



جهاز التخطيط والإحصاء
Planning and Statistics Authority
دولة قطر • State of Qatar



Regional Workshop on the Changing Role of Official Statistics in the State of Qatar: Why Data Culture Matters

21st -22nd September 2022, Doha, Qatar
Pullman Hotel, Al Thuraya Ballroom - West Bay

ورشة العمل الإقليمية حول الدور المتغير للإحصاءات الرسمية في دولة قطر: ثقافة البيانات مهمة

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JABATAN PERDANA MENTERI
JABATAN PERANGKAAN MALAYSIA

DATA GOVERNANCE vs DATA STEWARDSHIP: WHAT IS THE ROLE IN STREAMLINING THE NATIONAL STATISTICAL SYSTEM?: MALAYSIA'S EXPERIENCE

***22nd September 2022
11.55 am - 12.10 pm***

by:

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2016 - 2030



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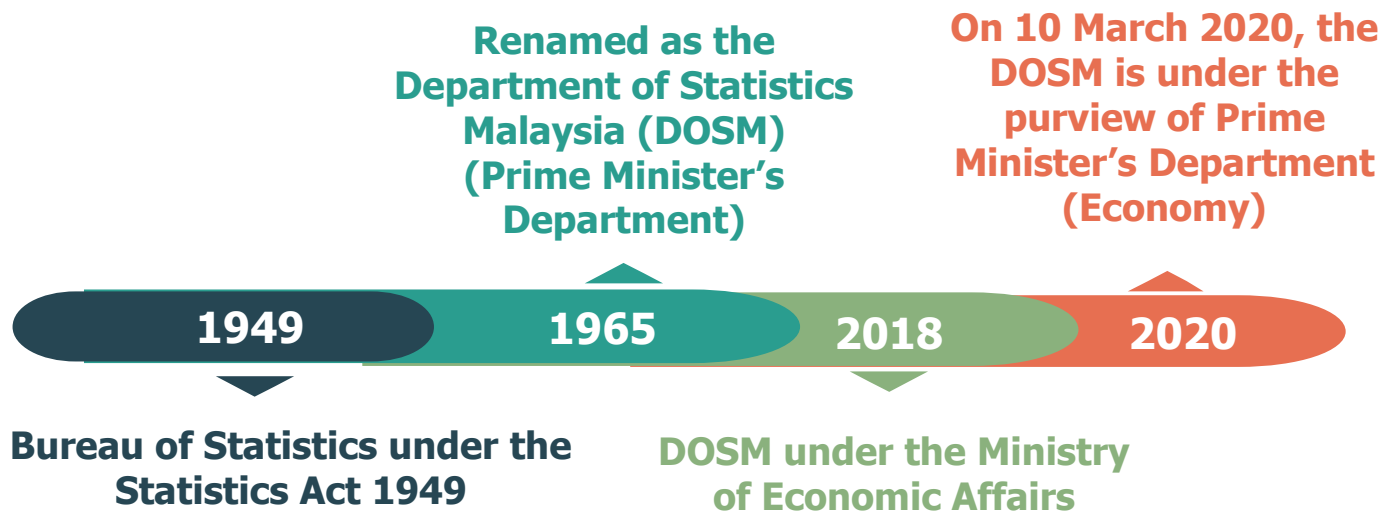
INTRODUCTION TO DOSM STATISTICAL SYSTEM



CENTRALISED STATISTICAL SYSTEM

- The integration of the entire process of data collection, interpretation and dissemination is done **under one roof.**
- **'One stop centre'** - convenient and efficient for users to secure statistical materials in various fields from a single source.

