**United Nations Regional Workshop on
The 2020 World Programme on Population and Housing Censuses:
International Standards and Contemporary Technologies**

SESSION 3:
ESSENTIAL FEATURES, DEFINITION AND METHODOLOGIES OF POPULATION AND HOUSING CENSUSES: MALAYSIA

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#MyCensus2020

OUTLINES

INTRODUCTION
MALAYSIA POPULATION
AND HOUSING CENSUS

MYCTP
MALAYSIA CENSUS
TRANSFORMATION PROGRAM

OUTCOMES
BENEFIT BEYOND CENSUS 2020

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MYCENSUS 2020
EVOLUTION, METHODOLOGY
AND TRANSFORMATION

MYIPCS
MALAYSIA INTEGRATED
POPULATION CENSUS SYSTEM

#MyCensus2020

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INTRODUCTION
MALAYSIA POPULATION AND HOUSING CENSUS (MYCENSUS)

BACKGROUND OF CENSUS

6th CENSUS 2020 – 6th

Population and Housing Census is conducted every 10 years. Since establishment of Malaysia in 1963, 5 census have been implemented

PURPOSE

To accurately measure numbers and key demography and socioeconomic characteristics of Malaysia's population, households and living quarters at one 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).

OBJECTIVES

1 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

2 To provide input for planning, formulation and implementation of government policies and development programmes as stated in the Legislation
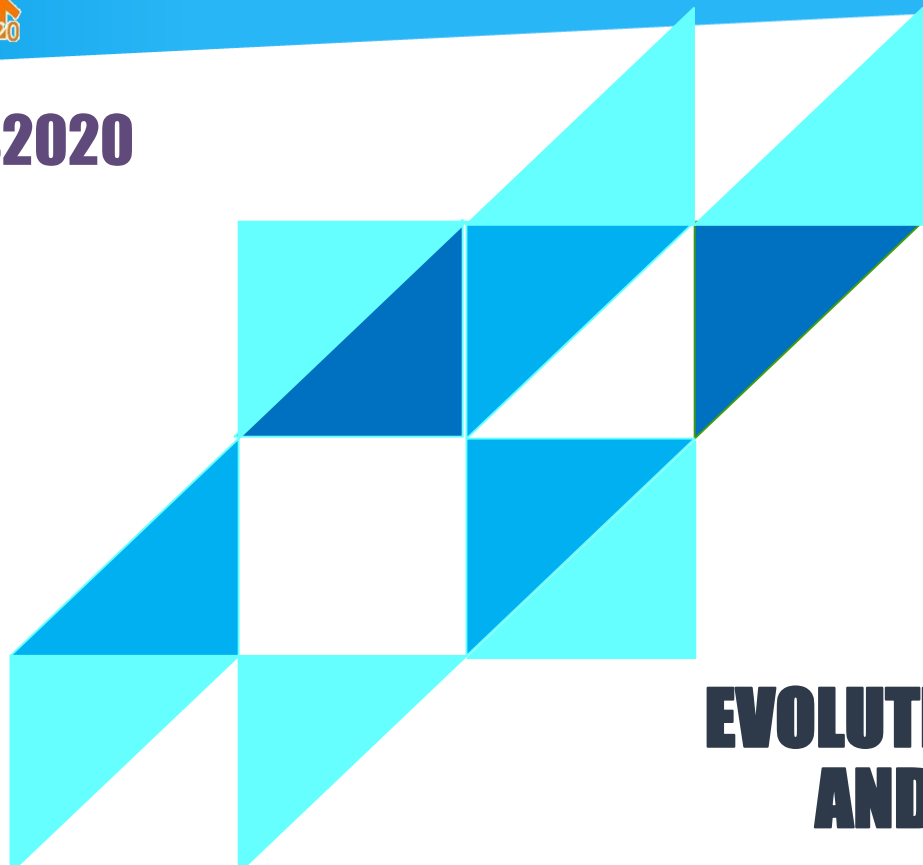
3 To provide a reliable basis for the estimation and projection of the population and living quarter

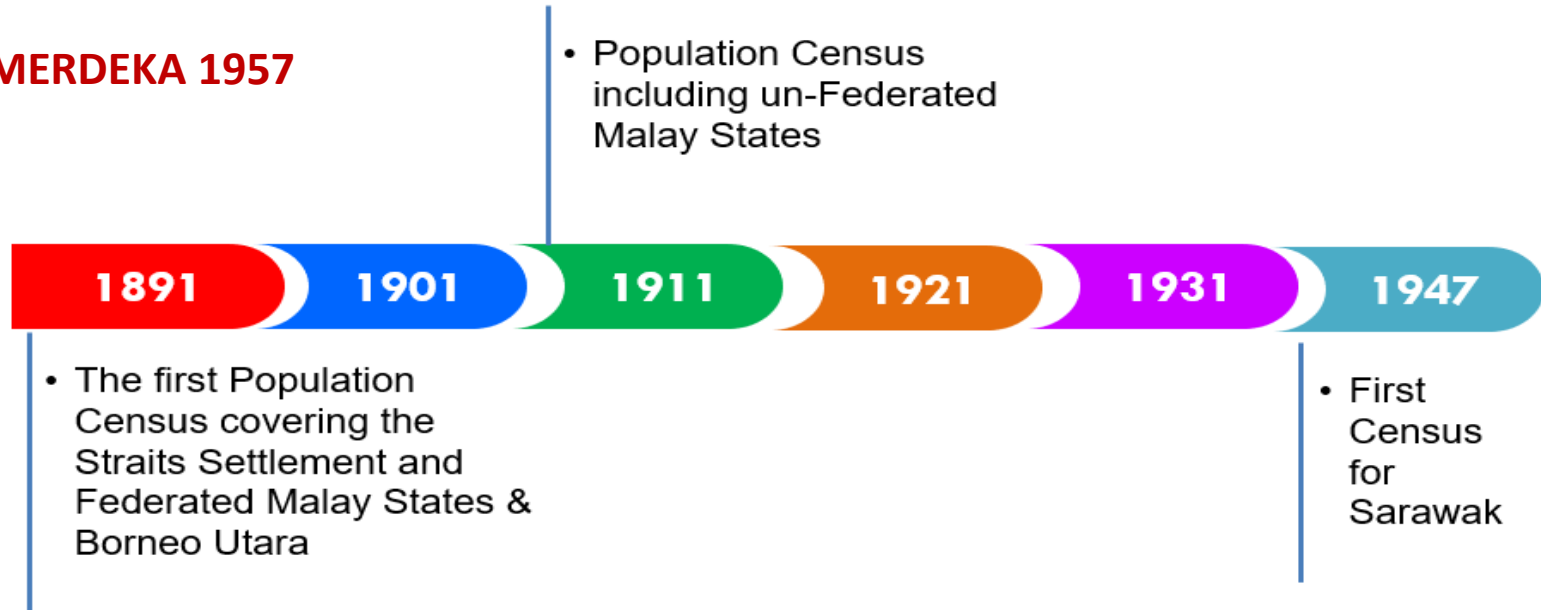**4** To provide input for the development of new socio-economic key indicators

