



National Statistical Office

SDMX DATA GOVERNANCE AND MANAGEMENT

# Enhancing Thailand Data Governance for statistical exchange by using SDMX standard



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THE 9TH SDMX GLOBAL CONFERENCE  
29 OCT-2 NOV 2023

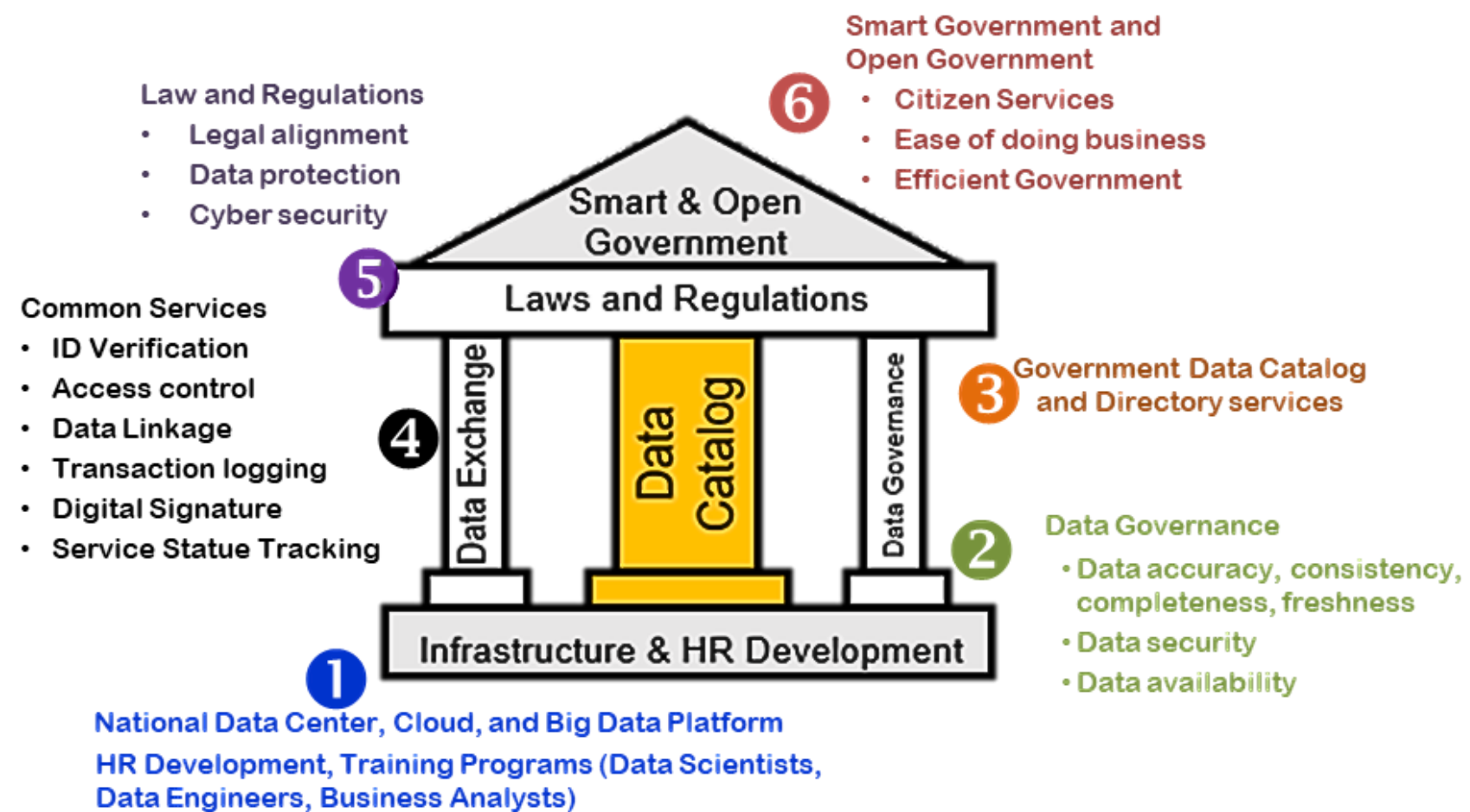


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# 01. Thailand Data Governance and Stewardship

