



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

**SESSION 11:
DATA COLLECTION WITH INTERNET: MALAYSIA**

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 www.dosm.gov.my

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Introduction

Using internet self-response as a collection mode: Requirement

Implementation process

Contact and communication strategy

Identification and authentication of respondents

Design of questionnaire and application features

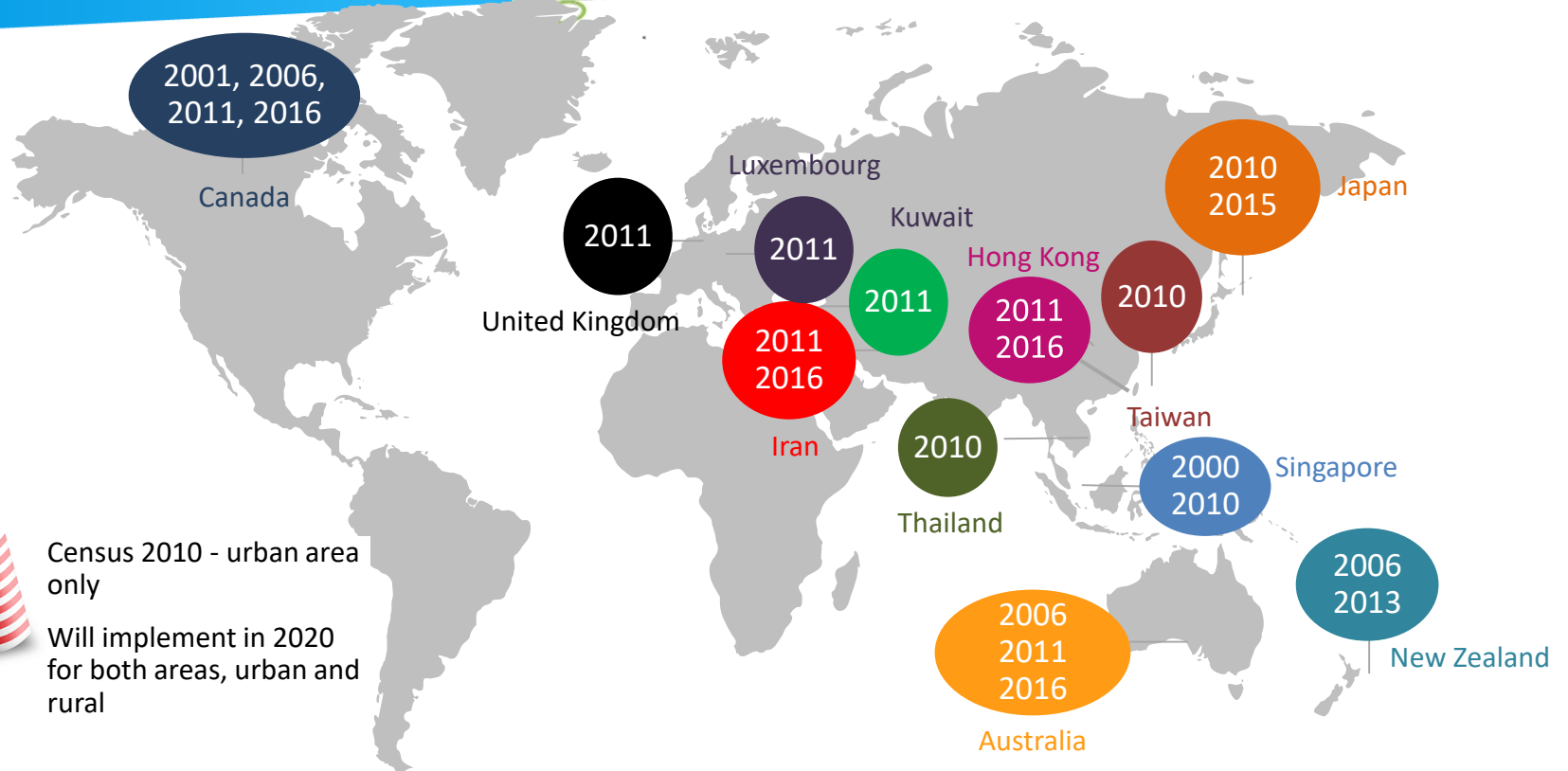
Support for respondents

Managing and monitoring response

Security

INTRODUCTION

Data Collection Using



Census 2010 - urban area only

Will implement in 2020 for both areas, urban and rural



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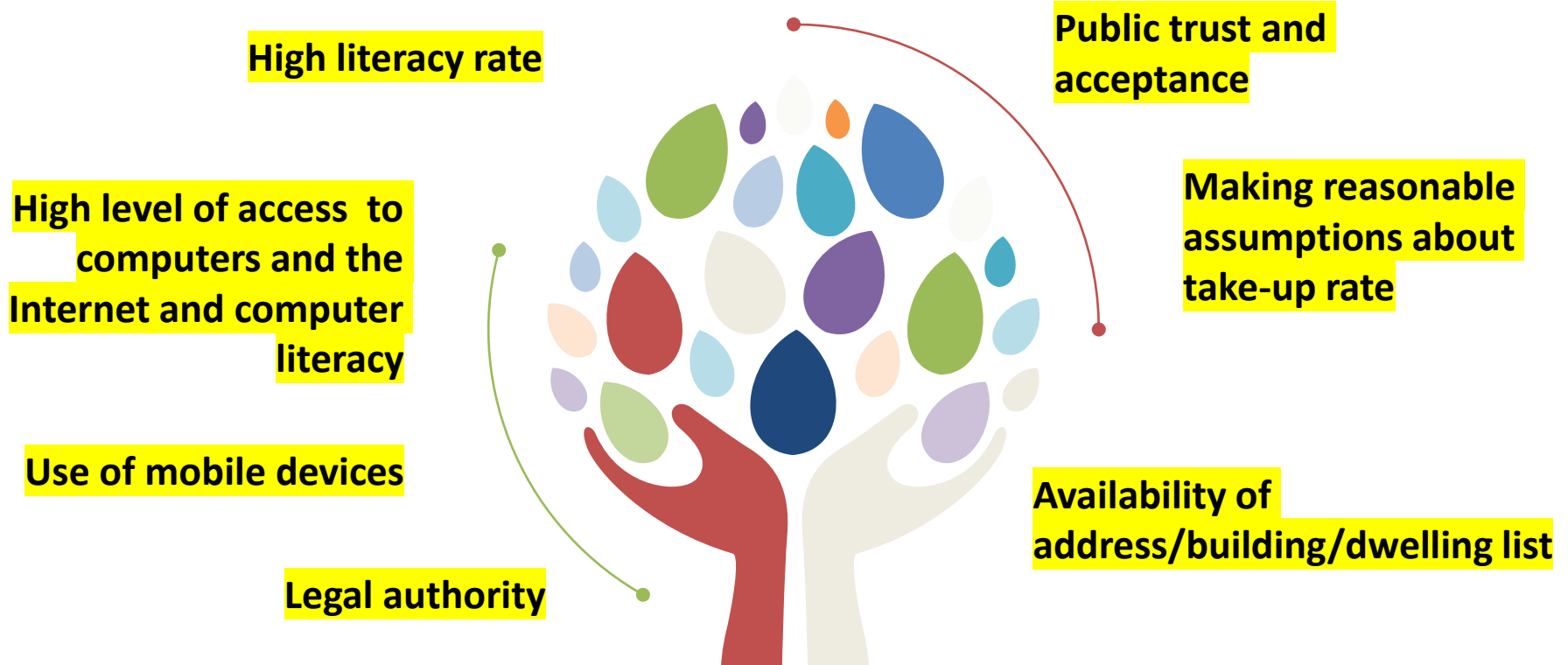