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MYCENSUS 2020
EVOLUTION, METHODOLOGY AND TRANSFORMATION

EVOLUTION OF MYCENSUS

Before MERDEKA 1957

- Population Census including un-Federated Malay States

1891	1901	1911	1921	1931	1947

- The first Population Census covering the Straits Settlement and Federated Malay States & Borneo Utara

- First Census for Sarawak

EVOLUTION OF MYCENSUS

1970
- Conducted separately 27 July 1970 (Housing), 25 August 1970 (Population)
- Approach: De Facto
- Mode: Face-to-face interview

1980
- Conducted separately 17 May 1980 (Housing), 11 June 1980 (Population)
- Approach: De Facto
- Mode: Face-to-face interview

1991
- Conducted simultaneously on 14 August 1991
- Approach: De Facto & De Jure
- Mode: Face-to-face interview

2000
- Conducted simultaneously on 5 July 2000
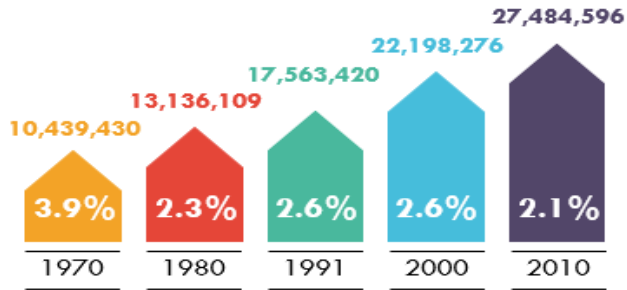- Approach: De Jure
- Mode: Face-to-face interview

2010
- Conducted simutaneously on 6 July 2010
- Approach: De Jure
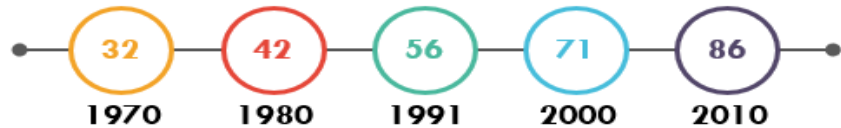- Mode: Face-to-face interview, Drop Off Pick Up (DOPU) & e-Census
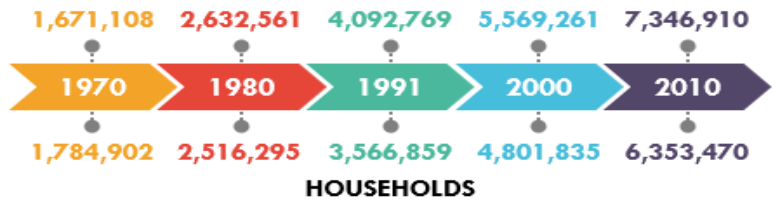
FINDINGS: CENSUS 1970 - 2010

POPULATION & GROWTH RATE
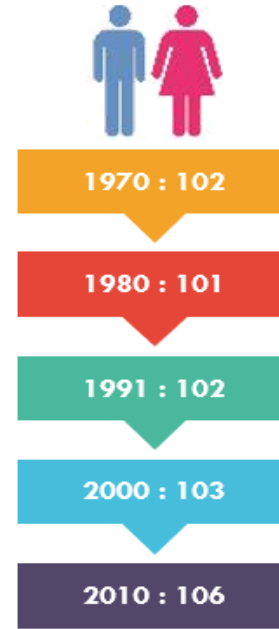
Year	Population	Growth Rate
1970	10,439,430	3.9%
1980	13,136,109	2.3%
1991	17,563,420	2.6%
2000	22,198,276	2.6%
2010	27,484,596	2.1%

POPULATION DENSITY (per km²)

1970	1980	1991	2000	2010
32	42	56	71	86

LIVING QUARTERS / HOUSEHOLDS

Year	Living Quarters	Households
1970	1,671,108	1,784,902
1980	2,632,561	2,516,295
1991	4,092,769	3,566,859
2000	5,569,261	4,801,835
2010	7,346,910	6,353,470

MEDIAN AGE

Year	Median Age
2010	26.2
2000	23.6
1991	21.9
1980	19.6
1970	17.2

SEX RATIO[1]

Year	Ratio
1970	102
1980	101
1991	102
2000	103
2010	106

DEPENDENCY RATIO[2]

Year	Ratio
1970	92.0
1980	76.0
1991	68.0
2000	59.2
2010	48.5
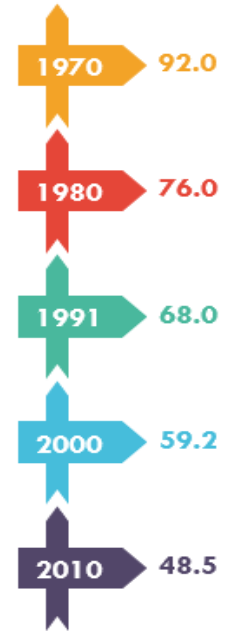
NOTES:
1. Per 100 female
2. The population in the age groups of young (below 15 years) and old age (above 65 years) to be bear for every 100 people of working age (15 years to 65 years)
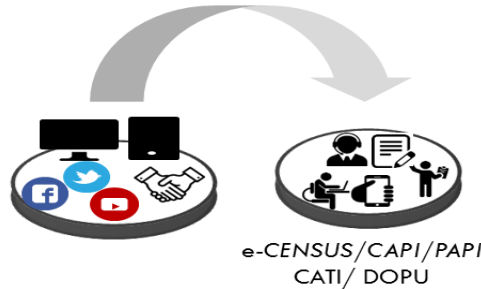
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MYCENSUS 2020 TRANSFORMATION

MOTIVATE POPULATION TO RESPOND
- Strategic Communication Plan on Census 2020 *
- Engagement with various parties/agencies
- Publicity through various media & target group
- More use of digital media

COUNT ON POPULATION, HH & LQ
- Make it easy for people to respond anytime & anywhere
- Encourage people to use self-enumeration*
- Use the latest & cost effective technology - Mobile Apps*
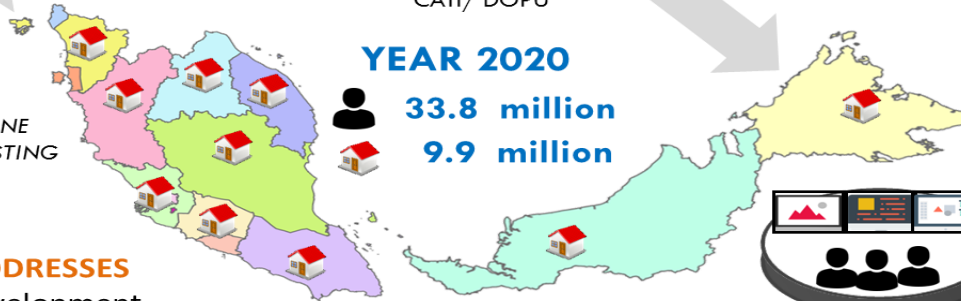- Field data collection – monitored digitally*

e-CENSUS/CAPI/PAPI CATI/ DOPU

FIELD WORK

ONLINE SELF-LISTING

YEAR 2020

33.8 million

9.9 million

* **Census 2020 Innovation**

IDENTIFICATION OF ADDRESSES
- MSAR* & MSPR* Development
- Modernisation of listing - online self-listing & use of mobile apps in the field

