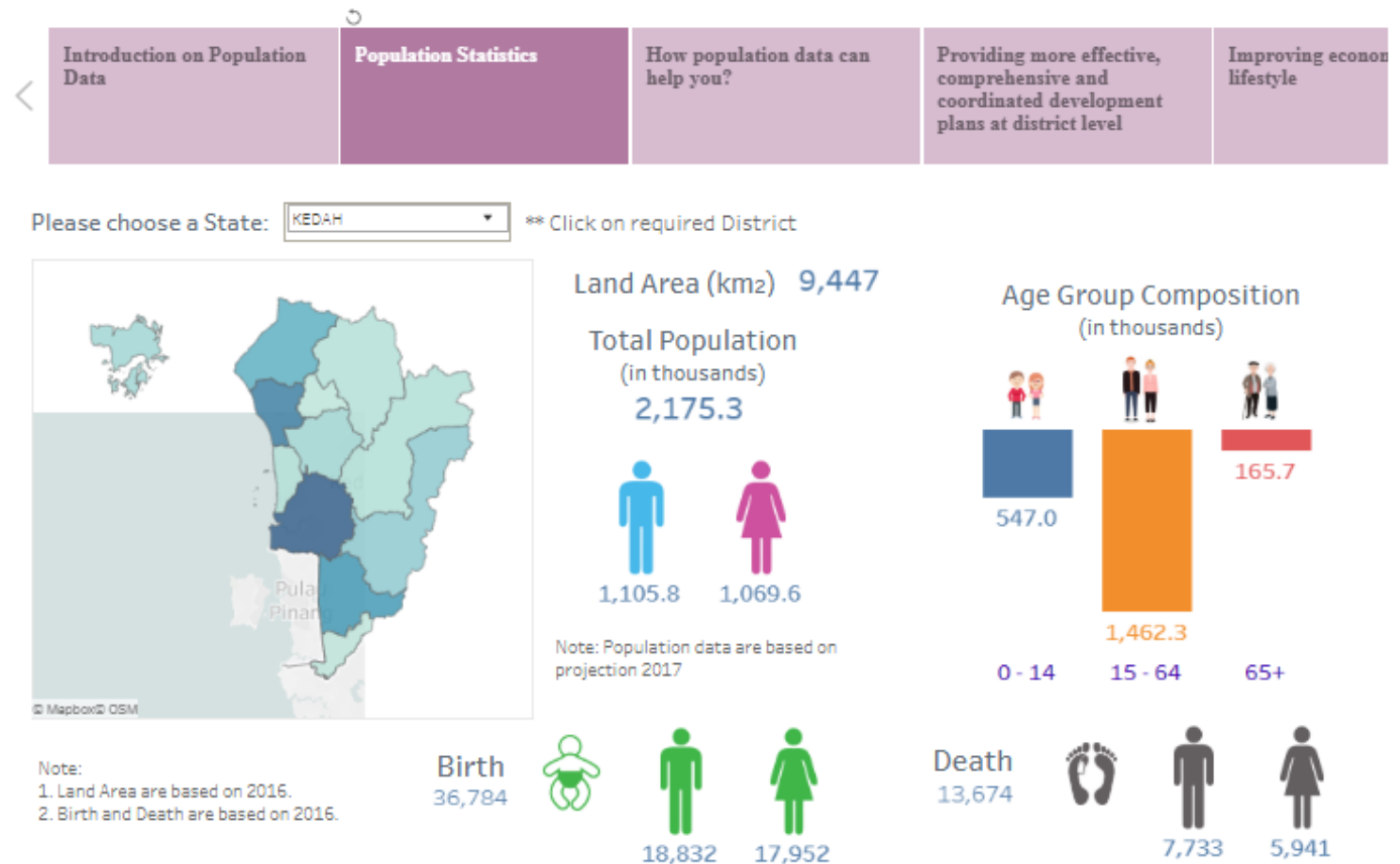
Report

STATS GEOPORTAL is a gateway to web-based geostatistics information that allows users to search, access, display and view information by population / demographic, social and economic data at various geographical levels.

- Data visualisation at www.dosm.gov.my. Data visualisation tools allow anyone to organize and present information intuitively.