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USING INTERNET SELF-RESPONSE AS A COLLECTION MODE: REQUIREMENT



IMPLEMENTATION PROCESS OF e-CENSUS & IDENTIFICATION AND AUTHENTICATION OF RESPONDENTS

Census
Operation



Individual ID &
temporary
password

Head of Household



Respondents

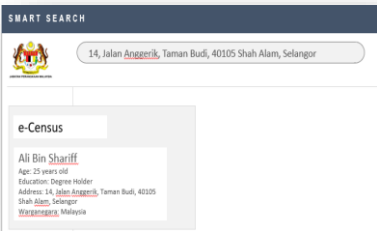
Challenge:

the availability of a confidential
method of delivering the
identifiers to the household (not
advisable)

eCensus



MyCensus 2020 Booth/Exhibition



IMPLEMENTATION PROCESS OF e-CENSUS 2010 VS 2020: TECHNOLOGY

	2010	2020
System	<ul style="list-style-type: none"> • Stand alone • Not synchronized 	<ul style="list-style-type: none"> • Integrated • Frequent Operation Monitoring <ul style="list-style-type: none"> • End to end support
Interface	<ul style="list-style-type: none"> • Not friendly 	<ul style="list-style-type: none"> • e-Census web application that is responsive and adaptive to all screen resolutions and smart devices such as Smartphones & Tablets. • A web application that is able to increase / decrease font sizes & adjust color for color blindness.
Electronic Devices	Desktop/Laptop	<ul style="list-style-type: none"> • Desktop/Laptop <ul style="list-style-type: none"> • Tablet • Smartphones

IMPLEMENTATION PROCESS e-CENSUS 2010 VS 2020: TECHNOLOGY



	2010	2020
Network Traffic	Heavy traffic	<p>The traffic capacity will be controlled via the following:</p> <ul style="list-style-type: none"> • A Load Balancer to support high number of users & requests at the same time. • Provide high speed network via 1Govnet bandwidth on demand • System replication of Mission Critical applications at multiple locations (MyLoca & DOSM HQ). • Protection against Distributed Denial of Service (DDOS) attack by implementing Intrusion Prevention System (IPS) at the network security layer.
Network Coverage	<ul style="list-style-type: none"> • Limited network coverage (urban only) 	<ul style="list-style-type: none"> • Wide network coverage (urban, sub urban & rural)



DESIGN OF QUESTIONNAIRE AND APPLICATION FEATURES



DESIGN OF QUESTIONNAIRE AND APPLICATION FEATURES e-CENSUS 2010 VS 2020

	2010	2020
Questionnaire design	Not attractive and user friendly	<p>The implementation of a question-based flow structure such as the following:</p> <ul style="list-style-type: none">• Implementation of the eDoc Builder to allow user to dynamically input required questions by utilizing not only the drag and drop function but can also add on new fields for new questions or variables.• Implement question-based flow structure to reduce time constraint during interviewing.• Implement Search Coding• Pre-filled variables & dropdown options to speed filling up process.

DESIGN OF QUESTIONNAIRE AND APPLICATION FEATURES e-CENSUS 2010 VS 2020







	2010	2020
Questionnaire Application	Respondent did not hit the "Submit" button after completing the information	Notification or Alert function: The Respondent & the Census Enumerator will be notified on a frequent basis as a reminder to complete & submit pending eDocs.
	Access from www.statistics.gov.my	Access from dedicated census portal via https://mycensus.gov.my



DESIGN OF QUESTIONNAIRE AND APPLICATION FEATURES e-CENSUS 2010 VS 2020

	2010	2020
Questionnaire Application	Incomplete response	Functions to minimize incomplete responses: i) Save as draft functionality to allow Respondents to complete the census at a later time. ii) Form Validation: System including Electronic Census Mode will check & prevent user from submitting the eDoc: <ul style="list-style-type: none">• Empty or blank on compulsory fields• Invalid input such as alphanumeric value for age field• Logical validation such as age & date of birth not consistent

Online Help

-  FAQ
-  Embedded help text
-  Questionnaire guide
-  MyCensus Realtime Chat
(mycensus.gov.my)