MSAR – *Malaysia Statistical Address Register*
MSPR – *Malaysia Statistical Population Register*

STATISTICS COMMUNICATION
- Main Parameter : 3 months ⎤ After operation
- Final Data : 9 months ⎦ completes
- Easy access to data through Census Portal & Stats Geoportal*

- July 2020
- De Jure approach

3
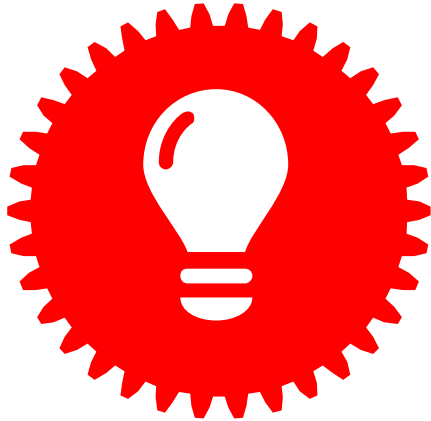
MYCTP
MALAYSIA CENSUS
TRANSFORMATION PROGRAM

WHAT IS MALAYSIA CENSUS TRANSFORMATION PROGRAMME (MyCTP) ?

Transformation that encompasses **6 elements of innovation** in the implementation of the Population and Housing Census of Malaysia 2020

Operational design towards modernization through a **new ICT-based framework** aligns with **Malaysia National Development Strategy** (MyNDS) outlined in the 11th Malaysia Plan of delivering **high-performance**, **high impact** and **cost-effective** outcomes

OBJECTIVES OF MyCTP

Produce **high quality and timely statistics** according to user expectations

Integrate census data, administrative data and survey into an **integrated database**

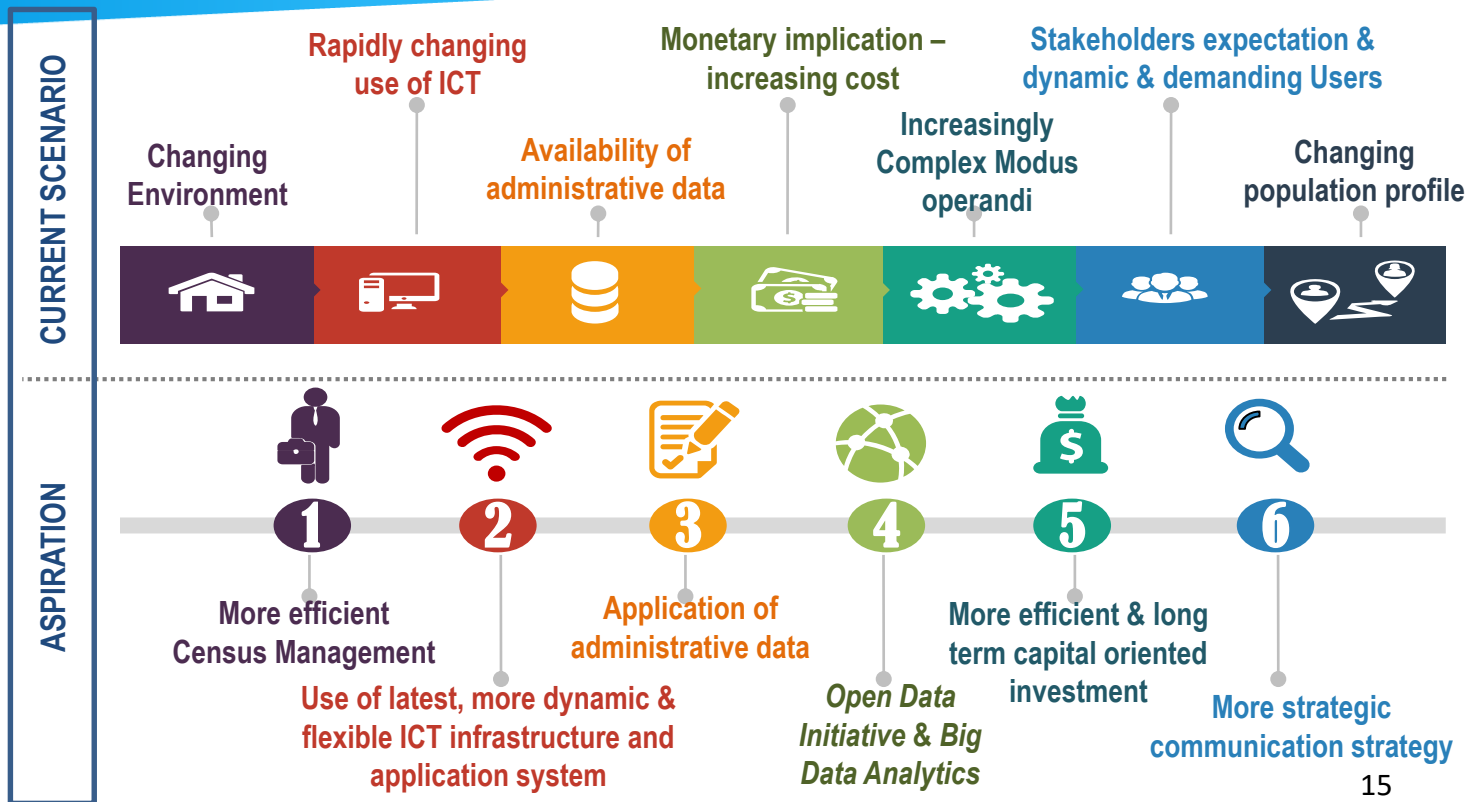**Transforming** the implementation of Census towards the **use of ICT**

Increase the **confidence of respondents** in providing information

Modernization of census activities to be more **efficient** and **cost-effective**

Increase the **potential** of the Department through **long-term investment**
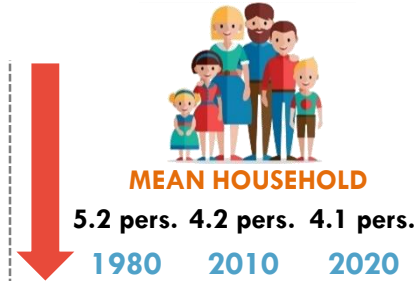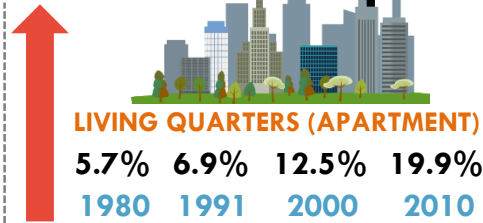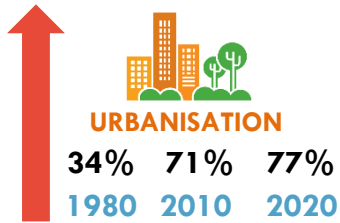
WHY MyCTP?