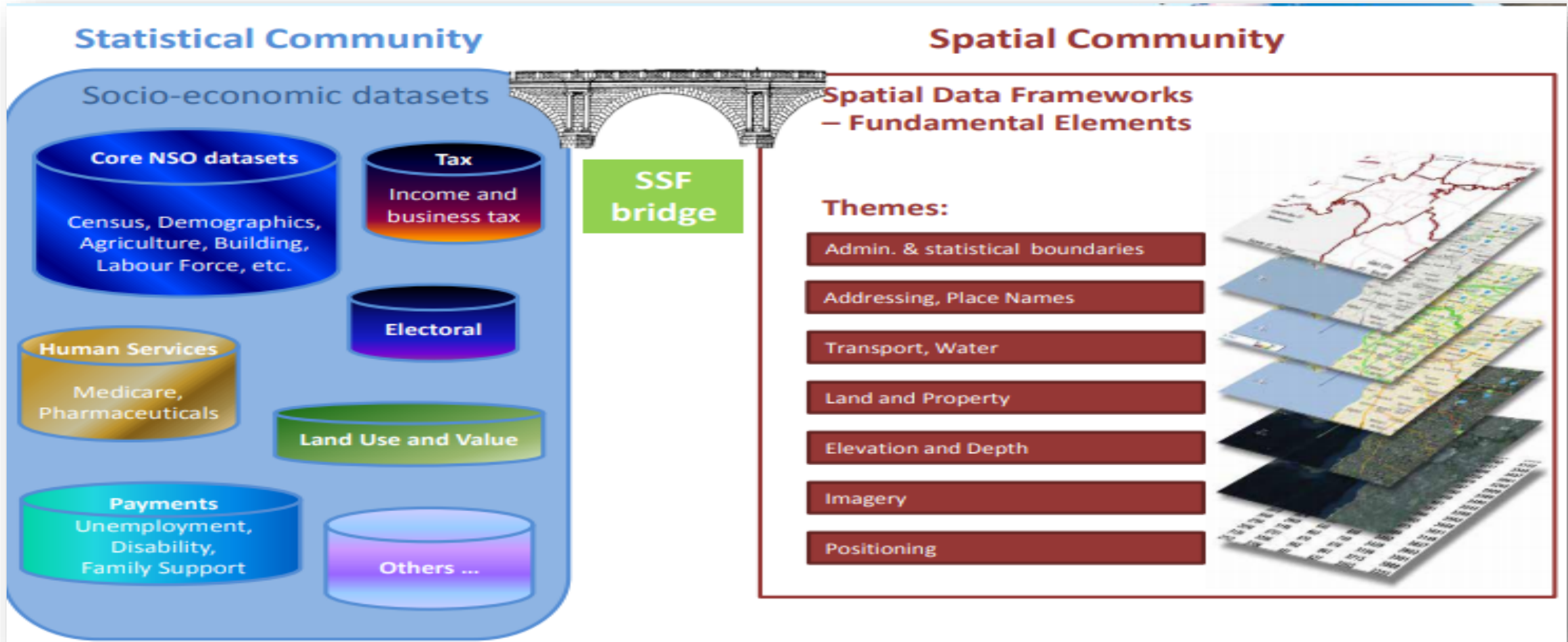
Population Statistics

Home » Statistics » Online Services » Interactive Visualisation » MyLocal Stats » Population Statistics



- ✓ Lack of expertise and technical capabilities to enhance the use and development of GIS with the most updated technology.
- ✓ Need investment to purchase the most updated base maps/software especially on raster data.
- ✓ Integrating the variety of spatial data from OGA in order to create updated statistical maps.

- ✓ Extending the scope of census cartography to the national spatial framework.
- ✓ Providing the most efficient platform for data dissemination through GIS Portal.
- ✓ Merging of household and establishment frames into the GIS environment.
- ✓ Constructing the EB geo database by using technical advances, such as Remote Sensing data, GPS.
- ✓ Strengthening the collaboration with OGA/GLC for map integration, standard and quality assurance.