Census helpline

Call centre



- **Monitoring Data**

During enumeration

For later analysis

- | | |
|--|----------------------------|
| - Daily returns | - No. of edits |
| - Cumulative returns | - Use of help pages |
| - Comparison with predicted returns | - Item non-response rate |
| - Concurrent users | - Average completion time |
| - Saved, abandoned or incomplete returns | - Use of foreign languages |

- **Coordination of nonresponse follow-up**

- Centralised and integrated



- **Network:** 1GovNet network (secured government network) for data transfer
- **System Authentication:** Each individual has username and password
- **Server:** The data server is physically secured (ISO/IEC 27001:2013 ISMS)
- Encryption/Confidentiality

“To make security data more powerful, we need to make it easier to consume, analyze and operationalize.



MyCENSUS2020: E-CENSUS OPERATION SCHEMA



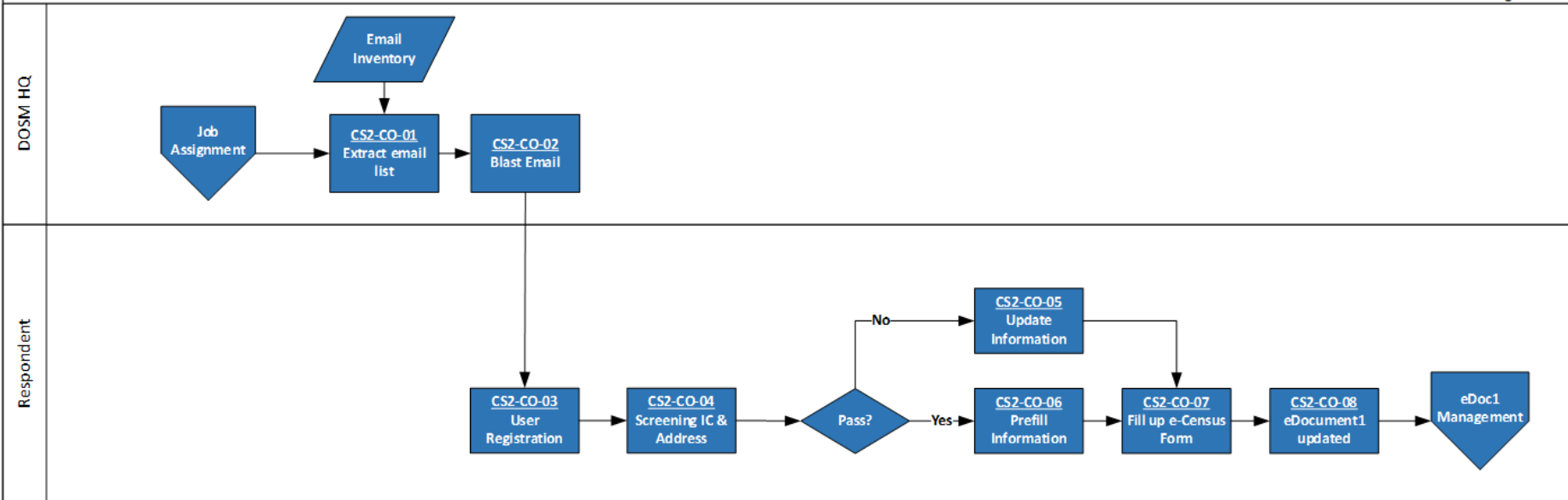
Interface	https://mycensus.gov.my				
Access	Self enumeration				
	BYOD		Internet centre (Rural)	MyCensus2020 Mobile truck	Mobile Kiosk (UTC/RTC/Institutions)
	Email invitation	Snowball			
Support System	Population Smart Search				
	Operation Monitoring System (e-RKL)				



MyCENSUS2020: E-CENSUS SYSTEM FLOW

e-Census – Blast email to targeted Respondent (without EB Information)(CS2)