EVOLUTION



LEGISLATION

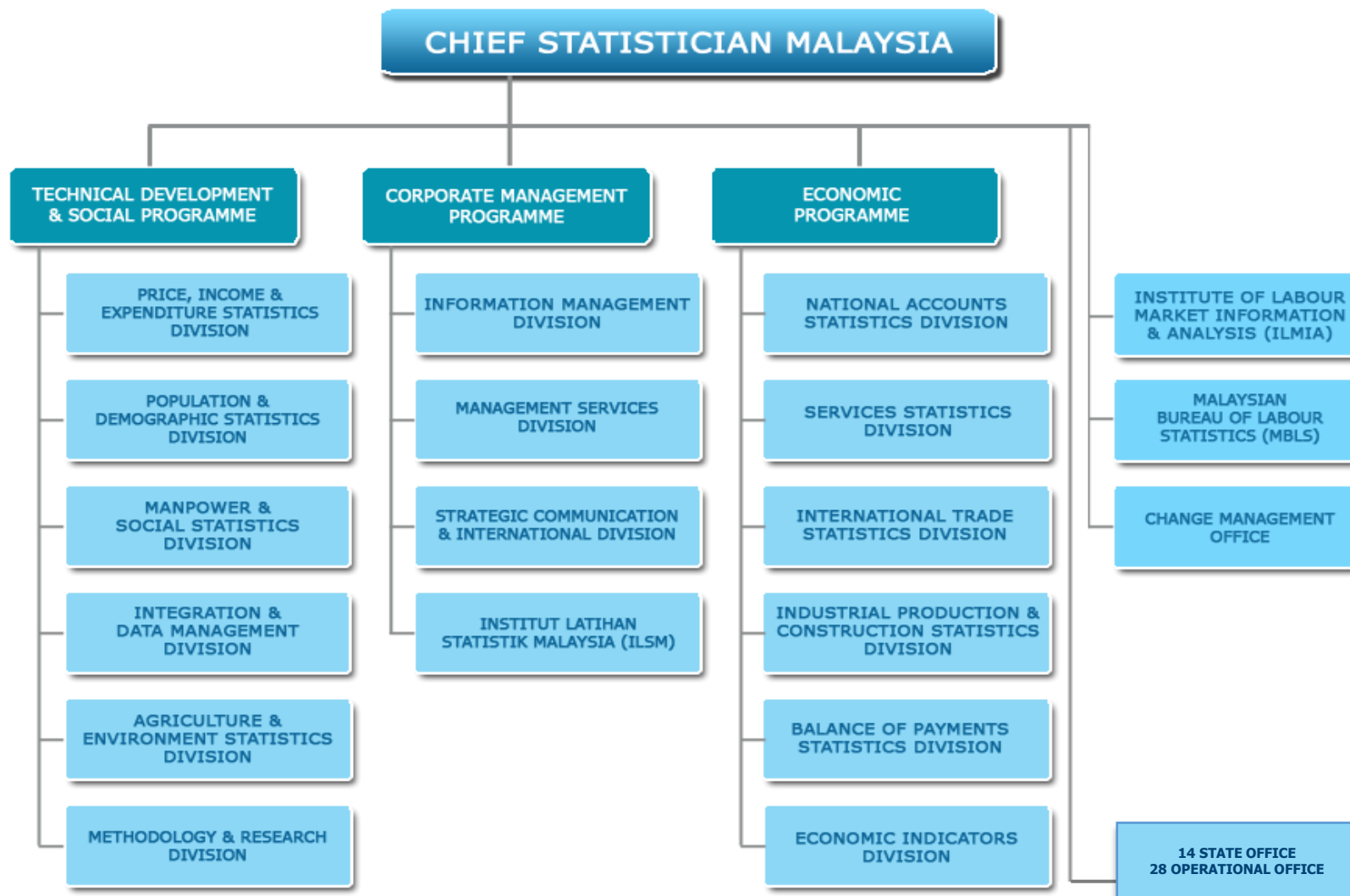
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| LAWS OF MALAYSIA Act 415 STATISTICS ACT 1965 (REVISED-1989) Under the Statistics Act 1965 (Revised - 1989), the functions of DOSM [Section 2] are: To collect and interpret statistics for the purpose of formulation or implementation of government 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.... |
|---|---|

Statistics Act 1965 (Revised-1989)

Census Act 1960 (Revised-1969)



ORGANISATION CHART



Structure of DOSM

- 3** Core Programmes
- 16** Divisions
- 2** Institutes
- 1** Change Management Office
- 14** State Offices
- 28** Operational Offices