## The Government Data Service Framework



Source : <https://gbdi.depa.or.th/SL-Bigdata-framework-book>  
<https://www.oecd-ilibrary.org/sites/2ab0c605-en/index.html?itemId=/content/component/2ab0c605-en#section-d1e14508>

## The key agencies in Thailand that drive data governance



### Office of the Public Sector Development Commission

To drive the policy for inter-agency data linkage within government agencies and to establish, monitor, and evaluate annual performance indicators



### Digital Government Development Agency (Public Organization)

Lead Data governance, Manage Open Data Platform, ensure data quality, and promote data utilization for beneficial purposes



### National Statistical Office of Thailand

Promoting and supporting knowledge sharing among various government agencies to enable them to establish a Data Catalog, with the Thai NSO serving as the Registrar for the Government Data Catalog



# 01.

## Thailand Data Governance and Stewardship

**Data Governance** defines the rights, duties, and responsibilities of every stakeholder and defines the policies and standards for creating, using, and managing data such as the data value cycle, quality of information, and metadata

The meaning as per the announcement by the Digital Government Development Committee of Thailand

### The digitalization of public administration and services delivery act 2019



Integration of  
Government Agencies'  
Data Exchange



Digitization of Data  
Services

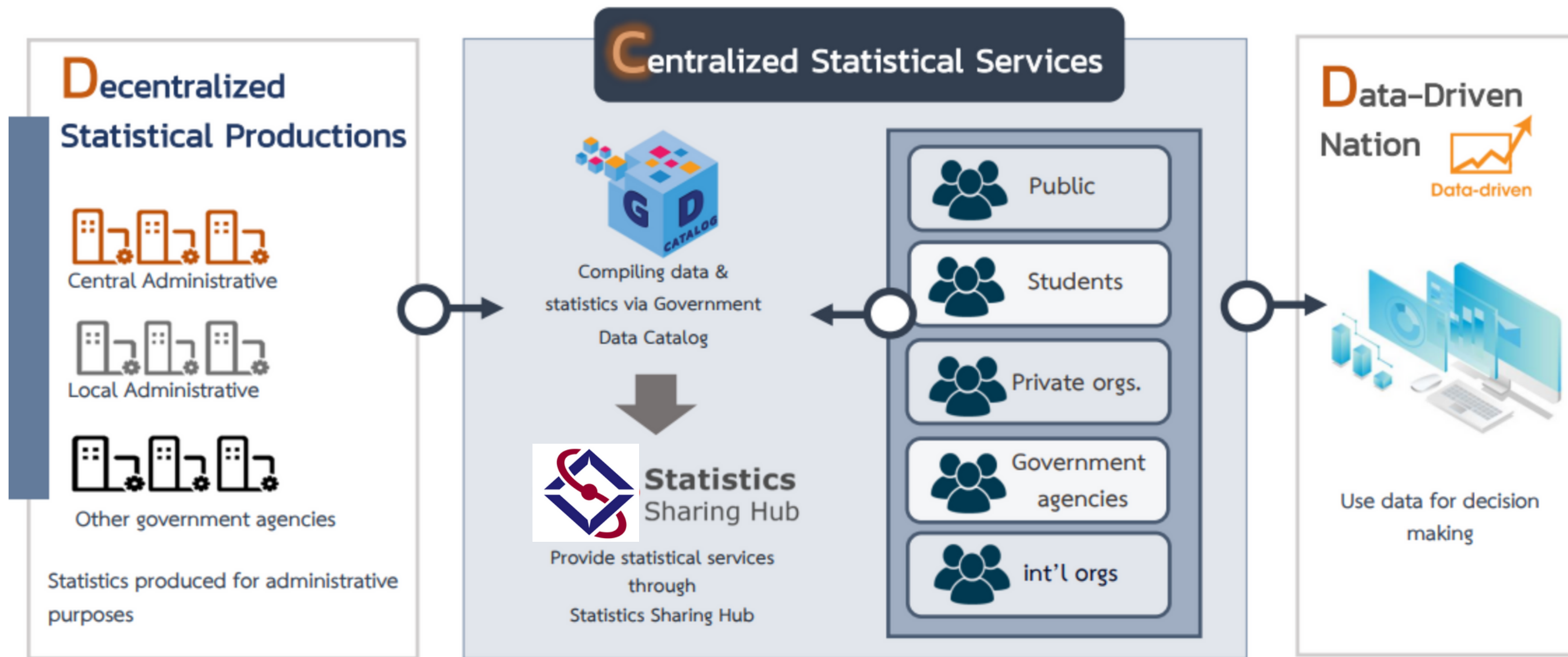


Open Government  
Data

# 02.

## NSS and TNSO Data Governance

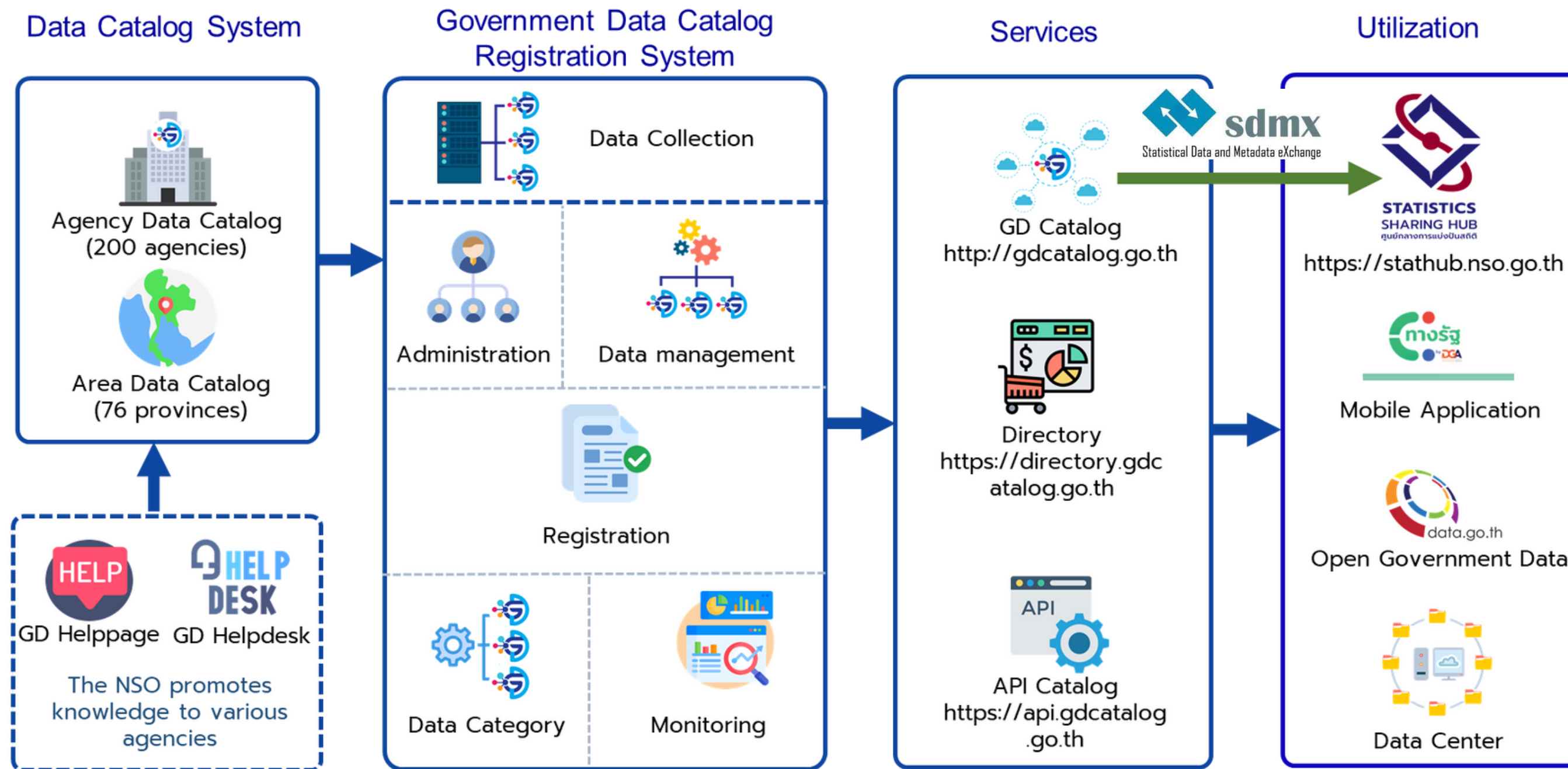
### Thailand National Statistical System