CURRENT SCENARIO

- Changing Environment
- Rapidly changing use of ICT
- Availability of administrative data
- Monetary implication – increasing cost
- Increasingly Complex Modus operandi
- Stakeholders expectation & dynamic & demanding Users
- Changing population profile

ASPIRATION

1. More efficient Census Management
2. Use of latest, more dynamic & flexible ICT infrastructure and application system
3. Application of administrative data
4. *Open Data Initiative & Big Data Analytics*
5. More efficient & long term capital oriented investment
6. More strategic communication strategy

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CHALLENGES OF MyCENSUS 2020

URBANISATION

34%	71%	77%
1980	2010	2020

LIVING QUARTERS (APARTMENT)

5.7%	6.9%	12.5%	19.9%
1980	1991	2000	2010

MEAN HOUSEHOLD

5.2 pers.	4.2 pers.	4.1 pers.
1980	2010	2020

COMPLEXITY OF CENSUS MODUS OPERANDI

STAKEHOLDERS EXPECTATIONS & DYNAMIC USERS

Request More Information

RESPONDENT CHARACTERISTICS

% HH (SINGLE HH)

7.5%	8.3%	?
1980	2010	2020

POPULATION 65 YEARS+

3.6%	5.0%	7.2%
1980	2010	2020

✓ **GENERATIONAL GAP**

BEST PRACTICES FROM OTHER COUNTRIES
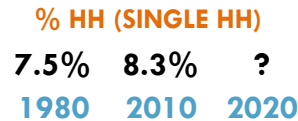
2020 CENSUS TRANSITION PLAN
i. Reengineering Address Canvassing
ii. Optimizing Self-Response
iii. Utilizing Administrative Records and Third-Party Data
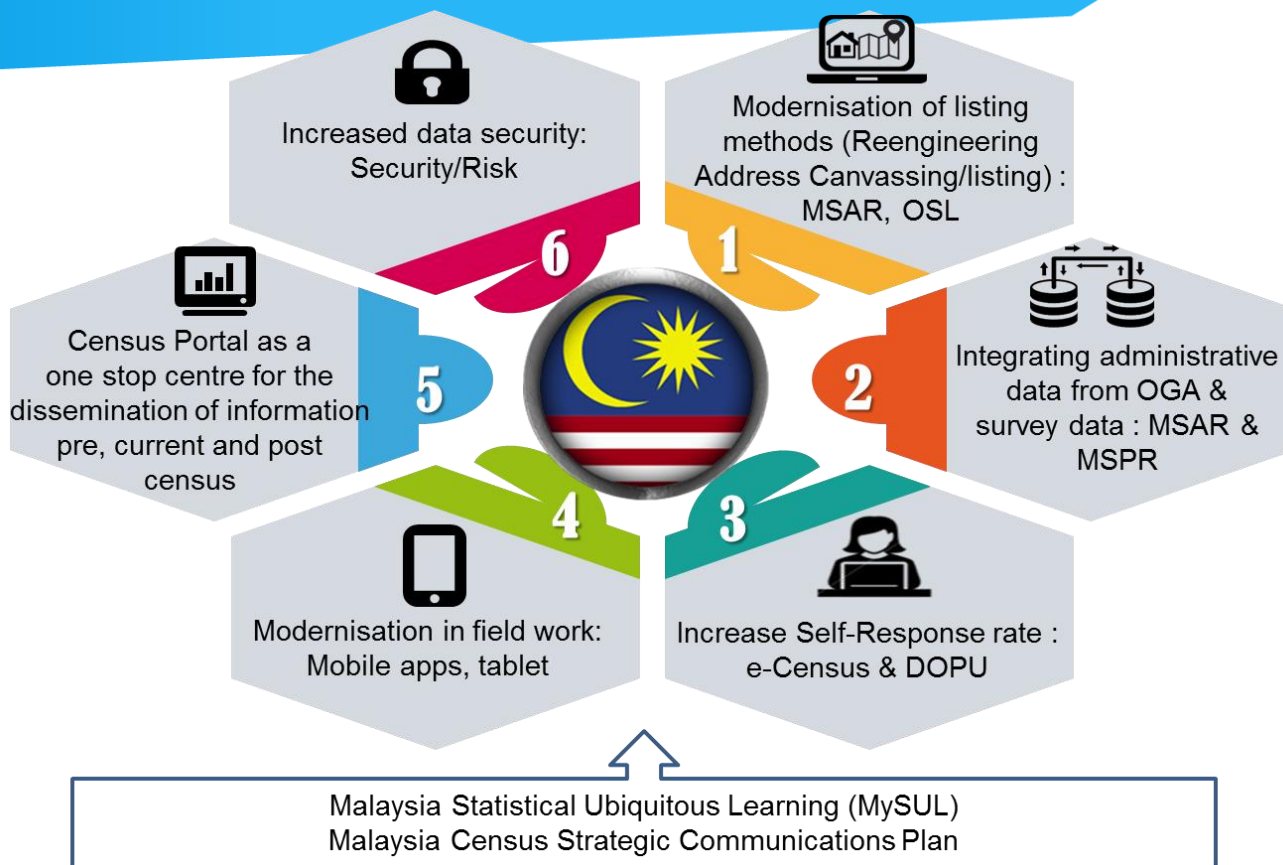iv. Reengineering Field Operations

KEY TRANSFORMATION

THE 2016 CENSUS STRATEGY PROJECT
i. Feasible Approach
   ❖ traditional census
   ❖ existing administrative registers
   ❖ continuous measurement
ii. Country-Specific Legislation Related to The Definition of a Census
iii. Administrative Data Census Project

CENSUS TRANSFORMATION PROGRAMME
i. An online census
ii. Administrative data
iii. Plans Beyond 2021

MyCTP: ELEMENTS OF INNOVATION

Increased data security: Security/Risk

6

Modernisation of listing methods (Reengineering Address Canvassing/listing) : MSAR, OSL

1

Census Portal as a one stop centre for the dissemination of information pre, current and post census