Sources :

http://ggim.un.org/meetings/2014-IGSI_Beijing/

International Workshop on Integrating Geospatial and Statistical Information, Beijing, China, 2014

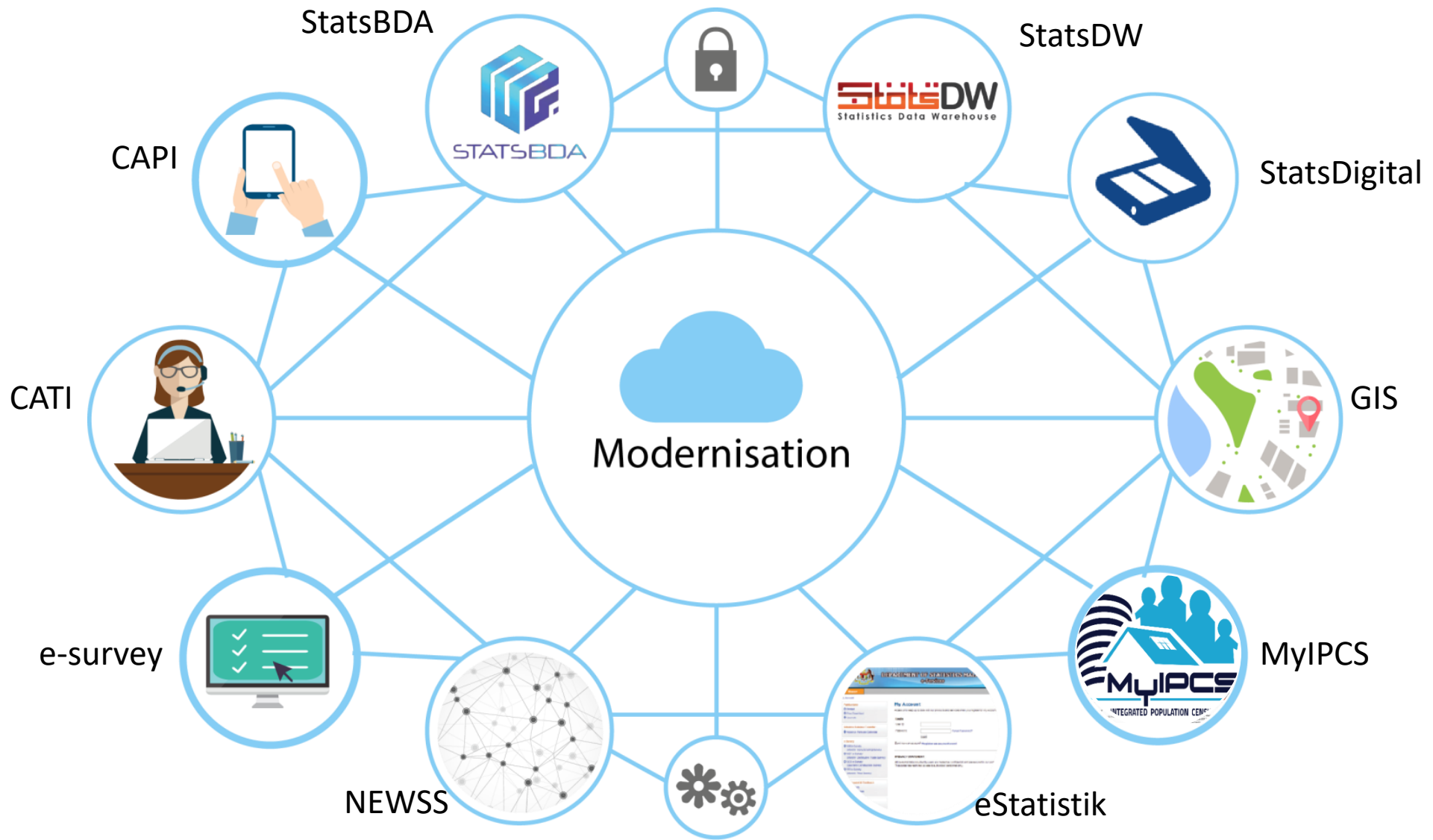
MODERNISATION

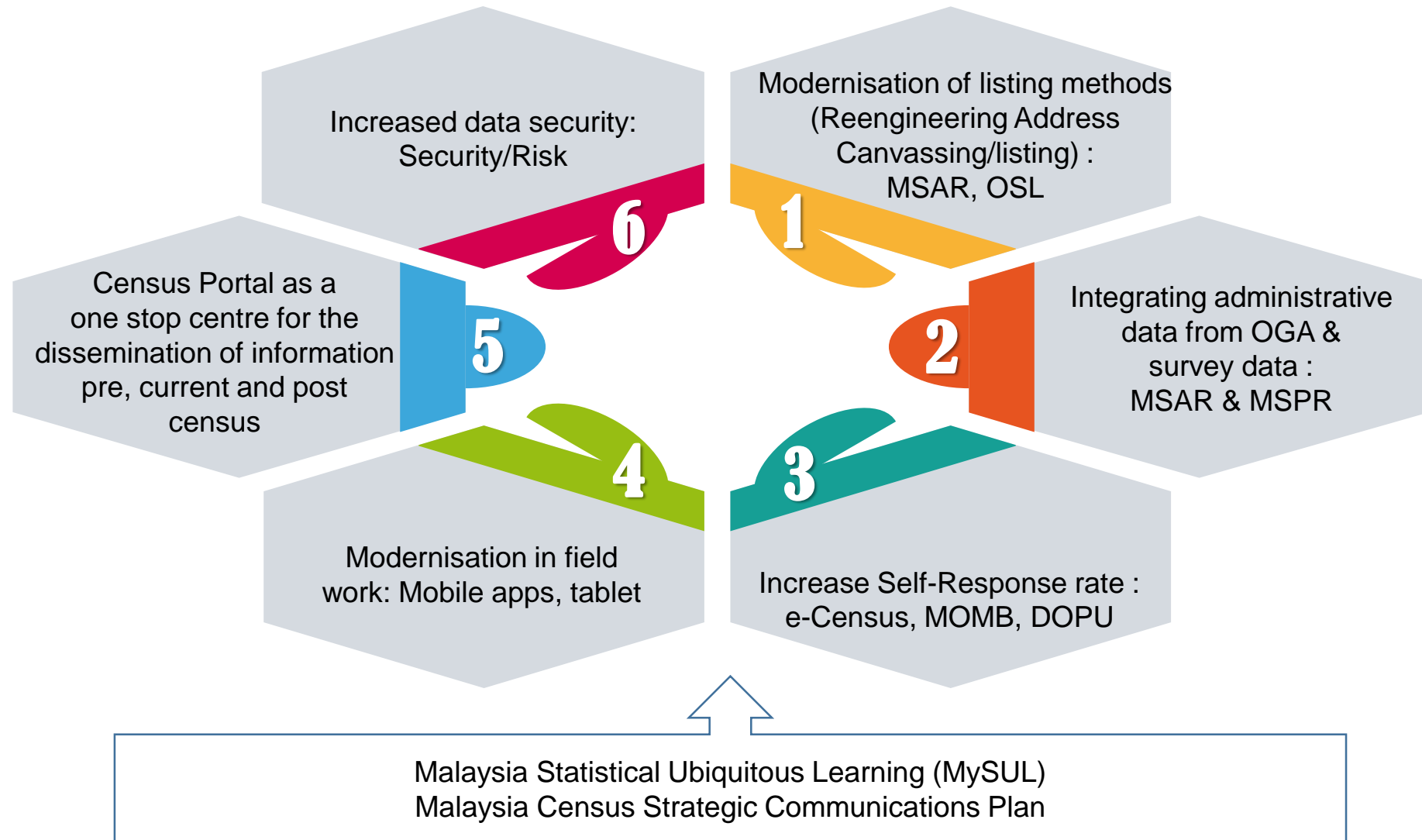


@StatsMalaysia

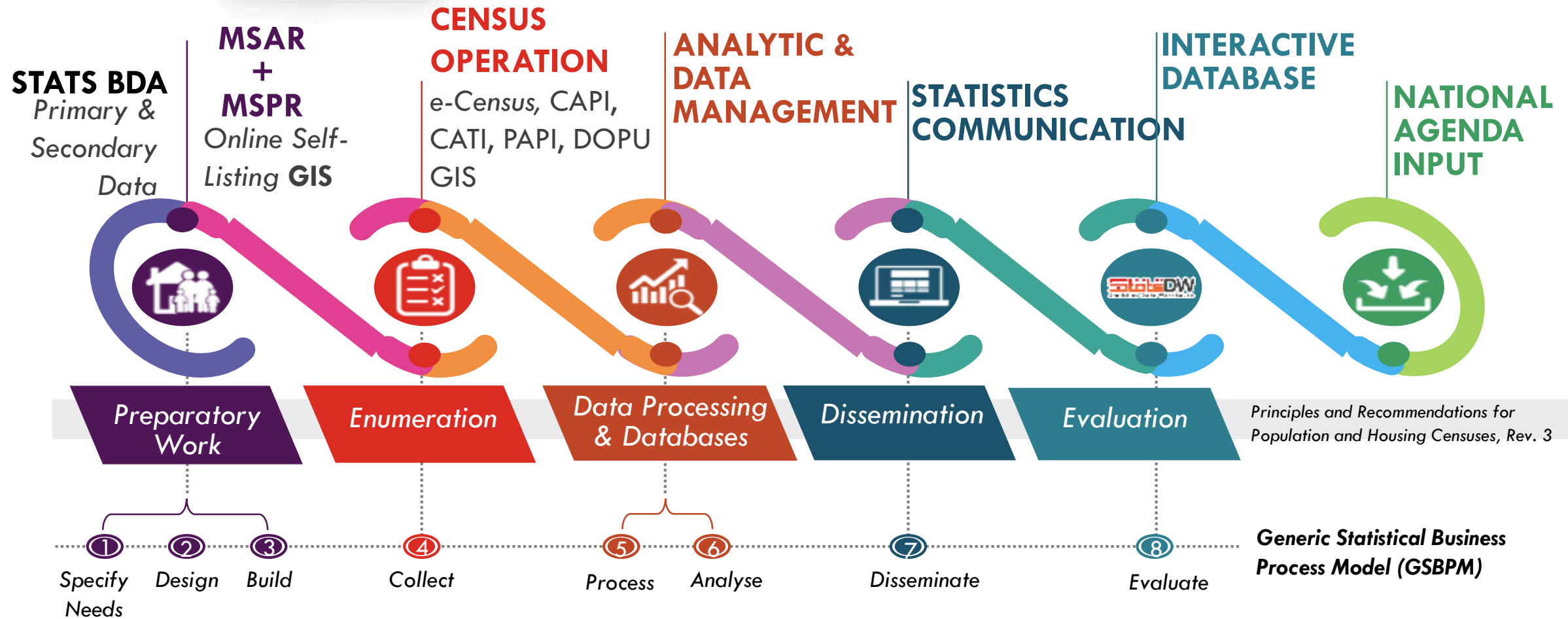


www.dosm.gov.my