# 03.

## SDMX Standard aids in Data Governance

All government agencies are required to share data on their agency's data catalog system and register it in the government data catalog system.



# 03.

## SDMX Standard aids in Data Governance

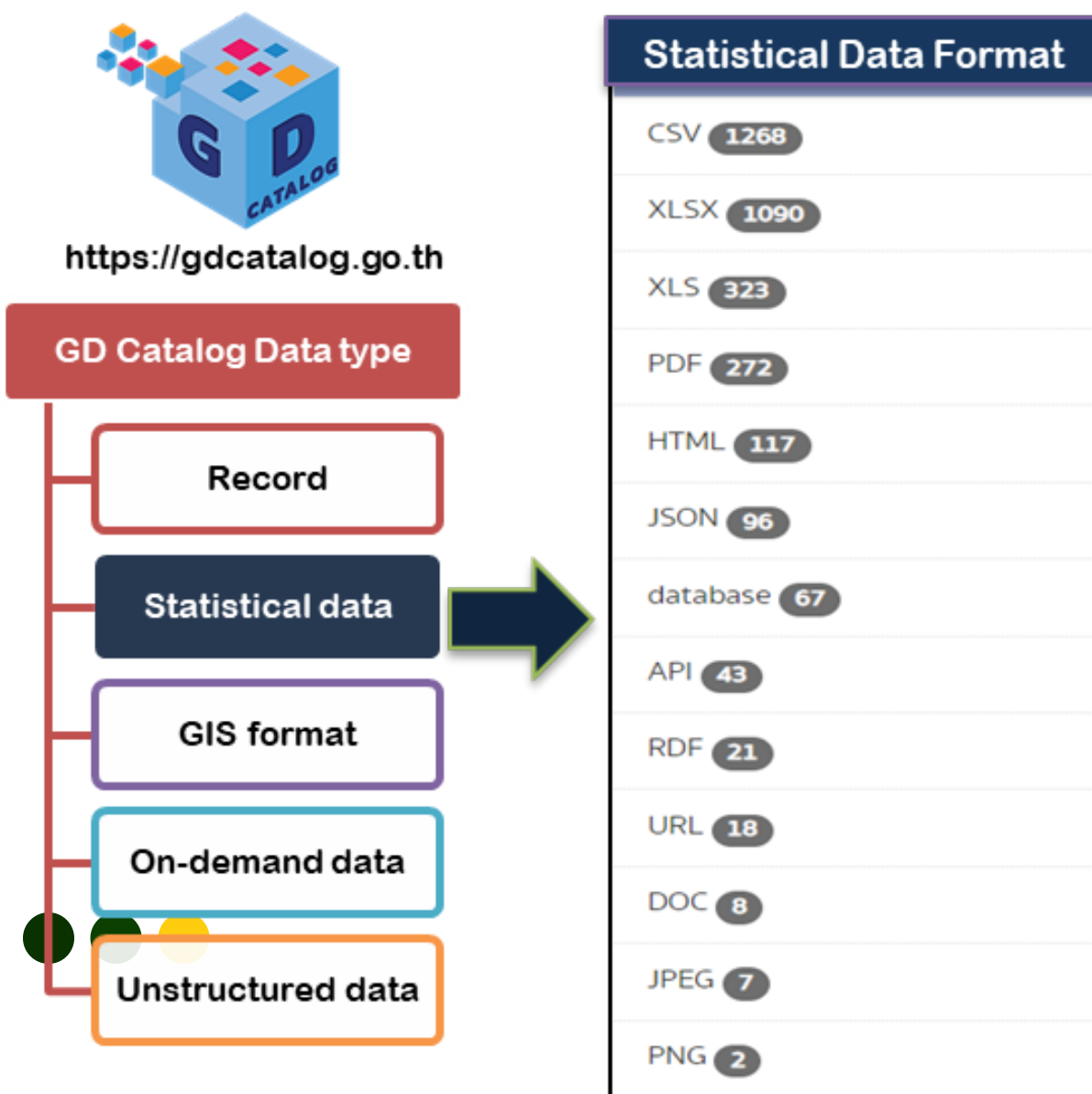
### Data Integration for Exchange in Compliance with SDMX Standard