Manpower : **3,426 people**
14.6% professional

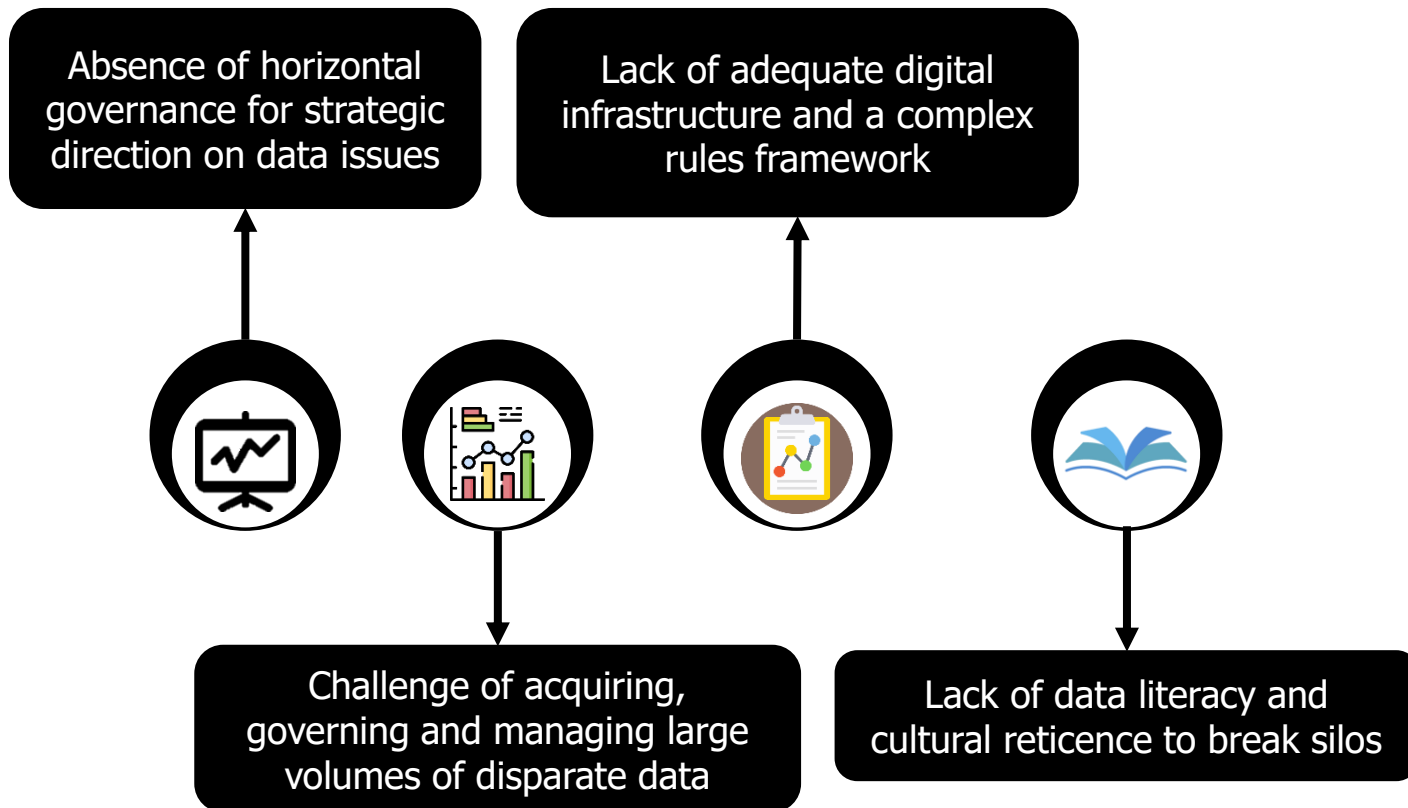




The Need for Data Governance



Why do we need Data Governance?



Benefits Data Governance:

- Data is an asset that MUST be managed from an agency-wide perspective.





Introduction of Data Governance and Data Stewardship



“At a basic level, data governance and strategy oversight mean orchestrating people, processes & technology to ensure we use and manage data based on our principles – at global, regional or country level. In general, our governance should focus on creating value for stakeholders, in ways that help everyone get work done, with respect for rights, security, accountability & data quality.”

- UN 2020-2022 -

Change in the environment and new data ecosystem

- ✓ What will be the role of NSOs and official statistics in the society?
- ✓ How will NSOs respond to the new data ecosystem?
- ✓ How to built trust in producing statistics?
- ✓ How can we co-ordinate work and information between data and information provider?
- ✓ How can we become more user-centric (with real-time need) and ensure that the society maintains great trust in us?

- New demands and new opportunities were brought along by an increasingly interconnected, dynamic and digitized statistics.
- Data abundance, privacy protection, data security and accessibility issues has raised the importance of an advanced governance ecosystem.

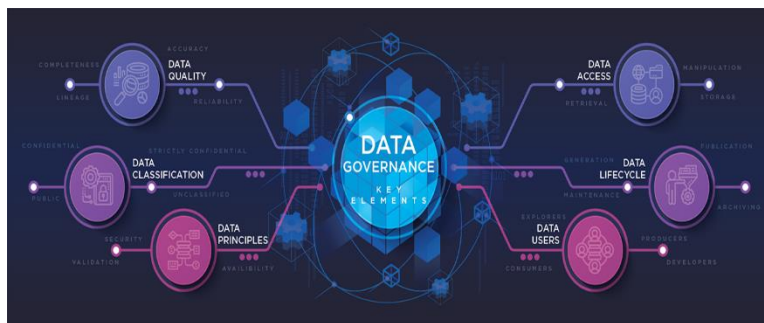
Malaysia is adapting and evolving in the data ecosystem as well as data governance and data stewardship.



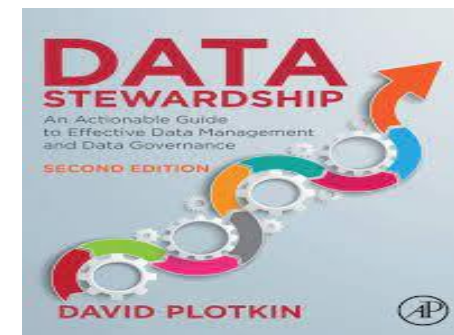


Data Governance

A system of decision rights and accountabilities for the management of the availability, usability, integrity and security of the data and information to enable coherent implementation and co-ordination of data stewardship activities as well as increase the capacity (technical or otherwise) to better control the data value chain, and the resulting regulations, policies and frameworks that provide enforcement.



DEFINITION



Data Stewardship

- Data Stewardship is in general operating in service of, rather than in control of the data ecosystem
- Data Stewardship is not about getting/transferring ownership on data from custodian organizations, but rather sharing and collaboratively improving across the data ecosystem governance, data interoperability and production processes, know-how and technology, literacy and communication

“There are no globally agreed definitions of data governance or data stewardship. The concept of data governance has been interpreted in a variety of ways.”

– UNESCAP Committee on Statistics Eighth session Bangkok and online, 23–25 August 2022



Roles to be considered by NSOs in perspective of new data ecosystem.

1. Encourage other government bodies to review their data quality, especially for administrative sources.
2. Initiate discussions within national governments on how they could be involved in the elaboration of national data strategies, either in an advisory or leadership role.
3. Start discussions within the national governments in order to establish a legal system enabling use of data.
4. Develop analytical capabilities, more specifically in the areas of data literacy, data science and data engineering, to support effective data management.
5. Work closely with the international community in sharing experience in data governance.



The advantages of sound governance and coordination:

- Efficiency and synergies of operations by avoiding overlapping efforts, duplication of work and reducing the response burden through data sharing
- Effectiveness by addressing demands for data and statistics in an organized and timely manner through the capability to jointly produce expected outputs
- Quality, coherence, comparability and accessibility of data and statistics within and across domains through the harmonization of methodology, classifications and dissemination channels
- Develop a corporate identity, and secure trust in data and statistics.

Source: UNSD



Governance Agenda

The strengthening of the National Statistics System will have a positive impact, including ensuring the availability of more comprehensive data in the government sector in formulating short-term and long-term national policies.