5

2

Integrating administrative data from OGA & survey data : MSAR & MSPR

Modernisation in field work: Mobile apps, tablet

4
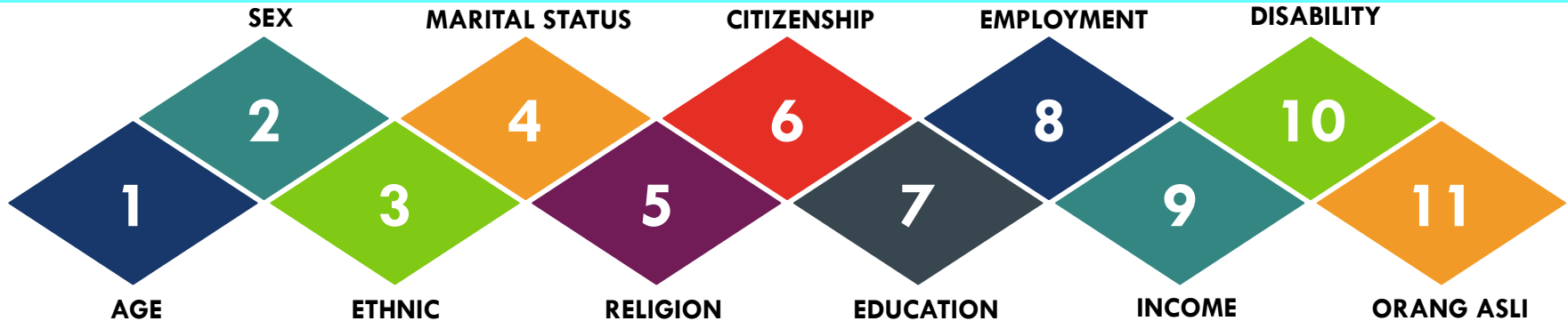
3

Increase Self-Response rate : e-Census & DOPU

Malaysia Statistical Ubiquitous Learning (MySUL)
Malaysia Census Strategic Communications Plan

1ST ELEMENT OF INNOVATION

Modernisation of listing methods (Reengineering Address Canvassing/listing): MSAR, OSL

SOURCE OF DATA

FRAME UPDATE & MAPPING

MSAR

- List of Address in NEWSS
- EB Map in GIS Format
- List of Address, Housecode & Geocode from POS Malaysia & TM Smart Map

- Online self Listing (OSL)
- CAPI
- Fieldwork
- Updating Digital Map
- Integration of information in MSAR with NEWSS and GIS Smart Geosearch

- Standard Complete Address Format
- StatsBDA Platform
- Address LQ & GIS
- Address ID *(identifier)* for every LQ

	🇰🇷 Korea	🇧🇳 Brunei	🇨🇦 Canada	🇳🇿 New Zealand	🇺🇸 USA	🇬🇧 UK	🇲🇾 Malaysia
YEAR	2015	2016	2016	2016	2020	2021	2020
ADMINISTRATIVE DATA	✔		✔	✔	✔	✔	✔
e-CENSUS	✔		✔	✔	✔	✔	✔
CAPI		✔	✔		✔	✔	✔
MOMB					✔		
DOPU		✔	✔	✔			✔
CATI							✔

4TH ELEMENT OF INNOVATION

4
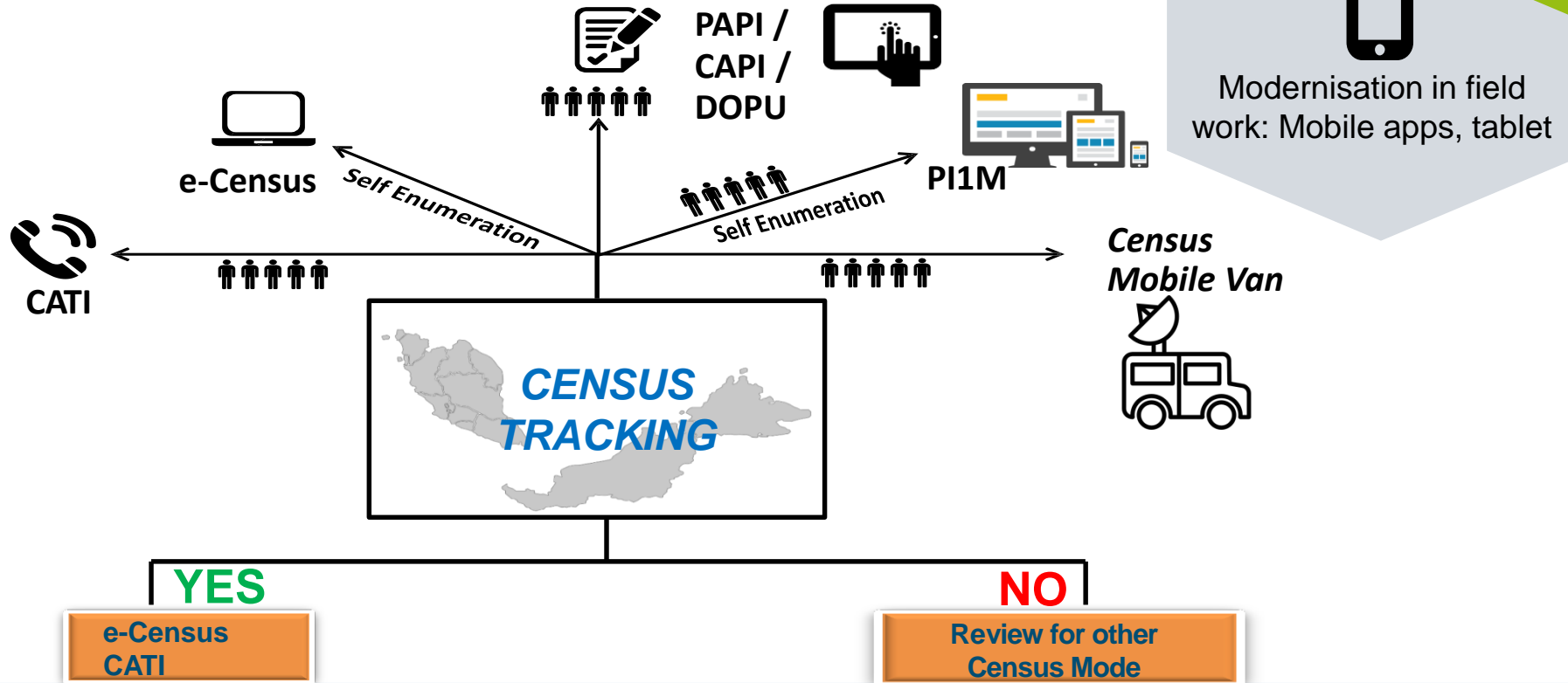
Modernisation in field work: Mobile apps, tablet

PAPI / CAPI / DOPU

e-Census

Self Enumeration

CATI

Self Enumeration

PI1M

Census Mobile Van

CENSUS TRACKING

YES

e-Census CATI

NO

Review for other Census Mode

5TH ELEMENT OF INNOVATION

MyCensus Portal & Stats Geoportal

Census Portal as a one stop centre for the dissemination of information pre, current and post census

5

Census Info
- ❖ Background
- ❖ History
- ❖ Census Act
- ❖ Organisation
- ❖ Census Activity