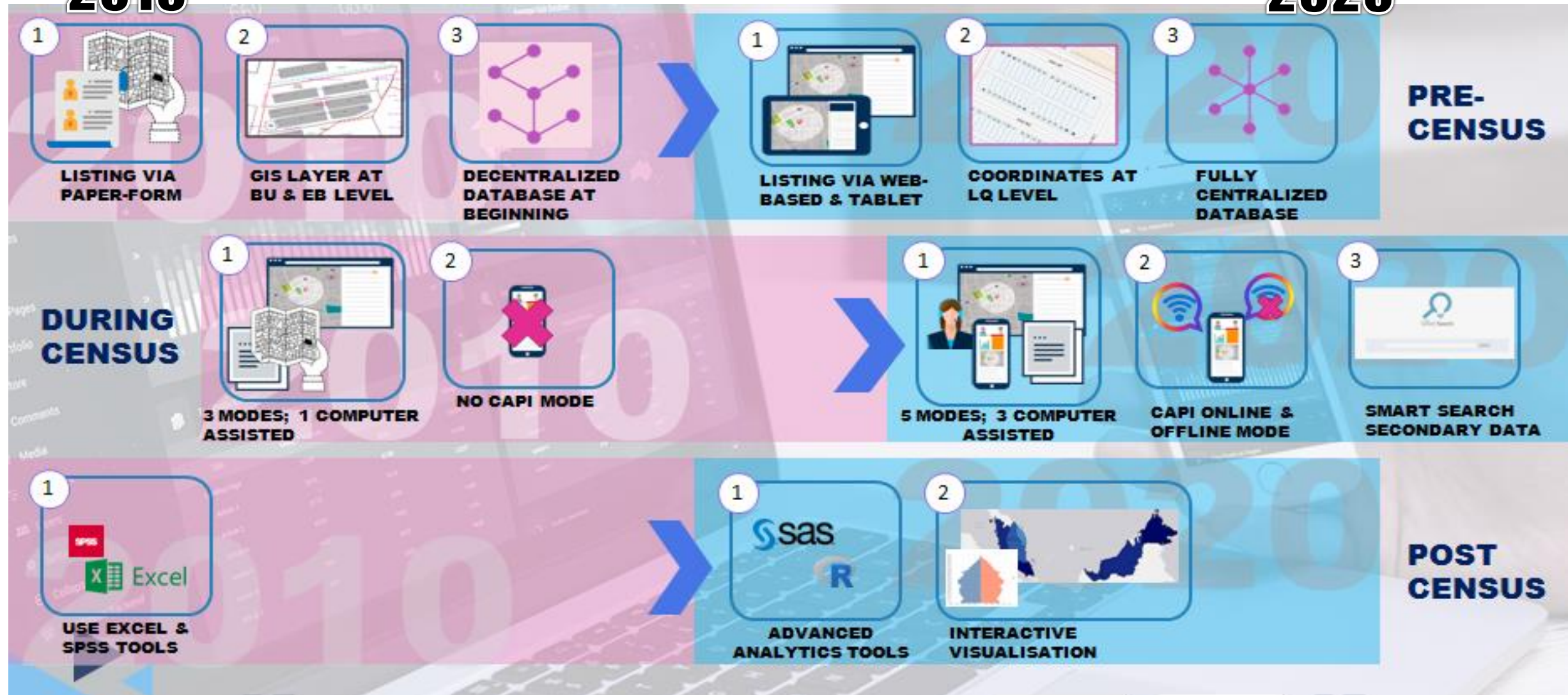
Overview MyIPCS



Modernisation Of Census 2020 – Key aspects

2010

2020



GEOSPATIAL ACTIVITIES FOR 2020



@StatsMalaysia



www.dosm.gov.my



2017-2019

PRE-ENUMERATION

- Create and update statistical map
- Address geocode



2020

ENUMERATION

- Census tracking and progress monitoring during operation



2021-2022