- 1 **Change Management Office (CMO)**
- 2 **National Statistics and Data Council**
- 3 **Chief Data Officer (CDO)**
- 4 **Amendments of Statistics Act 1965 (Revised 1989)**
- 5 **National Big Data Analytic Centre (NBDAC)**
- 6 **DOSM as the Central Agency**
- 7 **Capacity Building:**
 - Organisational Restructuring
 - Subject Matter Expert
 - Statistics Intelligence Centre of Excellence



Governance Agenda

- The National Statistics and Data Council has been formed as the highest advisory body with regards to national data and analysis in the country that will provide guidelines to strengthen the management of the national statistics system.
- Chaired by the Prime Minister, members in the National Statistics and Data Council includes nine Cabinet members or their deputies, Chief Secretary to the Government, Chief Statistician as well as technocrats, academicians and representatives from the private sector.
- Executive Committee (EC) of the National Statistical and Data Council consist of 4 clusters:
 - Economy, Agriculture and Industry Cluster;
 - Infrastructure, Technology and Environment;
 - Wellbeing, Security and Health Cluster;
 - Education, Social and Population Cluster.
- Moving forward, the statistics and data council at the state and district level will also be established to support the National Statistics and Data Council's agenda at the federal level.





Governance Agenda

State Statistics and Data Council

- State Statistics and Data Council will be established as the highest Council at the state level in planning and determining the direction to strengthen the coordination of state and district statistics.
- Chaired by the State Chief Minister, members in the State Statistics and Data Council includes heads of state governments.

District Statistics and Data Council

- District Statistics and Data Council is responsible to report the implementation of statistical activities for each district to the State Secretary who is a member of State Statistics and Data Council. This council also responsible to formulate strategy, coordination governance and data management of the public and private sectors at the district level.
- Chaired by the District Officer, members in the District Statistics and Data Council includes government chief officers from various agencies in the district.



Data Governance : Core Areas



There are 6 core areas for data governance framework

People and Culture

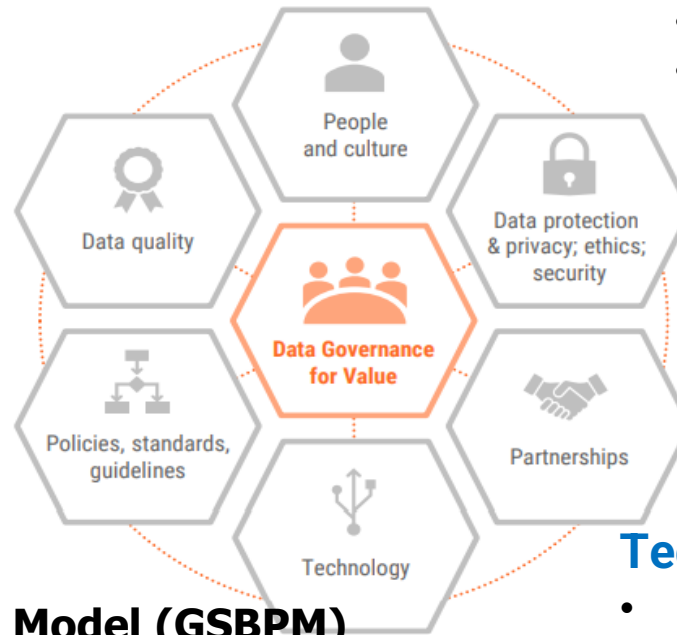
- Chief Data Officers (CDOs)
- Statistical Competencies Development Programme (SCDP)
- Data Scientists SAS
- Big Data Analytics Core Team
- Subject Matter Experts (SMEs)

Policies, Standards and Guidelines

- Statistics Act 1965 (revised 1989)
- Census Act 1960
- DOSM Strategic Plan
- General Statistical Business Process Model (GSBPM)
- Generic Activity Model for Statistical Organisations (GAMSO)
- Statistical Business Architecture (SBA)
- Micro Data Dissemination Policy

Data Quality

- Generic National Quality Assurance Framework (g-NQAF)
- Sound Methodology



Partnership

- MOU's for Data Sharing
- Collaboration with Agencies

Data Protection & Privacy; Ethics; Security

- Public Sector Data Sharing Policy (DPDSA)
- National Data Sharing Policy (NDSP)
- Personal Data Protection Act 2010 (PDPA)

Technology

- National Enterprise-Wide Statistical System (NEWSS)
- Integrated Population Census System (MyIPCS)
- StatsBDA
- StatsDW
- Stats Geoportal
- OpenDOSM

Source: United Nations' "Data Strategy of the Secretary-General for Action by Everyone, Everywhere, 2020-2022"



Stewardship Agenda



Under the strengthening of national statistical system, **DOSM has designated Chief Data Officers (CDOs)**

Who serve as Chief Data Officer in:

- Ministries/Agencies
- State level
- District level

In order to enhance capacity building of statisticians:

- **Statistical Competencies Development Programme (SCDP)**

This programme (3 months course) was created for new statisticians to develop their skills and knowledge in statistical subject matter and tools.

- **SAS Certified Data Scientists**

A group of certified statisticians who has undergone SAS course.

- **Big Data Analytics Core Team**

A team specialized for analyzing big data.

- **Subject Matter Experts (SMEs)**

SMEs specialized in national account, data scientist, survey methodology, labor force, population and demography.





Governance Agenda

Statistics Act 1965 (revised 1989) and Census Act 1960 (revised 1969)

to empower and support the strengthening
of the National Statistical System.

LEGISLATION

**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
(Revised-
1969)**



DOSM Strategic Plan



To ensure that DOSM remains relevant in the delivery of statistical services, the plans as below have been designated for better governance and future needs.

