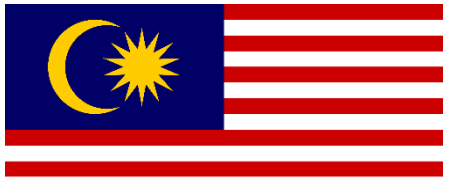
Telecommunication and ICT Household Data Collection in Malaysia

During the International Telecommunication Union (ITU) Regional Workshop on ICT Statistics for Asia-Pasific, Hanoi, Vietnam, 2nd October 2019

Presented by Syamaizar Abd Rashid



MINISTRY OF COMMUNICATIONS
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Outline

- Survey Objectives
- Partnership for the survey
- Role of the Regulator and NSO
- Telecommunication and ITCHS Data Collection
- Data Collection Process
- Challenges and Result
- Initiatives to Improve ICT Ranking

MINISTRY OF COMMUNICATIONS
AND MULTIMEDIA MALAYSIA

Ministry Vision & Mission

VISION

Connected and Informed Society

MISSION

CONNECTING CITIZENS

01

02

BUILDING INFORMED SOCIETY

CREATE DIGITAL ECONOMY

03

04

BUILDING QUALITY CONTENT

Objective of the ICT Data Collection

1 ICT measurement is one of the key information in formulating and evaluating national ICT policies and strategies

2 Monitoring the Millennium Development Goals (MDG) and the ICT indicator are the critical input to drive Digital Economy

3 To provide ICT statistics for international and regional benchmarking