POST ENUMERATION

- Dissemination via Web based and spatial analysis

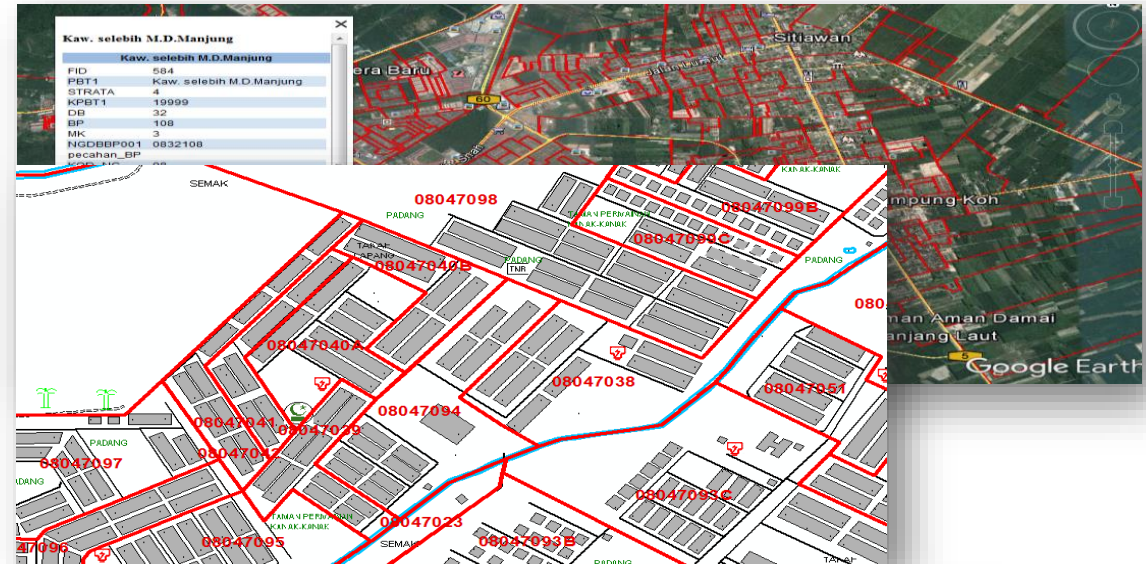


Pre-enumeration

Period

2017-2019

Process



Platform



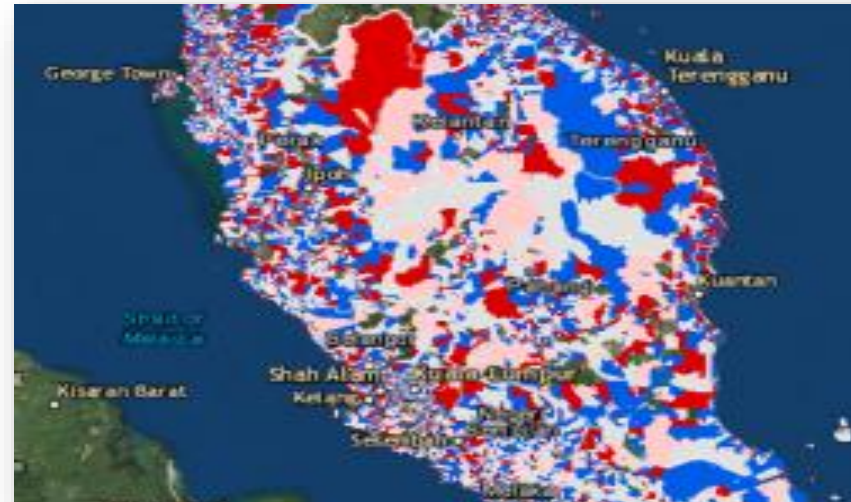
Base map



PLANMalaysia
(Jabatan Perancangan Bandar dan Desa)

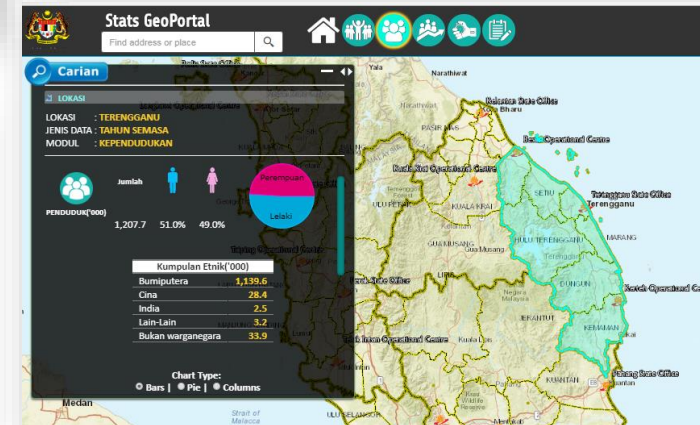
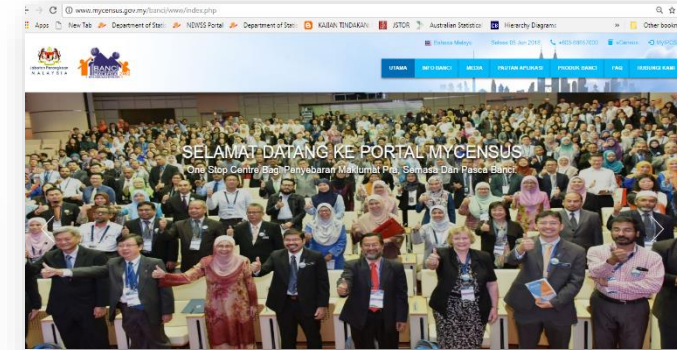