Publicity
- ❖ Infographic
- ❖ Video
- ❖ *Newsletter*
- ❖ Current Activity
- ❖ Media

Application
- ❖ e-Census
- ❖ Census Tracking (e-RKL)
- ❖ U-Learning (MySUL)

Census Product
- ❖ ARC
- ❖ Research
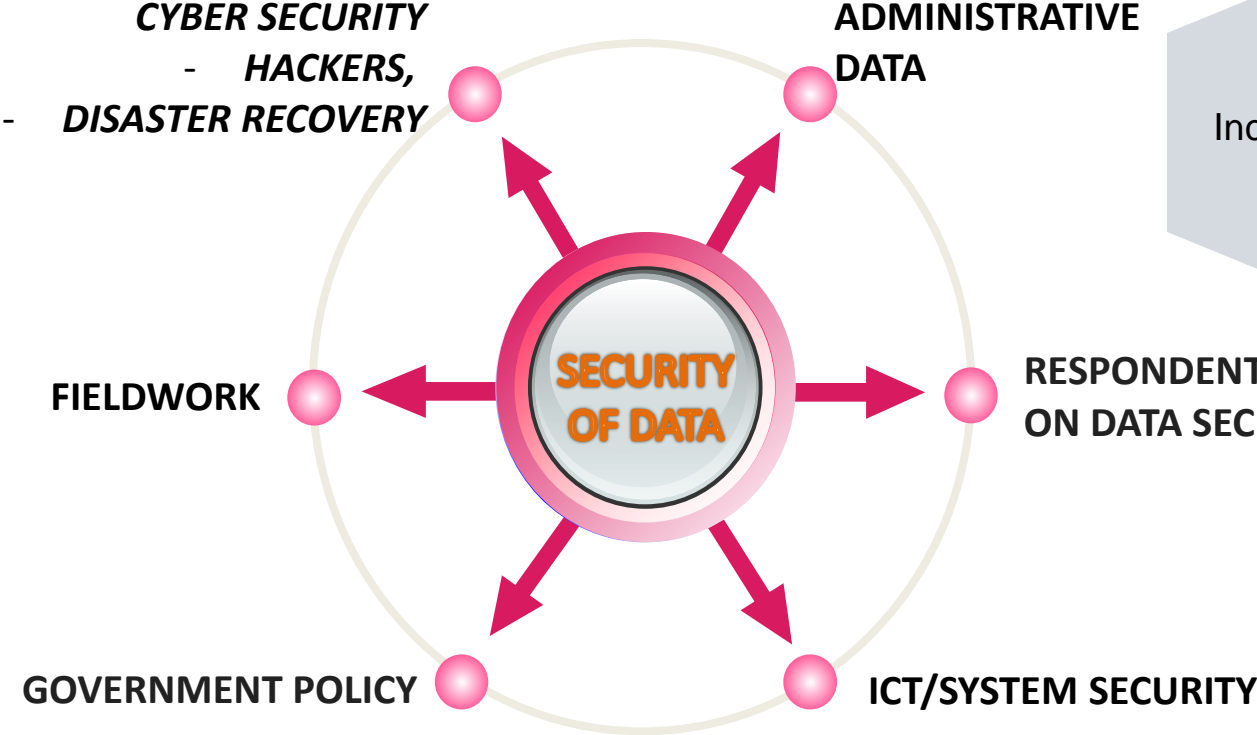- ❖ Publication
- ❖ Infographic
- ❖ Visualisation
- ❖ Table Builder

Portal Geospatial
- ❖ GIS
- ❖ Population Data in GIS
- ❖ Other Statistics

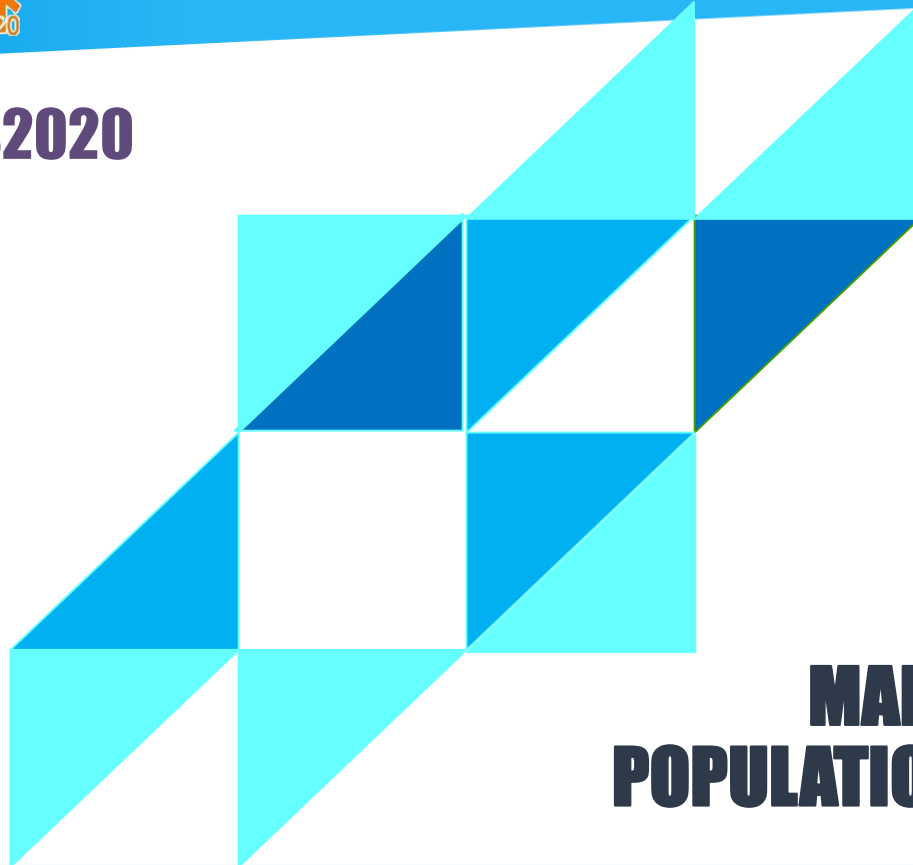**CYBER SECURITY**
- **HACKERS,**
- **DISASTER RECOVERY**

ADMINISTRATIVE DATA

FIELDWORK

SECURITY OF DATA

RESPONDENTS PERCEPTIONS ON DATA SECURITY

GOVERNMENT POLICY

ICT/SYSTEM SECURITY

Increased data security: Security/Risk

6

MyIPCS – MALAYSIA INTEGRATED POPULATION CENSUS SYSTEM

STATS BDA

MSAR + MSPR

Online Self-Listing
GIS

OPERATION

e-Census, CAPI,
CATI, PAPI, DOPU
GIS

DATA MANAGEMENT AND ANALYTICS

STATISTICAL COMMUNICATION

INTERACTIVE DATABASE

NATIONAL AGENDA INPUT

| Preparatory Work | Enumeration | Data Processing & Databases | Dissemination | Evaluation |