- ICT Development Index (IDI)
- Telecommunication Infrastructure Index UNEGDI
- Sustainable Development Goals (SDGs)

Role of Regulator in the Survey - MCMC

- Coordination of the project implementation
- Preparation of survey questionnaire & manual
- Report writing
- Data processing and analysis
- Dissemination of research outcome

Role of NSO – Department of Statistics Malaysia

- Selection of Enumeration Areas (EAs)
- Provision of Maps for the Enumeration Areas
- Technical Support and advice
- Recruitment and training of enumerators for the data collection
- Facilitation of training programme
- Data processing and analysis
- Report writing and dissemination

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Partnerships for the ICT Data Collection

REGULATOR

MCMC

NSO

Department of Statistics
M A L A Y S I A

MINISTRY OF EDUCATION

KEMENTERIAN PENDIDIKAN MALAYSIA

DATA SUPPLIER

ITU

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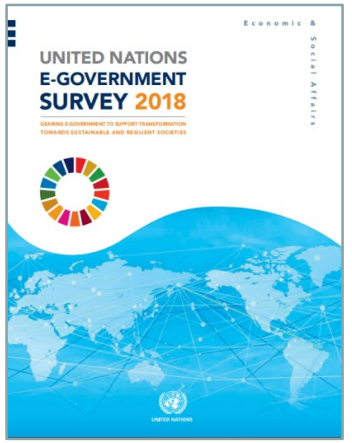
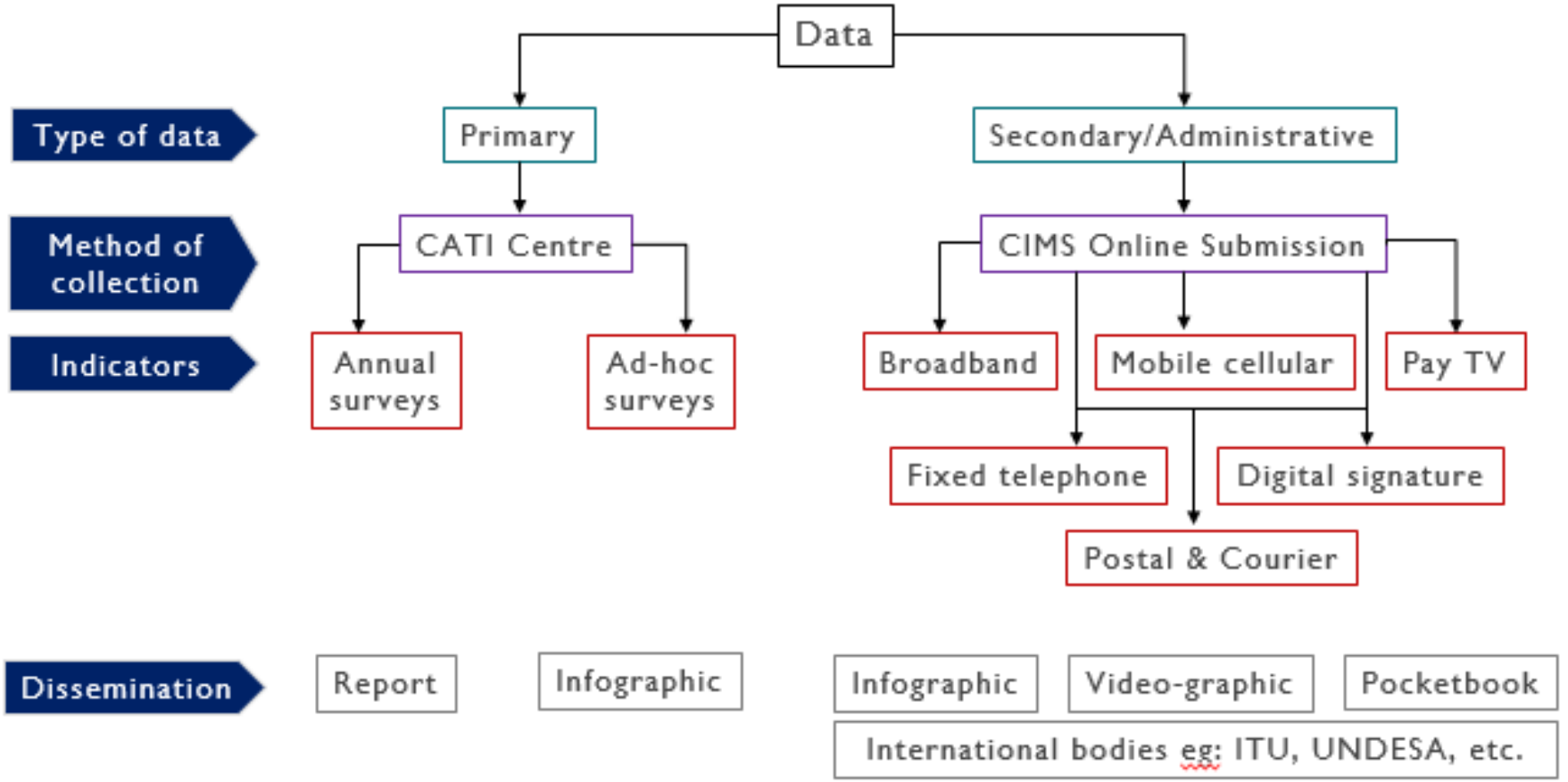
UNITED NATIONS
DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS



Telecommunication Data Collection - Services

Type of Services	Number of Service Operators	Total of Indicators
Broadband	25	5,604
Mobile	21	91
Fixed Line	10	301
Paid TV	2	136

Telecommunication Data Collection - Indicators

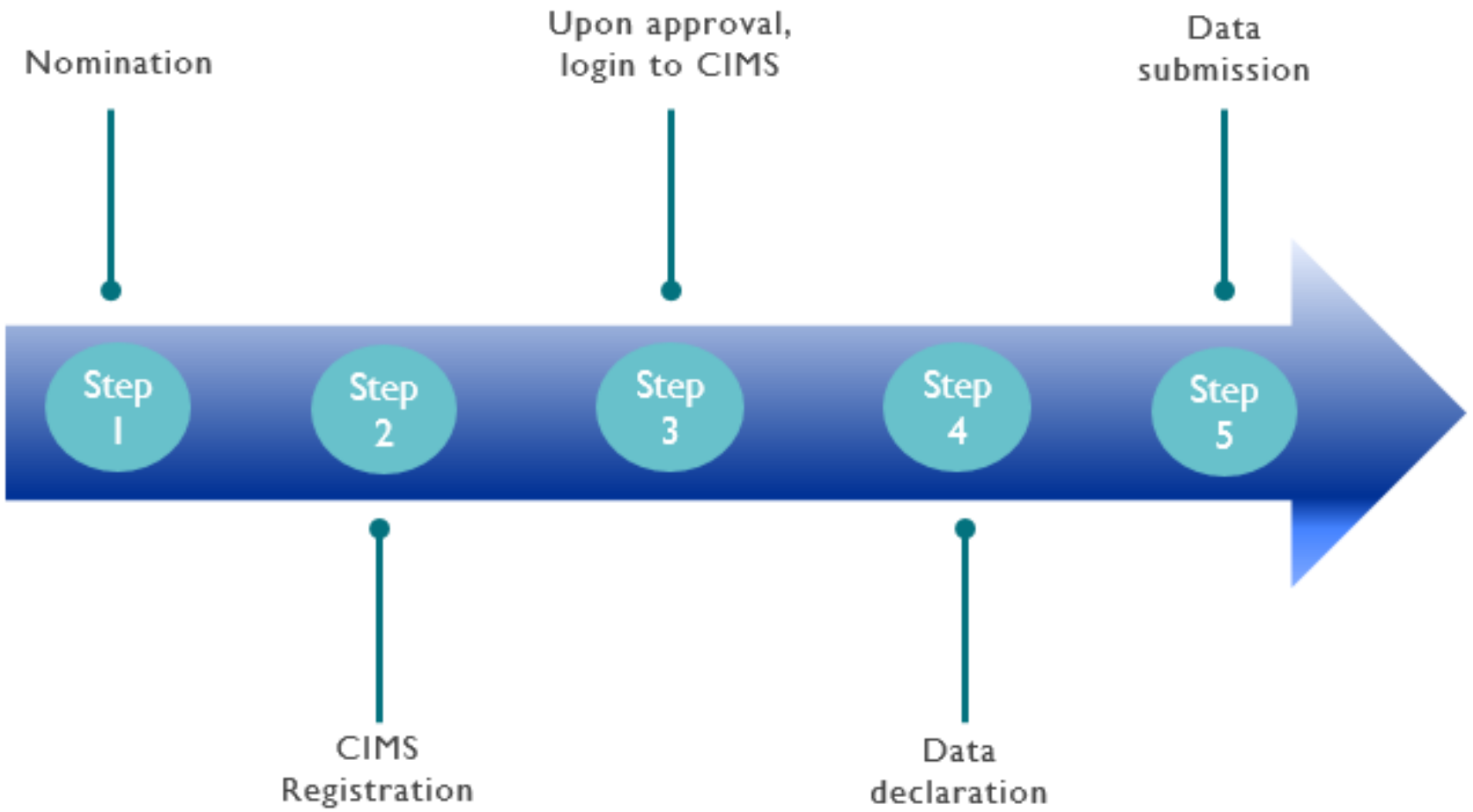


Telecommunication Data Collection - CIMS

CIMS - Communications Infrastructure Management System

Data Frequency	Submission Frequency	Due Date
MONTHLY	QUARTERLY	15th of month following the reference quarter ▪ Quarter 1 : 15th April ▪ Quarter 2 : 15th July ▪ Quarter 3 : 15th October ▪ Quarter 4 : 15th January

Telecommunication Data Collection - Process



Telecommunication Data Collection - Process

Step 1:

Companies must nominate 3 registered users which only these users will be given access to CIMS Statistics Module to perform data entry and data submission.

Nomination shall be made through Nomination Form provided by Statistics Department, and return the original form (with company stamp and authorised signature) by hand or post.

NOMINATION FORM

Telecommunication Data Collection - Process

Step 2:

All data submission shall be made online through Communications Infrastructure Management System (CIMS) and can be accessed via the following link:
https://cims.skmm.gov.my/cimsv3/cimsv3.html

New user may register by clicking "Register" button from the login page window and fill in registration form for new registration.

Telecommunication Data Collection - Process

Step 3:

Upon approval by MCMC, you may login to CIMS by using your IC No as username and password created during registration.

https://cims.skmm.gov.my/cimsv3/cimsv3.html

Telecommunication Data Collection - Process

Step 4:

Declare all services that your company provides to end users (i.e: fixed-broadband; mobile-broadband; fixed-telephone; etc.)

Telecommunication Data Collection - Process

Step 5:

Data key-in and submission may be done via Single Data Entry or Uploading Form.

i. Single Data Entry

Statistics > Broadband > Month > Type of broadband (Fixed/Mobile) > Choose indicators > Key-in data > Save > Submit

ii. Uploading Form

Statistics > Broadband > Month > Upload/Download Template > Select and download template by indicators > Key-in data accordingly > Upload the template into CIMS > Month > Submit