- DOSM Strategic Plan, 2021-2025
- ILSM Strategic Plan, 2021-2025
- DOSM Digitalisation Strategic Plan, 2021-2025
- Information Technology Strategic Plan, 2021-2025

DOSM Strategic Plan (DSP) 2021-2025 which highlights better accessing data where:

- DOSM as a Central Agency will be capable to access and share data at granular level.
- National Statistics and Data Council which is lead by the Prime Minister and DOSM as a Central Agency for statistical matters will drive better access of data for all users.



Governance Agenda

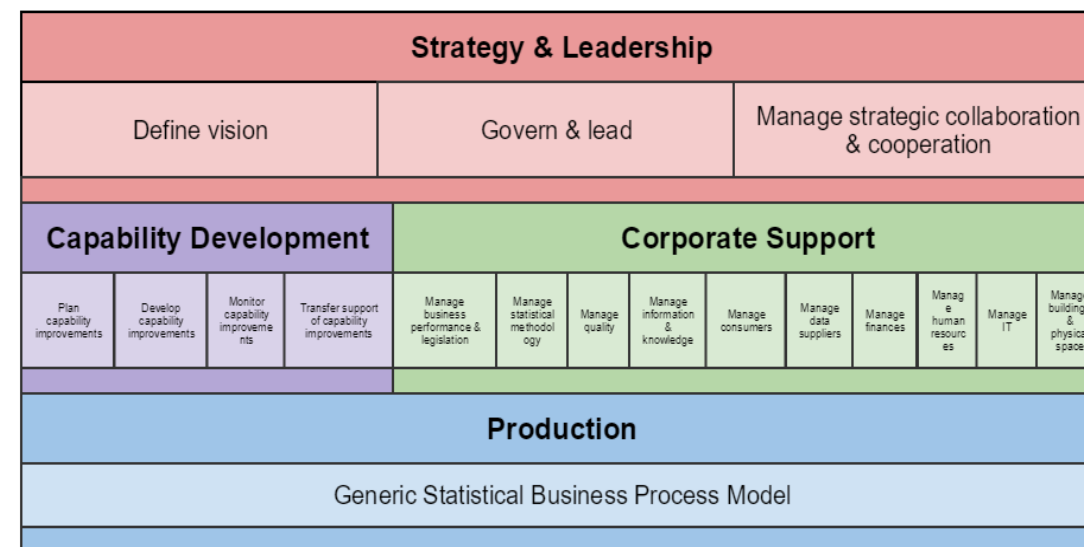
General Statistical Business Process Model (GSBPM)

The GSBPM adopted by DOSM and has always been the reference in modernising the core functions through ICT such as National Enterprise-Wide Statistical System (NEWSS) and StatsDW.

| Specify needs | Design | Build | Collect | Process | Analyse | Disseminate | Evaluate |
|--------------------------------------|--|---|------------------------------------|------------------------------------|-----------------------------------|--|------------------------------|
| 1.1 Identify needs | 2.1 Design outputs | 3.1 Reuse or build collection instruments | 4.1 Create frame and select sample | 5.1 Integrate data | 6.1 Prepare draft outputs | 7.1 Update output systems | 8.1 Gather evaluation inputs |
| 1.2 Consult and confirm needs | 2.2 Design variable descriptions | 3.2 Reuse or build processing and analysis components | 4.2 Set up collection | 5.2 Classify and code | 6.2 Validate outputs | 7.2 Produce dissemination products | 8.2 Conduct evaluation |
| 1.3 Establish output objectives | 2.3 Design collection | 3.3 Reuse or build dissemination components | 4.3 Run collection | 5.3 Review and validate | 6.3 Interpret and explain outputs | 7.3 Manage release of dissemination products | 8.3 Agree an action plan |
| 1.4 Identify concepts | 2.4 Design frame and sample | 3.4 Configure workflows | 4.4 Finalise collection | 5.4 Edit and impute | 6.4 Apply disclosure control | 7.4 Promote dissemination products | |
| 1.5 Check data availability | 2.5 Design processing and analysis | 3.5 Test production systems | | 5.5 Derive new variables and units | 6.5 Finalise outputs | 7.5 Manage user support | |
| 1.6 Prepare and submit business case | 2.6 Design production systems and workflow | 3.6 Test statistical business process | | 5.6 Calculate weights | | | |
| | | 3.7 Finalise production systems | | 5.7 Calculate aggregates | | | |
| | | | | 5.8 Finalise data files | | | |



Generic Activity Model for Statistical Organisations (GAMSO)