Principles and Recommendations for Population and Housing Census, Rev. 3

① Specify Needs ② Design ③ Build ④ Collect ⑤ Process ⑥ Analyse ⑦ Disseminate ⑧ Evaluate
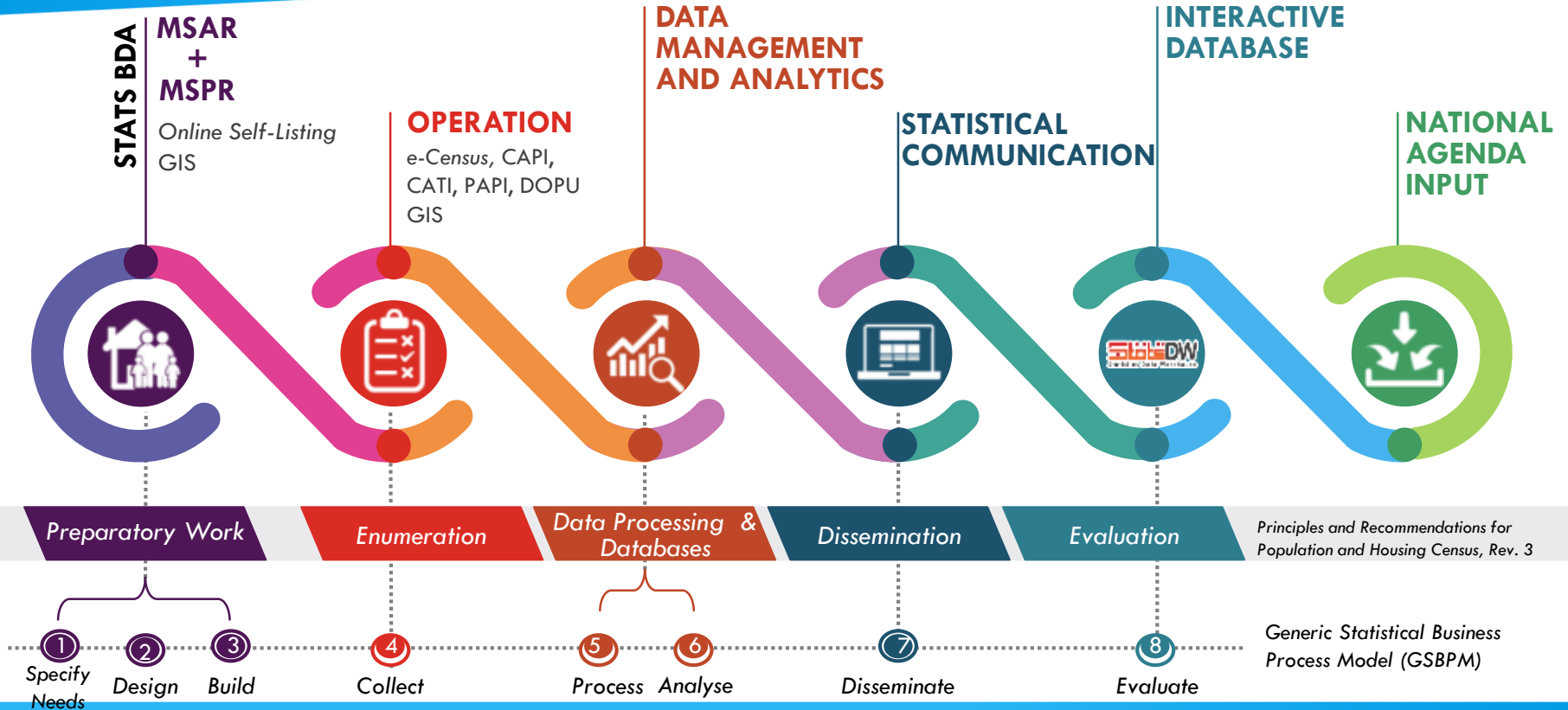
Generic Statistical Business Process Model (GSBPM)