Telecommunication Data Collection - Challenges

01

Late data submission which not comply with the deadline given

02

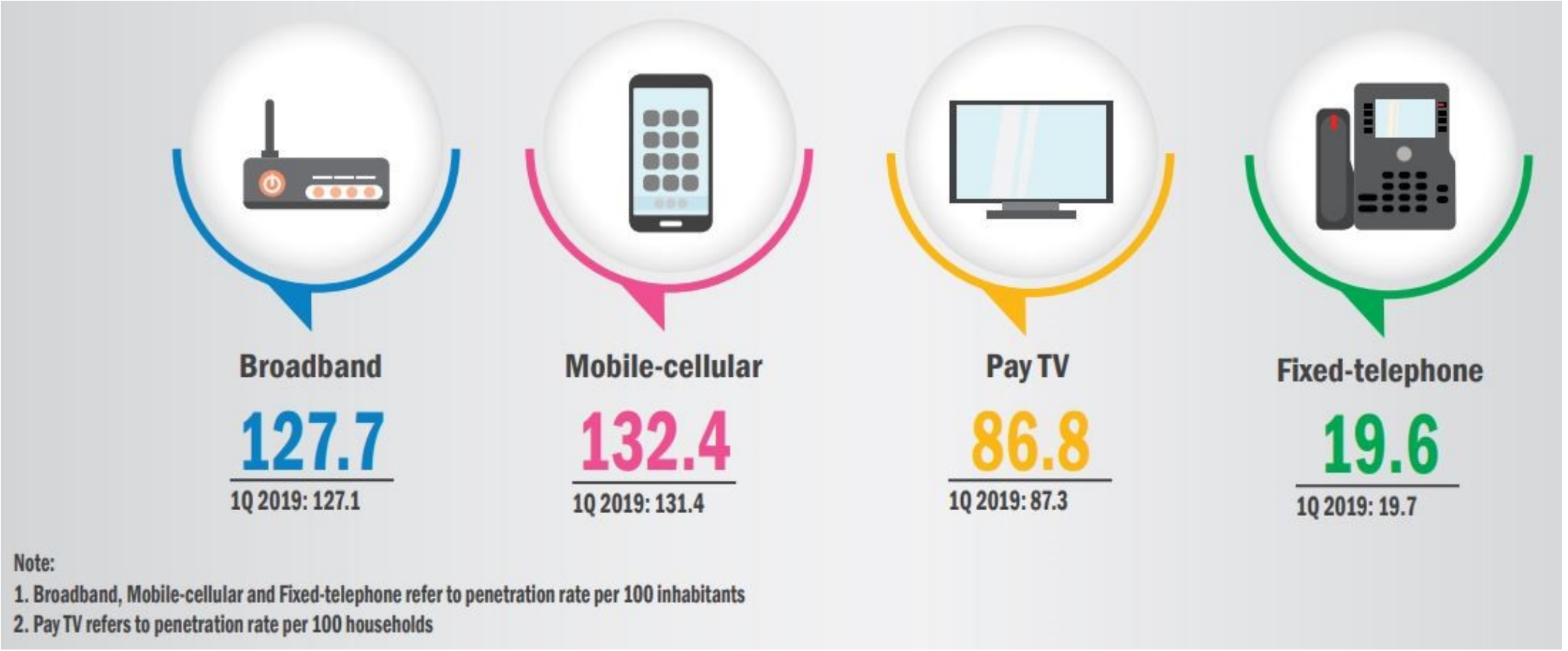
Some of the service provider could not submit some of the indicator needed because of the limitation on their systems

03

Service provider do not understand some the the indicator as requested

Telecommunications Penetration Rates (%)

Facts & Figures : 2Q 2019



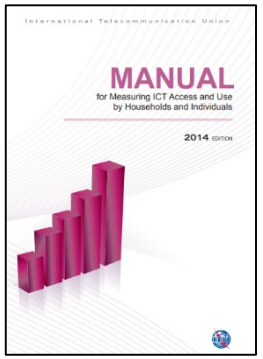
ICTHS – Background

Background

- ICTHS 1st time implemented in 2013
- Implemented biannually since 2014 and changed to yearly in 2017

Guidelines

Using the ITU - Measuring ICT Access and Use by Households and Individuals, 2014 as a formal guidelines.



01

Comprehensive Infromation

The main statistics produced:

- Access and use by households and inviduals for
  - i. Internet,
  - ii. Computer,
  - iii. Mobile,
  - iv. TV,
  - v. Paid TV
  - vi. Fixed telephone and
  - vii. Radio

02

03

04

Coverage and Act

- Include all 14 states in Malaysia
- Include all private household only
- About **36,536** samples of households is selected
- Comply with the Statistic Act 1965 (Revision 1989)

ICTHS – Indicators

ICT Development Index (IDI)

Household	Individual
a. % own radio*	a. % using computer**
b. % own tv*	b. % using Internet**
c. % own telephone*	c. % using Internet by places**
d. % own computer*	d. % using Internet by activities**
e. % access to Internet*	e. % using mobile phone**
f. % access to Internet by services*	f. % own mobile phone**
	g. % using Internet by frequency**
	h. Individual by ICT skills**

Note:
* By strata
** By strata, sex, age, occupation, education level and activity

ICTHS – Indicators (cont…)

Telecommunication Infrastructure Index (TII)

- OSI – Online Service Index
- HCI – Human Capital Index
- **TII – Telecommunication Infrastructure Index**
  - Individuals using Internet (% population) - **ICTHS**
  - Fixed-telephone subscriptions
  - Mobile-cellular subscriptions
  - Fixed (wired)-broadband subscriptions
  - Wireless broadband subscriptions

ICTHS – Benefits

ICT Survey as an National Input for

Sustainable Development Goals (SDG)

Provide statistics for SDGs indicators

4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skills **(ICTHS)**

5.b.1 Proportion of individuals who own a mobile telephone, by sex **(ICTHS)**

9.c.1 Proportion of population covered by a mobile network, by technology **(MCMC)**

17.6.2 Fixed Internet broadband subscriptions per 100 inhabitants **(MCMC)**

17.8.1 Proportion of individuals using the Internet **(ICTHS)**

National IT Council

Helping NITC to develop country policy which focusing on digital technology

ICT Satellite Account

Indicator used for ICTSA and also for survey on usage of ICT and e-commerce by establishment (ICTEC)