The Government Data Catalog is a collection of data and metadata listings that various agencies have shared and registered, making it easier for people to access and use government data for various purposes

Different agencies use various file formats, which can create challenges when working with their data

TNSO serves as the agency of data structures for exchange following SDMX standards.

TNSO provides data services that are ready for exchange following the SGS standards.



**SDMX Data Preparation => SDMX CSV**

DATAFLOW	IND	SUBJ	AREA	SEX	GP	AGE	LFS	STAT	FREQ	TIME	PERIOD	OBS	VALUE	UNIT	UNIT_MULT
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	_O	A		2555		1500.1	PS			3
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	_O	A		2556		1610.6	PS			3
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	_O	A		2557		1647.7	PS			3
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	_O	A		2558		1730.7	PS			3
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	_O	A		2559		1833.6	PS			3
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	_O	A		2560		1854.2	PS			3
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	_O	A		2561		1975.3	PS			3
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	_O	A		2562		1874	PS			3
TNSO-DF_02LFS01	STAT	TH	F	Y	GIE15	_O	A		2555		733.3	PS			3
TNSO-DF_02LFS01	STAT	TH	F	Y	GIE15	_O	A		2556		707.7	PS			3
TNSO-DF_02LFS01	STAT	TH	F	Y	GIE15	_O	A		2557		683.2	PS			3
TNSO-DF_02LFS01	STAT	TH	F	Y	GIE15	_O	A		2558		702	PS			3
TNSO-DF_02LFS01	STAT	TH	F	Y	GIE15	_O	A		2559		703.7	PS			3
TNSO-DF_02LFS01	STAT	TH	F	Y	GIE15	_O	A		2560		703.3	PS			3
TNSO-DF_02LFS01	STAT	TH	F	Y	GIE15	_O	A		2561		664.3	PS			3
TNSO-DF_02LFS01	STAT	TH	F	Y	GIE15	_O	A		2562		692.6	PS			3
TNSO-DF_02LFS01	STAT	TH	M	Y	GIE15	_O	A		2555		807.2	PS			3
TNSO-DF_02LFS01	STAT	TH	M	Y	GIE15	_O	A		2556		902.9	PS			3
TNSO-DF_02LFS01	STAT	TH	M	Y	GIE15	_O	A		2557		905.8	PS			3
TNSO-DF_02LFS01	STAT	TH	M	Y	GIE15	_O	A		2558		1028.7	PS			3
TNSO-DF_02LFS01	STAT	TH	M	Y	GIE15	_O	A		2559		1129.8	PS			3
TNSO-DF_02LFS01	STAT	TH	M	Y	GIE15	_O	A		2560		1346.9	PS			3
TNSO-DF_02LFS01	STAT	TH	M	Y	GIE15	_O	A		2561		1090.9	PS			3
TNSO-DF_02LFS01	STAT	TH	M	Y	GIE15	_O	A		2562		1176.32	PS			3
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	CLF	A		2555		39198.2	PS			3
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	CLF	A		2556		39190.4	PS			3
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	CLF	A		2557		38400.1	PS			3
TNSO-DF_02LFS01	STAT	TH	T	Y	GIE15	CLF	A		2558		38356.7	PS			3

