Big Data Application
in Thailand’s Government

National Statistical Office, Thailand
Outline

1. Thailand National Big Data Policy

2. Use cases in Thailand Government Agencies

3. TNSO Case Study
1. Thailand National Big Data Policy

The Steering Committee for Policy Implementation to utilize Big Data, Data Centers, and Cloud Computing

Legislation

Architecture and government Information integration system

Human Resource Development

Ministry of Digital Economy and Society as a secretary

2018

Central Service

MDES

Improve the quality of life of the citizen
Smart Operations
Citizen-centric Services
Resource sharing
Help save budget
Government Data Service Framework

1. National Data Center, Cloud, and Big Data Platforms
   • HR Development
     (Data Analysts, Data Scientists, Data Engineers)

2. Data Governance
   • Data accuracy, consistency, completeness, freshness
   • Data Security
   • Data availability

3. Data Cataloging and directory services

4. Common Services
   • ID verification
   • Access control
   • Data Linkage
   • Transaction logging
   • Digital Signature
   • Service Statue Tracking

5. Law and Regulations
   • Legal alignment
   • Data protection
   • Cyber security

6. Smart and Open Government
   • Citizen Services
   • Ease of doing business
   • Efficient Government

- Smart and Open Government
- Data Catalog
- Data Governance
- Infrastructure & HR Development
- Law and Regulations
2. Use Cases in Thai Government Agency

**Increasing tourism potential**
Demand and supply analysis to identify behaviors, to match the data availability in the areas

**Improving tax collection**
identify businesses that have a high chance of having an underpaid income

**The analysis of Social Media on the issues of the Village Broadband Internet**
collects opinions from various online channels using “Net Pracharat Wifi”, as a pilot project
Agricultural Data Integration and Zoning Optimization Modeling
(by The National Electronic and Computer Technology Center : NECTEC)

- The government lacks information to plan and formulate the national Agricultural Economics Crop Zoning in order to make the most use of the country's land and maximize efficiency.
- Supported data and cooperation from 22 Departments, Provide information related to soil type, weather, and supply and demand humidity, rainfall, wind speed, wind direction and temperature
- Help farmers to grow the ‘right’ crops.

National Water Management
(by Hydro and Agro Informatics Institute)

- Collects related data acquired from the cooperation of 35 relevant Departments
- Developed a national database of water resources (National Hydro informatics and Climate Data Center)
- Manage water in both normal and crisis conditions by monitoring, analyzing, and predicting the water level and situation, including flood monitoring to proactively stay alert of inundation.
- NSO supports fundament data on water usage of individual, households, agricultural households and establishments
Thailand Tourism Intelligence Center
(by Ministry of Tourism & Sports)

- Linkage and Integration tourism data from 9 Departments
- Gather information on important domestic tourism situations
- Manage data, plan to improve tourism potential

Thailand Digital Outlook Project
(by The Office of the National Digital Economy and Society Commission)

- Collect data from the 3 provinces during 1 January to 31 December 2018 through “Net Pracharat wifi” and mobile data networks.
- The exploration draws attention to technology and digital information accessibility such as People ages 30-39 years are the majority Net Pracharat users, The participation in E-commerce is high, while the access of government websites is still low.
- Outcome: Government can make policies or interested contents based on each age range.
3. Thailand NSO Case Study
Timely, reliable **DATA** are the lifeblood of today’s societies.
Finding Alternative Data Sources to Complement Conventional Data Sources

- How can we reconcile the need for granular data and need to contain costs at manageable levels?

- Could we capitalize on availability of alternative data sources to complement conventional data sources to meet the disaggregated data requirements?
Satellite images provide rich information about various socioeconomic measures in real time.
OTHER GEOSPATIAL DATA

Image Source: DevelopmentSEED

Image Source: Solar Quotation

Image Source: Earth Imaging Journal

Image Source: Pan et al., 2008

Image Source: AgriLand

Image Source: Wang et al., 2016
ADB’s **Data for Development**

aims to strengthen the capacity of NSOs in engaging with **innovative data** sources.

**Data for Development Team**

- Statistics and Data Innovation Unit, Asian Development Bank
- National Statistics Office of Thailand
- Philippine Statistics Authority
- World Data Lab

*Other Development Partners: UNESCAP, UNSD, PARIS21*
Enhancing Small Area Population and Poverty Estimates Using Geospatial Data and Satellite Imagery
Challenges

• Access to Big Data
• Technological Requirements
• Capacity
• Data Privacy
• Ecosystem
Thank you for your attention!