Integrated Strategic Intelligence & Transformative System (INSIGHTS)

INSIGHTS is an advanced data analytics platform to provide actionable and interactive insights for Digital Economy

ICTHS - Implementation Strategy

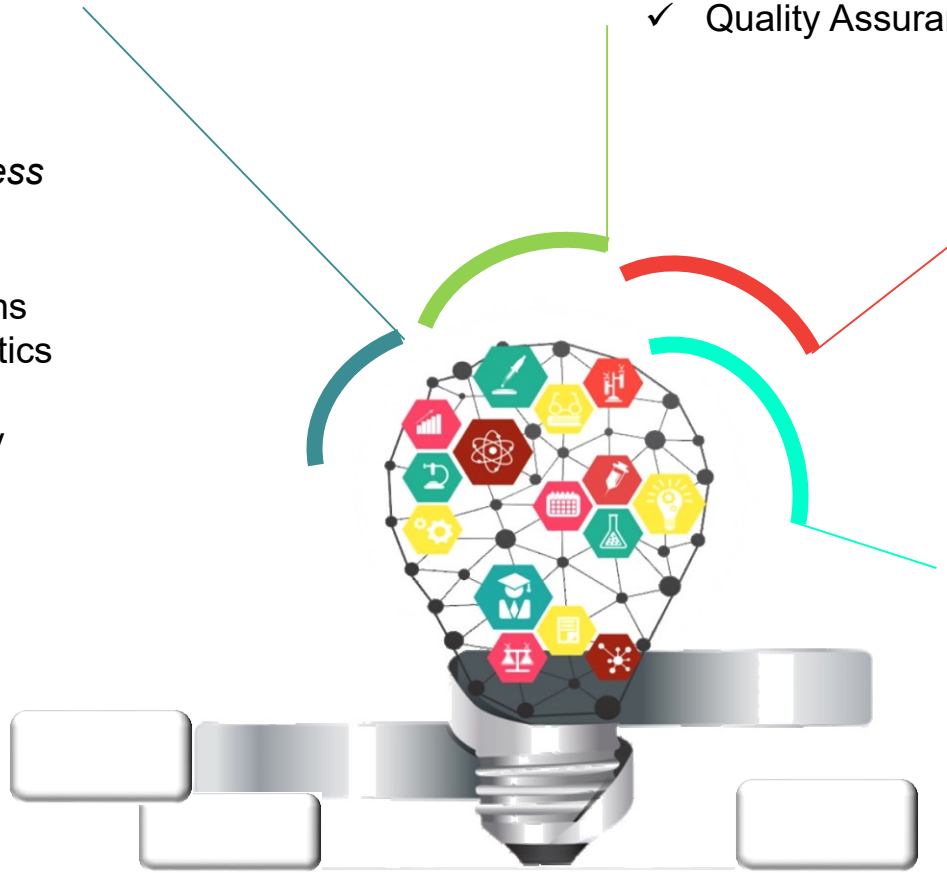
1 Standard & Systematic Approach

- ✓ Follows the ITU Manual
  - ❑ *Manual for Measuring ICT Access and Use by Households and Individuals*
- ✓ Using post-stratification for estimations within small area and key characteristics of population demographics
- ✓ Using probability sampling with justify accuracy up to district level

2 Improvement

NEW

- ✓ Analysis up to state and district area for ICTHS
- ✓ Improvement on Data Processing Systems
- ✓ Quality Assurance SOP



3 Use of Technology

- ✓ Improved access to data communication
  - ❑ Data visualization

4 Output

- ✓ 1 Main publication on ICT
- ✓ 14 publications as follows the all states

NEW

ICTHS – Implementation Timeline for 2019

Field works start on 9 September to 8 November 2019

DATA COLLECTION

DATA PROCESSING & ANALYSIS

10 September 2019 (**Processing Briefing**)
17 September to 18 November 2019

October 2019 to January 2020

PRODUCING REPORTS

PUBLICATIONS

February 2020

ICTHS – 2018 Results

ICT Access by Household

INTERNET
2018 : 87.0%
2017 : 85.7%
2015 : 70.1%
2013 : 58.6%

COMPUTER
2018 : 71.7%
2017 : 74.1%
2015 : 67.6%
2013 : 59.4%

MOBILE
2018 : 98.2%
2017 : 98.1%
2015 : 97.9%
2013 : 97.0%

TV
2018 : 98.6%
2017 : 98.5%
2015 : 98.4%
2013 : 98.2%

PAID TV
2018 : 73.1%
2017 : 72.3%
2015 : 68.7%
2013 : 56.1%

FIX LINE
2018 : 26.5%
2017 : 28.6%
2015 : 28.8%
2013 : 31.1%

RADIO
2018 : 95.7%
2017 : 94.9%
2015 : 92.1%
2013 : 78.1%

ICTHS – 2018 Results (cont...)