**SDMX Structure Generation**

Name	Note	Date
SDO_Housing_Household	SDO of Housing Household	Not Final
SDO_of_Characteristics_of_Labor_Force	SDO of Characteristics of Labor Force	Not Final
SDO_of_Industrial_Sector_and_Formal_Sector	SDO of Industrial Sector and Formal Sector	Not Final
SDO_of_Working_Age_Population	SDO of Working Age Population	Final

Thailand Fusion Metadata Registry  
<https://sdmx.nso.go.th/>



# 03. SDMX Standard aids in Data Governance

The data originating from the Agency Data Catalog is structured in accordance with SDMX standards, and users can always be confident that the data comes from a trusted source.

The screenshot shows the 'the Statistics Sharing Hub' interface at <https://stathub.nso.go.th>. On the left, there are filter options for 'ช่วงเวลา' (5/16), 'กลุ่มอายุ' (all/6), 'เพศ' (1/3), 'พื้นที่ระดับภาค' (all/9), 'พื้นที่ระดับเขต' (1/3), and 'พื้นที่ระดับจังหวัด' (1/78). The main content area displays a data entry for 'ชุดข้อมูลปีการศึกษาเฉลี่ยของประชากรวัยแรงงาน' (Mean Years of Schooling). A red box highlights the link '# บัญชีข้อมูลสำนักงานเลขาธิการสภาการศึกษา' (Agency Data Catalog), with a red arrow pointing to the right. Below the link, there is a description of the data, a list of tags (e.g., 'ตัวชี้วัดด้านการศึกษา', 'กลุ่มอายุ'), and metadata including the number of records (1310) and the publication date (March 14, 2023).

The screenshot shows the 'ONEC Open Data' interface. The main content area displays the 'ปีการศึกษาเฉลี่ยของประชากรวัยแรงงาน (Mean Years of Schooling)' data entry. On the right, there is a list of download links for different data subsets, each with a download icon and a 'ดาวน์โหลด' button. The list includes data for 'จำนวนปีการศึกษาเฉลี่ยของประชากรไทย' (Mean Years of Schooling of Thai Population) for various age groups and years, with download counts ranging from 25 to 55.