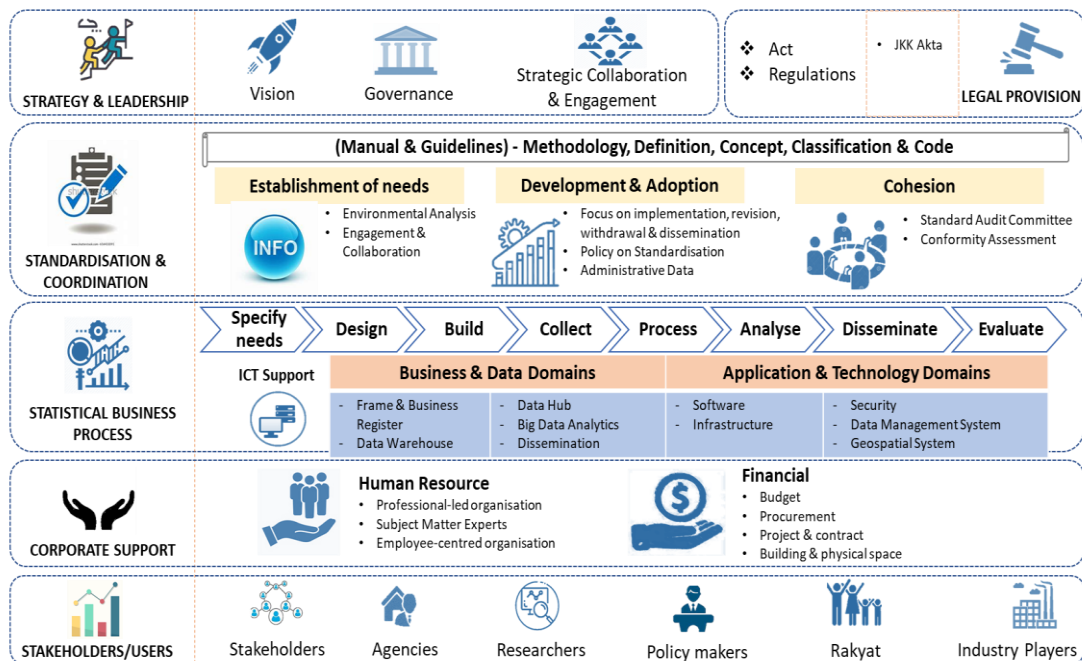
DOSM also adopted GAMSO that extends and complements the GSBPM by adding additional activities needed to support statistical production.



Governance Agenda

Statistical Business Architecture (SBA)

Covers all activities undertaken by a National Statistical Organisation (NSO) to conceptualise, design, build and maintain information and application resources used in the production of statistical outputs.



Micro Data Dissemination Policy

Guidelines for the handling and provision of micro data to users. This policy is prepared in accordance with the provisions of Section 4.(2) of the Statistics Act 1965 (Revised-1989) and aims to:

- i. Provide systematic guidelines in the process compilation and access to micro data;
- ii. Create uniform and user-friendly micro data request and dissemination procedures;
- iii. Ensure the confidentiality of respondent/organization information is always maintained.



Stewardship Agenda

Memorandum of Understanding (MOU) for Data Sharing

DOSM has been working in close collaboration with both government & non-government agencies through **38 MOUs** as the initiative to established strategic partnerships to increase the use of statistics.



8
Government
Agencies



6
Private
Agencies



16
Public
Universities



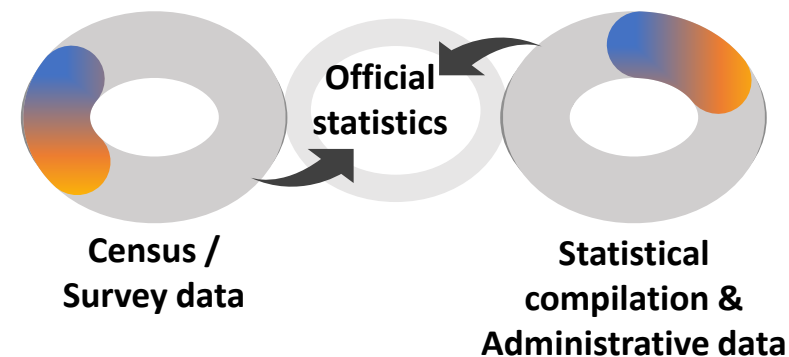
7
Private
Universities



1
International
Agency

Collaboration with Agencies

Collaboration between producers and users within Government and across other communities (i.e. private sector, academia etc.) and improved coordination by brokering new partnerships to ensure data of public interest that is relevant, interoperable, comparable, and meets needs.



A total of 122 agencies shares data with DOSM in various medium:

| Categories | Num. of Agency |
|----------------|----------------|
| Government | 70 |
| Statutory Body | 32 |
| Private | 20 |

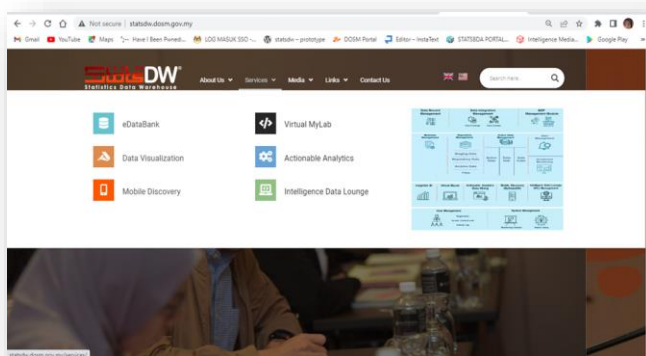


Stewardship Agenda

Currently, DOSM has modernized the process of data production, storage, dissemination through latest technologies such as National Enterprise-Wide Statistical System, NEWSS (centralized system for operational and data capture purposes), StatsDW (Data Warehouse) and Integrated Population Census System which support the operation and processing of data for Malaysia Population and Housing Census 2020.