ICT Usage by Individual

2018 : 81.2%
2017 : 80.1%
2015 : 71.1%
2013 : 57.0%

2018 : 70.5%
2017 : 69.8%
2015 : 68.7%
2013 : 56.0%

2018 : 97.9%
2017 : 97.7%
2015 : 97.5%
2013 : 94.2%

ICT Development Index (IDI)

Indikator IDI:

ICT ACCESS

1. Fixed-telephone subscriptions per 100 inhabitants
2. Mobile-cellular subscriptions per 100 inhabitants
3. International internet bandwidth (bit/s) per internet user
4. Percentage of households with a computer
5. Percentage of households with internet access

ICT USE

6. Percentage of individuals using the internet
7. Fixed (wired)-broadband subscriptions per 100 inhabitants
8. Wireless-broadband subscriptions per 100 inhabitants

ICT SKILLS

9. Mean years of schooling
10. Secondary gross enrolment ratio
11. Tertiary gross enrolment ratio

Used to monitor and compare developments in ICT between countries and over time

Yearly Report
Source: International Telecommunication Union (ITU)

IDI Ranking

WORLDWIDE

	IDI 2016	IDI 2017
#1	Korea (Rep.) (8.80)	Iceland (8.98)
#2	Iceland (8.78)	Korea (Rep.) (8.85)
#3	Denmark (8.68)	Switzerland (8.74)
#4	Switzerland (8.66)	Denmark (8.71)
#5	United Kingdom (8.53)	United Kingdom (8.65)
#18	Monaco (8.03)	Singapore (8.05)
#62	Malaysia (6.22)	Oman (6.43)
#63	Moldova (6.21)	**Malaysia (6.38)**
#176	Central African Rep. (0.89)	Eritrea (0.96)

REGIONAL

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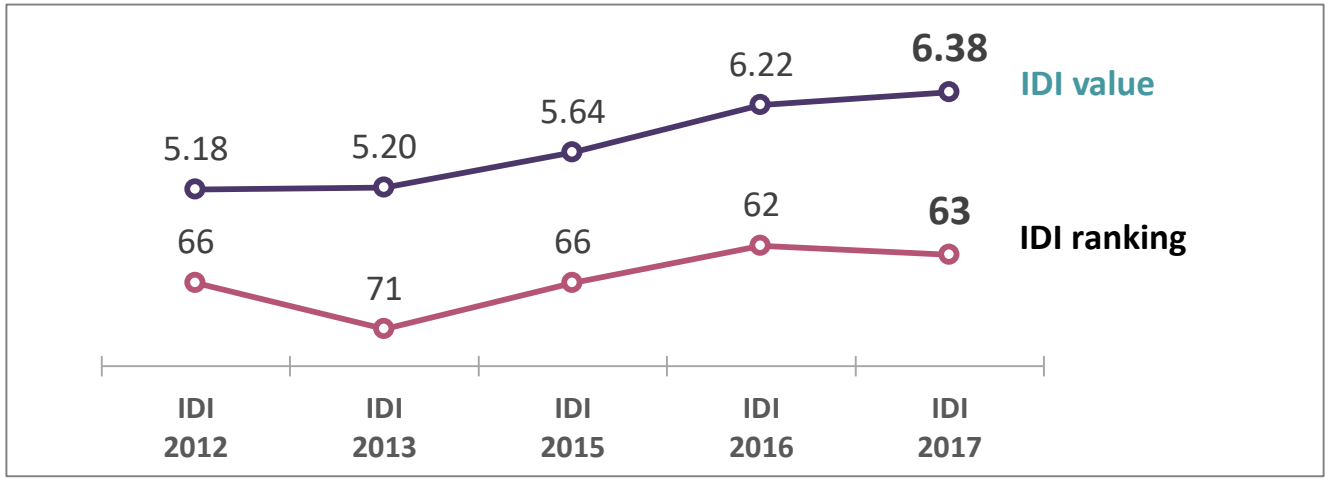
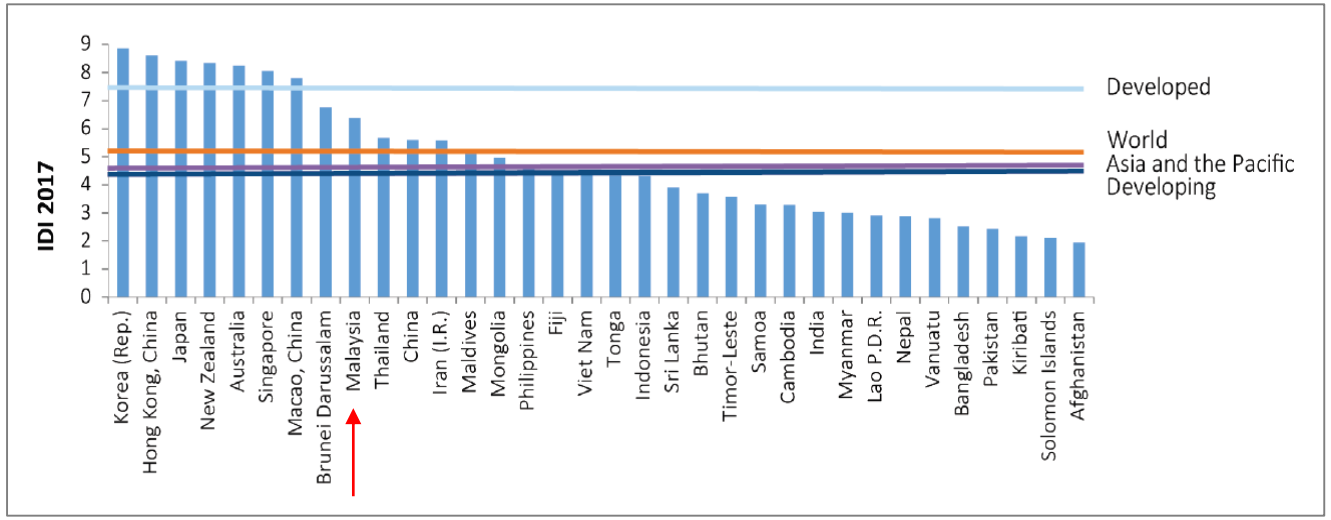
IDI Ranking