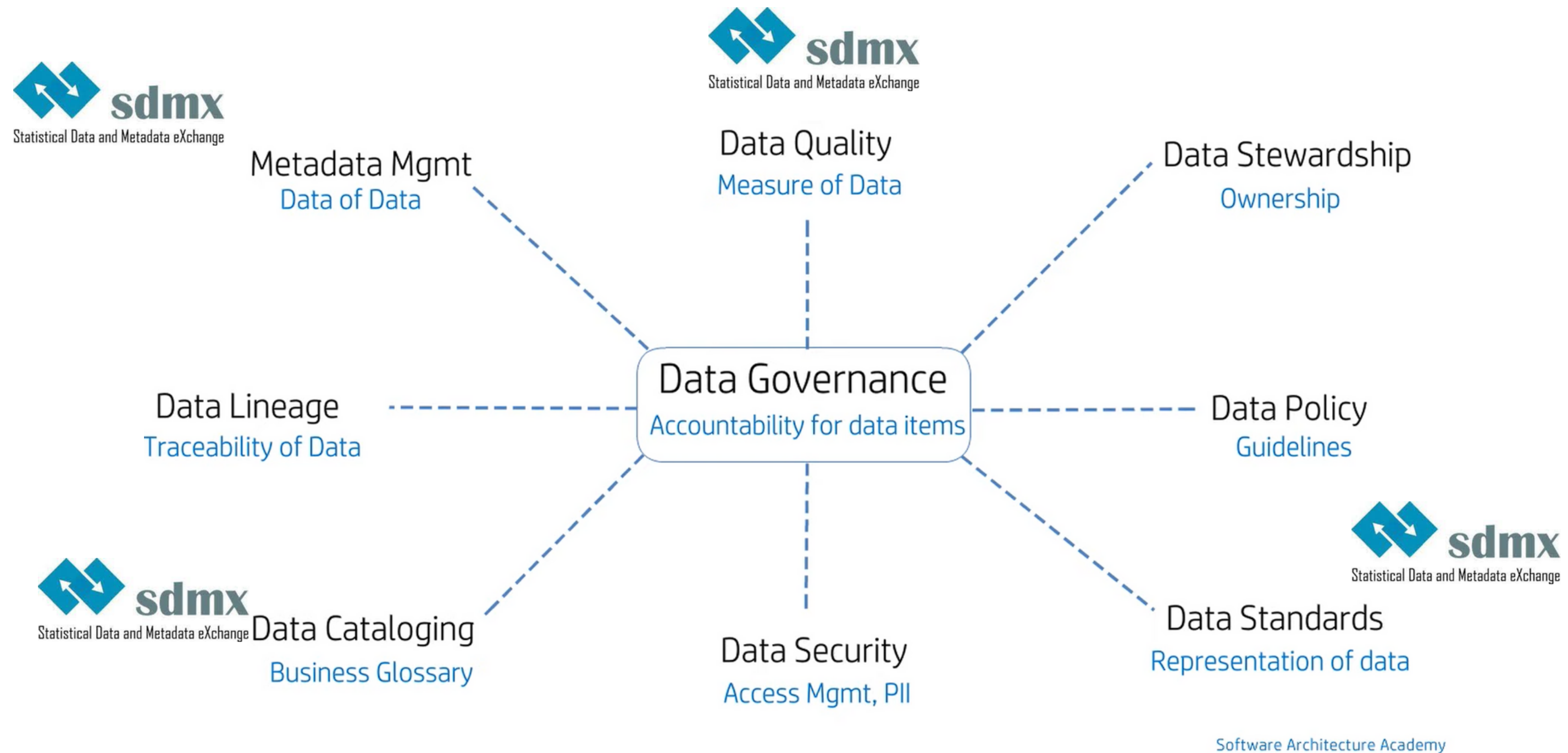
When publishing on the Statistics Sharing Hub, Users can click a link to return to view the original data from the Agency Data Catalog.



### 03. ---

## SDMX Standard aids in Data Governance

SDMX helps ensure that data exchanged between different organizations/platform is of high quality and standardized.



Credit: Software Architecture Academy, <https://www.youtube.com/watch?v=UNXAUc9gG-4>

# 03.

## SDMX Standard aids in Data Governance

### Completed

Train public officials in SDMX-compliant data management.

organized SDMX datasets into groups align with the national strategy

Fetching Data from the Data Catalog for Exchange Services Using SDMX Standards

### In progress

Proposing sdmx to be the National Standard

Developing a system to help government agencies for driving SDMX

supporting and promoting stakeholders to familiar SDMX



## 04. Challenges



**Infrastructure:** some government agencies are not fully prepared for managing digital data due to inadequate infrastructure



**Knowledge and training:** government employees experience frequent job rotations, requiring continuous training in essential areas.



**Legal:** government agencies encounter challenges in data disclosure due to legal and organizational cultural factors.



## 05.            The next phase



TNSO is planning to propose the SDMX standard as the national data exchange standard to the Digital Government Development Committee.



Establishing a system to support data integration and automated structuring of information to facilitate data exchange in accordance with the SDMX standards.



Developing learning materials, teaching aids, and various materials for dissemination to ensure that every sector is familiar with SDMX standards, such as websites, YouTube, and Facebook.





United Nations | DESA  
Statistics Division



ESCAP  
Economic and Social Commission  
for Asia and the Pacific

THANK YOU 😊



TA-9646 Data for Development (Phase 2)





National Statistical Office

# THANK YOU



**STATISTICS  
SHARING HUB**  
ศูนย์กลางการแบ่งปันสถิติ

<https://stathub.nso.go.th>  
[sdmx.tnso@nso.mail.go.th](mailto:sdmx.tnso@nso.mail.go.th)