National Enterprise-Wide Statistical System



StatsDW (Data Warehouse)

Integrated Population Census System (MyIPCS)



Census Mode

- e-CENSUS**  **SELF RESPONSE VIA ONLINE**
Online declaration
- CATI**  **COMPUTER ASSISTED TELEPHONE INTERVIEW**
Telephone interview
- CAPI**  **COMPUTER ASSISTED PERSONAL INTERVIEW**
Face to face interview using tablet
- PAPI**  **PAPER AND PEN INTERVIEW**
Face to face interview
- DOPU**  **DROP OFF AND PICK UP**
Self declaration by respondent



Technology (cont'd)



Stewardship Agenda



Trade by Enterprise Characteristic (TEC)

Integration of MSBR micro data and international trade to obtain more information without conducting surveys

Price Intelligence (PI)

Extract the prices of selected products from the internet through web crawling methods

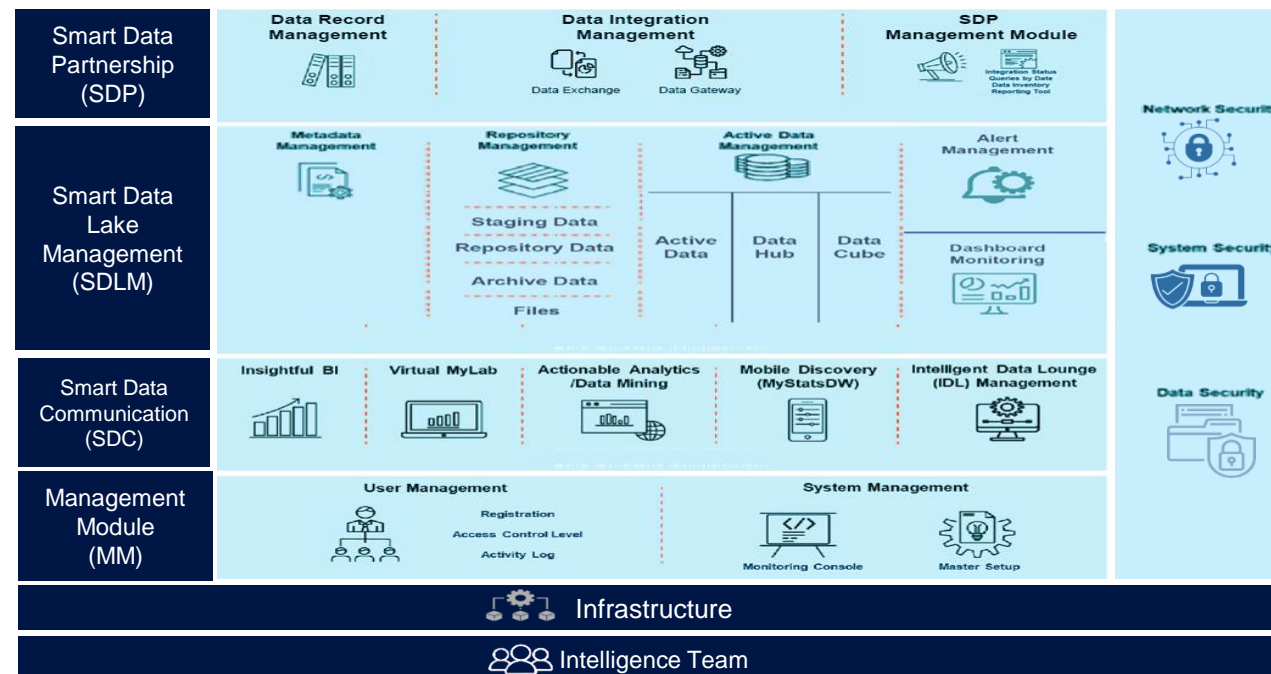


Public Maturity Assessment on Official Statistics (PMAOS)

Determine the "degree of happiness" of the community on the official statistics published through sentiment analysis



StatsDW will facilitate the storing, retrieving, processing activities of data for more efficient organising, administration, governing and securing of datasets. Now, StatsDW has enable DOSM to become the central data repository platform to other government agencies and has integrate with several government agencies system through API for data sharing.





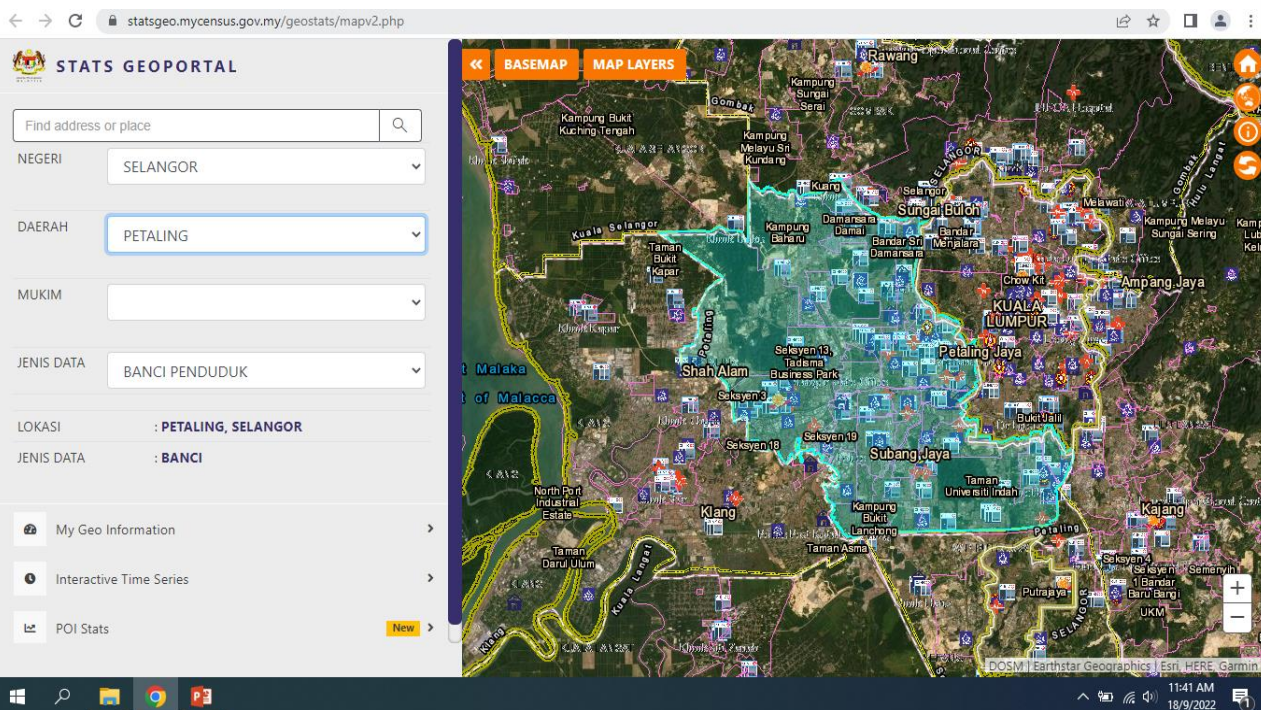
Technology (cont'd)