IDI 2017 VALUE - ASIA AND THE PACIFIC



- IDI value for Malaysia **exceeded** global, Asia and the Pacific, and Developing countries' IDI value
- **Improvement in Access sub-index**, due to increase in:
  - → International Internet bandwidth
  - → Households with computer
  - → Households with Internet access
- **Improvement in Use sub-index**, due to increase in:
  - → Internet users
  - → Mobile-broadband subscriptions

UNEGDI Ranking

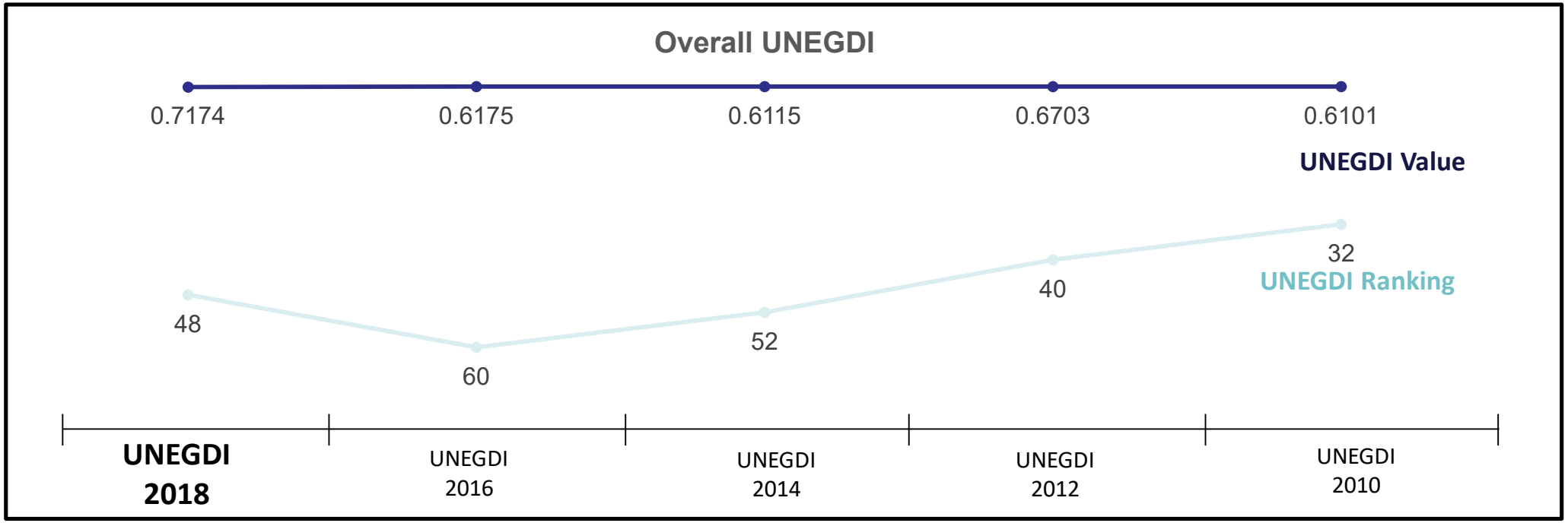
Index	2018		2016		2014	
	Rank	Score	Rank	Score	Rank	Score
UN E-Government Index (UNEGDI)	**48**	**0.7174**	**60**	**0.6175**	**52**	**0.6115**
a) Online Services Index (OSI)	28	0.8889	41	0.7174	32	0.6772
b) Telecommunication Infrastructure Index (TII)	59	0.5647	70	0.4397	67	0.4455
c) Human Capital Index (HCI)	100	0.6987	93	0.6953	96	0.7119