MyIPCS: MODULES

10 MAIN MODULES MyIPCS

- 01 DOSM SMART MAP & DOSM SMART LISTING
- 02 CENSUS DATA MANAGEMENT
- 03 ADMINISTRATION
- 04 CENSUS OPERATION
- 05 CENSUS PROCESSING
- 06 CENSUS SUPPORTING SYSTEMS: QUALITY CONTROL
- 07 CENSUS SUPPORTING SYSTEMS: POST ENUMERATION SURVEY
- 08 CENSUS SUPPORTING SYSTEMS: CENSUS TRACKING
- 09 ANALYTICS & REPOSITORY
- 10 DISSEMINATION & DATA COMMUNICATION
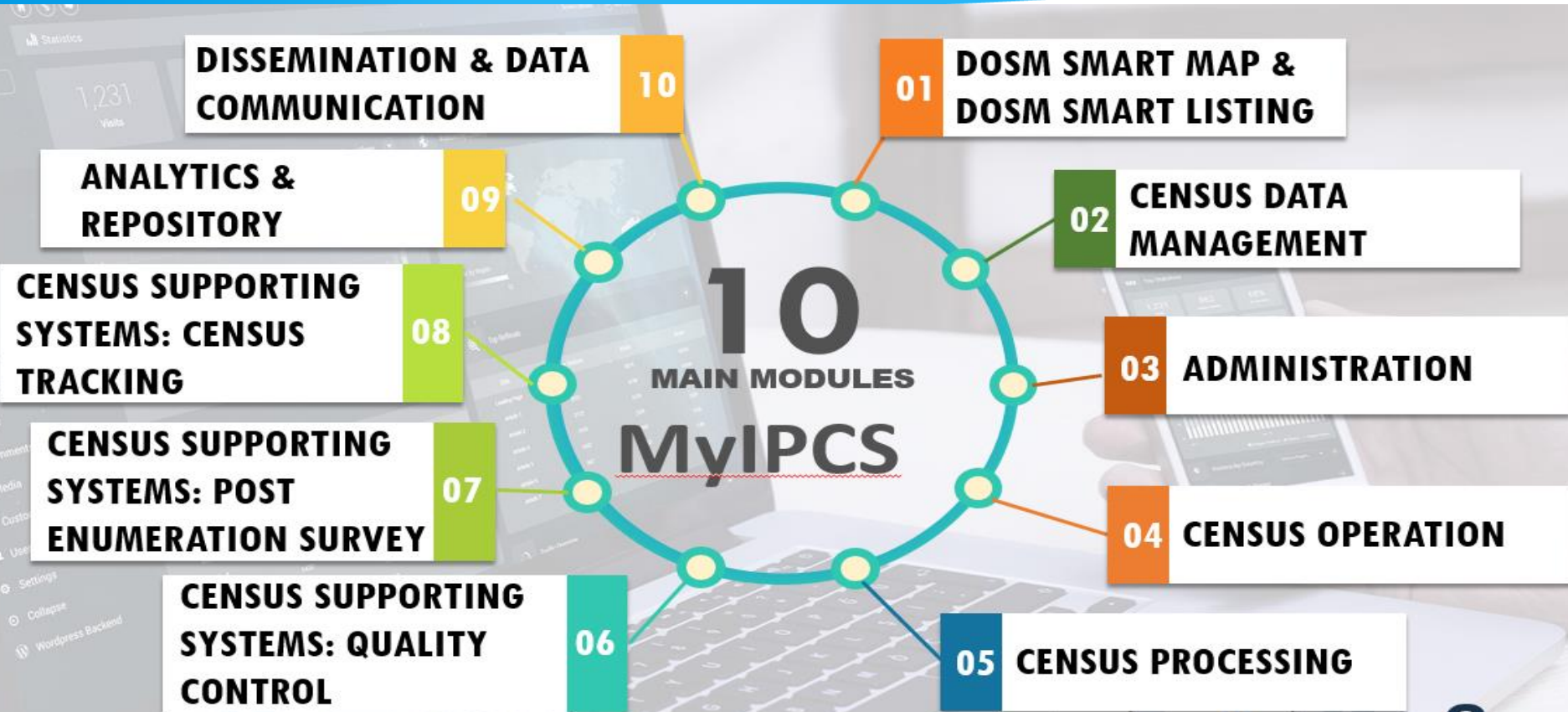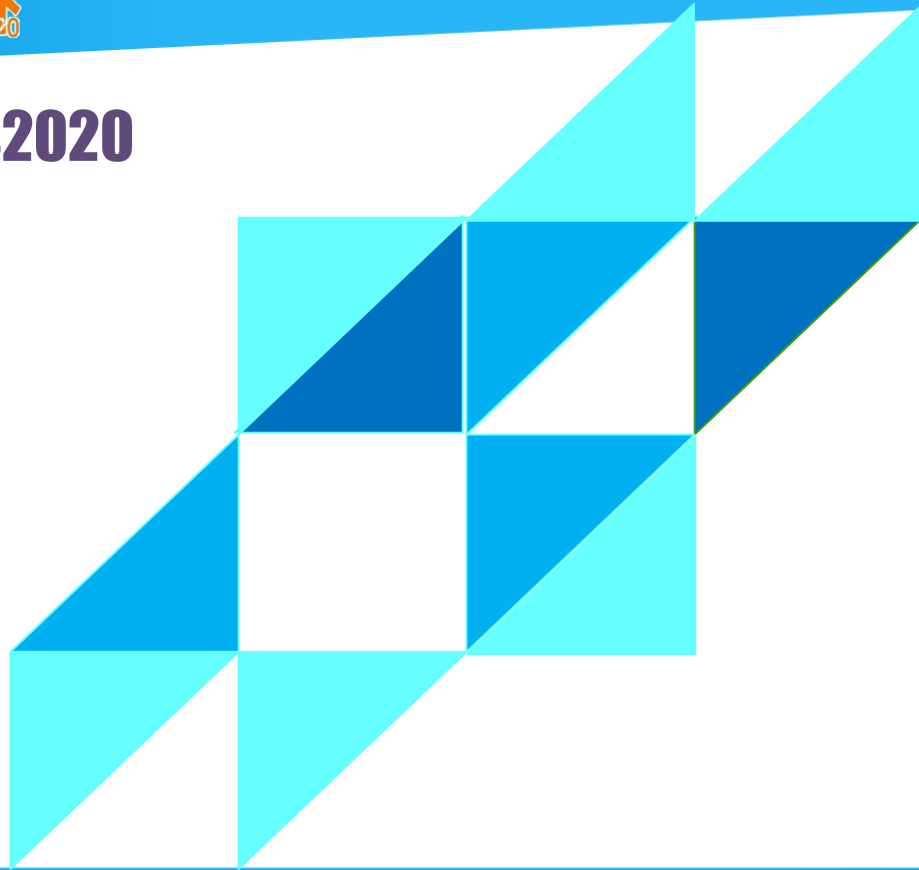
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OUTCOMES
BENEFIT BEYOND
CENSUS 2020

LESSONS LEARNED FROM CENSUS 2010 IMPLEMENTATION

Issue/Challenge	Suggestions
Planning and Preparation	
Questionnaire is too complex and contained too many variables to be responded.	The use of administrative data from other government agencies will complement the existing data sources
Non-Integrated Database and process. All the activities lead to data redundancies and inconsistencies	Centralized database and data preparation before census will maximize data integrity, enhance data reliability and reduce redundancies
Census 2010 framework is based on household listing obtained from fieldwork. ID for building unit (BU) and Living Quarters (LQ) generated are based on the statistical boundary code	Generate a unique and permanent ID for all addresses in Malaysia. Address ID can detect area in which state/city/section it resides in. ID should be standardized for all administrative agency

LESSONS LEARNED FROM CENSUS 2010 IMPLEMENTATION

Issue/Challenge	Suggestions
Operation and Data Process	
Sudden resignation of a Census Enumerator or Supervisor, termination of a Census Enumerator or Supervisor for underperforming of his/her tasks, limited qualified candidates.	Human resources availability will be addressed by engaging available university students on break, and existing public service officials
Training issues and the inability of trainers to conduct the required training as per the guideline.	Comprehensive training that will be conducted through training videos, and latest ICT technology
eCensus response rate was less than 1%	eCensus will be expanded in 2020, with efficient house code ID system, improved and capable ICT infrastructure, and extensive publicity
Questionnaire form data capture was inadequate due to incomplete and illegible forms, poor form conditions	Use of latest variety of tools for data capture such as tablet computer during interviews, simplified questionnaire forms, sufficient editing and review

FUTURE BENEFITS

NEW STATISTICAL INFORMATION

1
- The basis information for national planning and development
- Population information, household and living quarters to the smallest geographic area (local statistics)

REGISTER BASED STATISTICS (MSAR & MSPR)

2
- Complete LQ and population address database
- The Population and Housing Census can be implemented on a smaller scale in the future

STATISTICS LANDSCAPE TRANSFORMATION

3
- Technology change from paper-based to online
- Improve the efficiency of statistical delivery systems to be more modern, dynamic and user-friendly
- Improve the statistical literacy

FUTURE BENEFITS

4 **CENSUS PARAMETER SHARING**
- Up-to-date data from MSAR & MSPR can be shared with various agencies (aggregate data).
- Cooperation with other Government Agencies (OGA) in the use of administrative data can be enhanced

5 **ESTIMATES AND PROJECTION OF POPULATION, HOUSEHOLDS AND LIVING QUARTERS**
- Population input for the establishment of key national policy

6 **COST EFFECTIVE**
- Long term investments
- Continuous ICT improvements
- Cost effective for future

Thank You