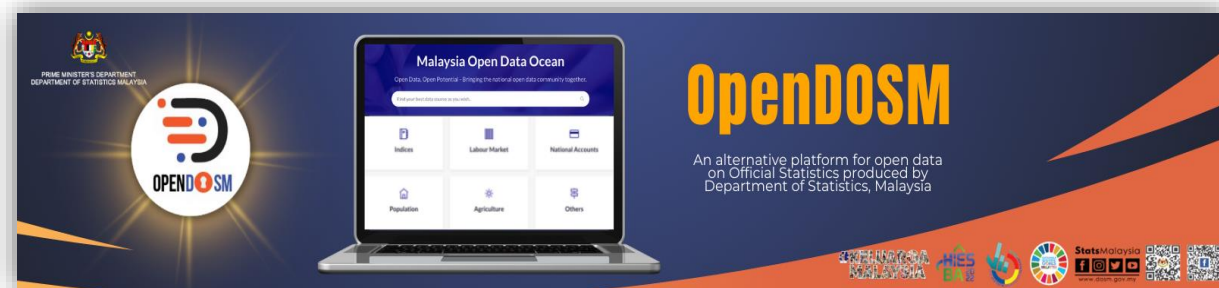
Stewardship Agenda

Stats Geoportal

Stats Geoportal was developed to facilitate access to various geospatial information that is essential in planning and development. Stats Geoportal provide services to the people through online to obtain Malaysian mapping information.



OpenDOSM



OpenDOSM is an alternative platform for open data on official statistics produced by DOSM.

This is an initiative to expand the open data audience and to promote open data usage among public.

Datasets available here covers wide range of topics, including, social, economic & financial and environment.



Governance Agenda

Public Sector Data Sharing Policy (DPDSA) and National Data Sharing Policy (NDSP)

There are **two policies** related to data sharing between government agencies:

- **Public Sector Data Sharing Policy (DPDSA)** published by Malaysian Administrative Modernisation & Management Planning Unit (MAMPU).
This policy provides guidance to Public Sector Agencies in implementing authentic, secure and effective data sharing by emphasizing compliance with data sharing principles and the provision of an efficient and secure data sharing ecosystem.
- **National Data Sharing Policy (NDSP)** published by the Ministry of Communications and Multimedia.

Both policies needed permission from data owners to users for access to micro data at agency level.

Personal Data Protection Act 2010 (PDPA)

Personal Data Protection Act 2010 (PDPA), which deals with personal data and focuses on regulating the processing of 'personal data' in commercial transactions. The PDPA is an Act that regulates the processing of personal data in regard to commercial transactions. It was gazetted in June 2010. This Act regulates all companies who process personal data in commercial transactions.



Governance Agenda

Generic National Quality Assurance Framework (g-NQAF)

To maintain a culture of quality in the organization as well as supporting quality improvement from time to time.

Sound Methodology

Referring to international manual and recommendation includes framework and guideline.

i.e. A Handbook of Principles and Practices Using Administrative and Secondary Sources for Official Statistics.



Challenges



1. Tools and Technology
2. Lack of Mutual Agreement
3. Legal and Regulatory Frameworks
4. Inconsistencies in Methodology and specifications
5. Insufficient Data Literacy
6. Capacity Building
7. Advocate for and Promote a Rich and Flourishing Data Ecosystem



Moving Forward



1. As new data sources become available and the society's expectations are changing regarding what new information data and statistics can provide, DOSM is moving towards developing data governance and data stewardship frameworks.
2. DOSM took into consideration the six core areas as mentioned by United Nations in order to develop our own data governance and data stewardship frameworks.
3. Effective communication promoting DOSM's statistical services is crucial for creating win-win partnerships with policy makers, other government agencies either at federal or state levels and the private sector.
4. The international statistical bodies could establish standard data governance and data stewardship frameworks as reference for NSOs to build their own frameworks.

"STATISTICS BLOOM IN HARMONY"

Doesn't matter far or near
Strength in numbers
we don't live in fear

Birds of feather flock together
Statistics our form of adour
We, will always live it up

So let us live in solidarity
And in the world arena we'll succeed
It is statistics that will come to be
The reason we will bloom in
harmony

Everybody undivided
Data's where our hearts reside in
There will always be a bind

Just like fire that ignites
That's how brightly lit our dreams are
We'll reach higher than the stars

Sending love to one another
Leaving no one in a slumber
We will stand with unity

Mustering our courage while
Embracing our disparities
We'll achieve our victory

One dream with unity
One love with harmony



"STATISTICS BLOOM
IN HARMONY"
VIDEO

<https://bit.ly/StatisticsBloomInHarmony>

THANK YOU



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