Responsible Ministries/Agencies:

- OSI : Malaysian Administrative Modernisation and Management Planning Unit (www.mampu.gov.my)
- TII : Ministry of Communications and Multimedia Malaysia (www.kkmm.gov.my)
- HCI : Ministry of Education Malaysia (www.moe.gov.my)
- Ministry of Economic Affairs : Monitors overall components -OSI, TII and HCI (www.mea.gov.my)

UNEGDI Ranking

Malaysia UN-eGovernment Development Index (UNEGDI) Position



- **EGDI Value** for Malaysia **exceeded** global, Asia and the South-Eastern Asia (**High EGDI Category)**

INSIGHTS

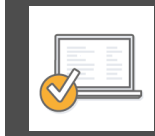
INTEGRATED STRATEGIC INTELLIGENCE AND TRANSFORMATIVE SYSTEM

INSIGHTS is an **advanced data analytics platform** to provide **actionable and interactive insights for Digital Economy**

(an 11th Malaysia Plan project under KKMM, and managed by MDEC;
pilot system development initiated since Feb 2017)

CENTRALISED PLATFORM

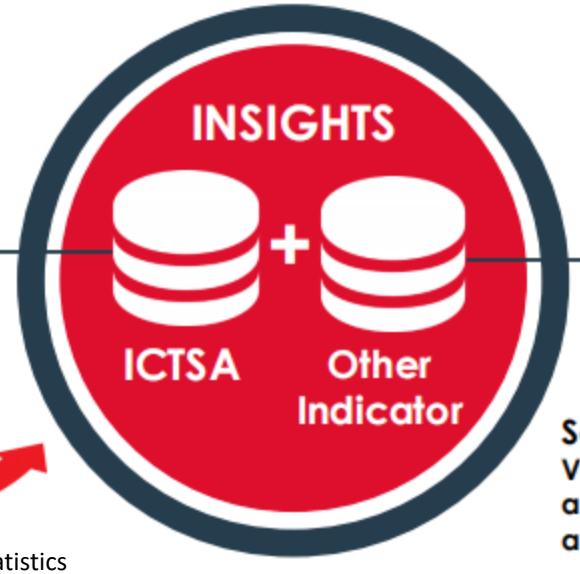
Secured Data Lake with Actionable Interactive Insights



Advanced **Analytics Platform**

INSIGHTS as a **single data analytic** platform for Digital Economy that **cut-across ministries & agencies**

INSIGHTS



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Sources:
Various ministries, agencies & private sector association/bodies

- Enable evidence-based **policy and operational decision makings**
- Aligning National-Level Initiatives for **Multiplier Effect**
- Improve Malaysia **Global Competitiveness** Intelligently

Datasets:

- **ICT Satellite Account (ICTSA) 6 primary indicators:**
  - ICT GDP Contribution
  - ICT Import & Export
  - ICT Employment
  - ICT Income
  - ICT Domestic Output
  - ICT Supply & Use
- **Usage of ICT by Businesses and e-Commerce**
- **ICT Household Survey**
- **Published national/international reports** (selected)
- **Ministry/agency-level data sets** (based on use-case)

Commitment to Improve ICT Rankings

1 INFRASTRUCTURE

Expanding and upgrading the coverage through :

A. National Fiberisation Connectivity Plan (NFCP) – 7 Key Objectives
B. 5G Task Force – Comprehensive Report and Test Bed
C. Terragraph Projects

National Fiberisation and Connectivity Plan (NFCP)

5G MALAYSIA

2 POLICY

- ❑ Continuous engagement with International Organization
- ❑ Provide an up-to-date and accurate data
- ❑ 2018-Double the speed at half price – Rank 35 (Speed Test Global Index) August 2019 at 74.87 Mbps
- ❑ Proper coordination with the data supplier i.e MCMC and DOSM
- ❑ Enforcement policy to equip with fiber optic technology for every building development projects
- ❑ Tax incentives for purchasing of mobile phones, computers and Connectivity Plan

3 PROMOTIONS

- ❑ Improve training in ICT, online business and e-commerce
- ❑ Offer an attractive promotions on fixed telephone, wired and wireless broadband subscriptions

THANK YOU | Terima Kasih

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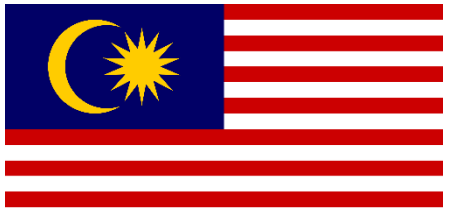

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