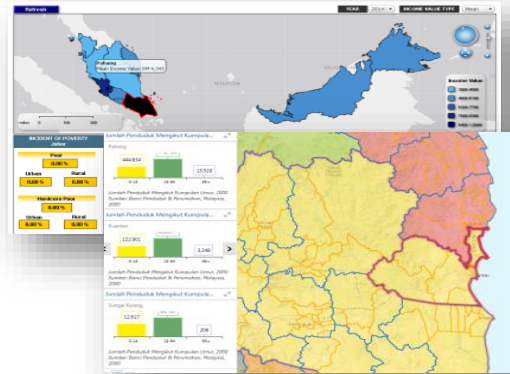


-



Post enumeration

- Preliminary report
- Progress monitoring
- Census tracking



MOVING FORWARD



@StatsMalaysia



www.dosm.gov.my

- Expand the integration of statistical and geospatial
- Strategic partnership with other agencies for the use of high resolution of spatial data
- Advanced the use of spatial analysis & tools for official statistics
- Extend the use of web based platform for dissemination of geo statistics



Welcoming 62nd ISI WORLD STATISTICS CONGRESS 2019



18 - 23 AUGUST 2019 ■ KUALA LUMPUR



THANK YOU

TOWARDS

POPULATION & HOUSING
CENSUS MALAYSIA **2020**



Your Data Is Our Future



www.dosm.gov.my



@StatsMalaysia