During Census

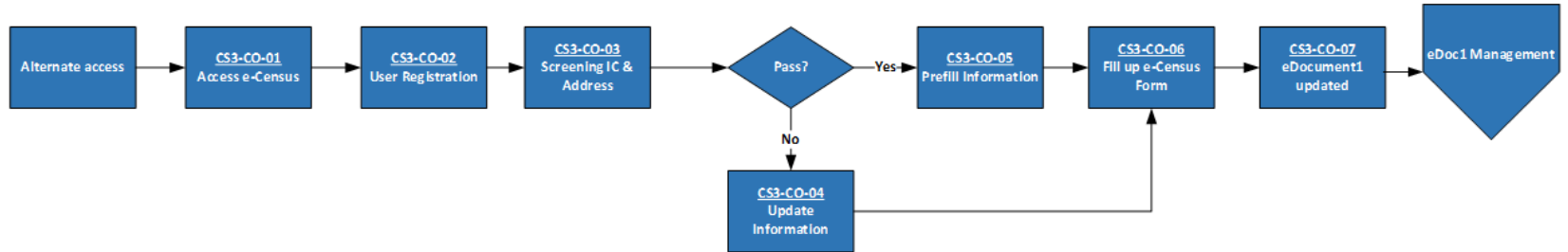


MyCENSUS2020: E-CENSUS SYSTEM FLOW

e-Census-Self Registration (CS3)

During Census

Respondent



Security

- Protecting Data security
- Confidentiality

Technology

- Rapid evolution of digital technology
- Internet bandwidth

Promotional

- Power of publicity
- Built the trust

Capability

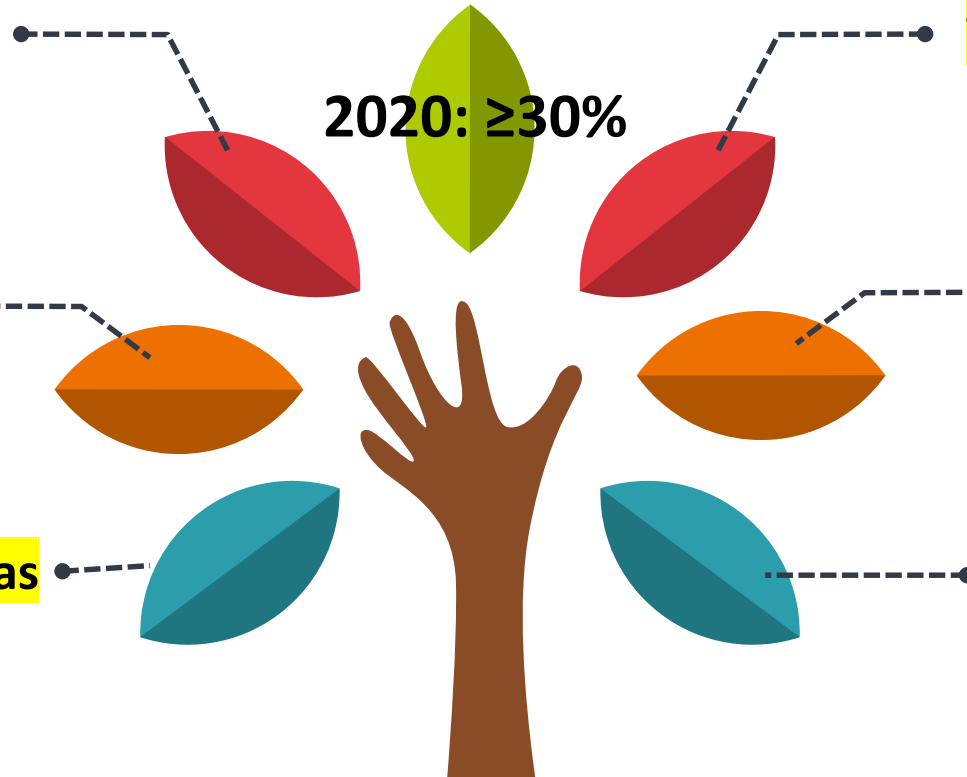
- Hands-On
- Demo
- Central Briefing
- MySUL

Mode effect bias

Difficult to monitor

Capacity

- Fast turn over FE





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Thank You

