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(Draft) Operational Plan (Roadmap) to Steer Thailand National Data Strategy

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(Draft) Operational Plan (Roadmap)

to Steer Thailand National Data Strategy

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Glossary

Term	Definition
Data Governance	The establishment of rights, duties, and responsibilities in data management. The scope covers creation, storage, categorization, processing, usage, disclosure, auditing, and erasure of data. This includes the formulation of measures to control and improve data qualityto ensure accuracy and usability, keeping data up-to-date, as well as setting clear rules for data access and utilization with appropriate security measures in place.
Data Alliance	A collaboration of organizations to prepare data through cooperation in setting policy directions, integration, and data exchange among alliance members. The pros include the host organization being responsible for all infrastructure costs. Meanwhile, alliance members have access to raw data owned by other members, or only alliance members can use the alliance's data services.
Interoperability Framework	This is a principle for designing data architecture to enable interoperability in terms of system design, system structure, and semantic standards for data recording. When organizations adhere to these principles, data linkage becomes easier.
Recording Standards Semantic Standards	The establishment of methods and rules for recording data in which systems can understand, such as specifying methods for recording product codes by industry number or country codes.
Data Architecture	The design and layout of data management systems across all processes. This concerns planning the workflow of data circulation within an organization. This may include processes in both software and hardware.

Glossary

Term	Definition
Government Data Catalog	The government data catalog is referred to a central digital catalog for government data that conforms to the government data governance framework and guidelines for creating government data catalogs. Data-owning agencies manage their own data catalog systems, input ready-to-use datasets into their own agency's data catalogs and register important datasets into the government data catalog. Thanks to this, users can search and access government data from the original sources. Datasets are categorized for easy access by users such as government officials and the general public. The system also forwards data to the government data catalog service system to provide API services and services to various data centers, such as the Open Government Data Center (data.go.th), as well as other platforms. This fosters a culture of sharing and utilizing government data collaboratively, leading to a digital government that drives the country with data towards the goal of public well-being.[1]
Metadata	Information that is used to describe datasets, specifying details about the data source and providing explanations about the data. This helps users understand where the data comes from and its format. It also promotes data searches and supports the creation of data catalogs for organizations and the country. It bolsters data disclosure, linkage, and exchange.[2]
Digital Solution	The application of digital tools or technologies to solve problems or improve the efficiency of services provided by agencies or organizations. This covers a wide range of digital services, from creating data dashboards to providing intermediary data services and establishing data marketplaces.[3]

[1] National Statistical Office, "Government Data Catalog (GD Catalog)", accessed on July 24, 2024 https://gdcatalog.go.th/about
[2] National Statistical Office, "Metadata description in details", accessed on July 24, 2024, https://gdhelppage.gdcatalog.go.th/p00_03_006.html#:~:text= Metadata description in details or,of the country%20to support
[3] Digital Government Development Agency (Public Organization), Digital Development Agency Standard on Criteria for Classification and Sharing of Government Data

Glossary

Term	Definition
Data Sharing	The process of making data available for use by other agencies, organizations, or individuals under agreed conditions, or referencing for sharing, exchanging, and extending data to support the community infrastructure of user groups or platform users.
Data Integration	Data integration, sometimes referred to as data linkage, is when two or more agencies agree to cooperate in linking data, whether raw or statistical, to generate new datasets. This can be automatic or manual.
Data Marketplace	A platform or service that acts as a central market for buying, selling, and exchanging data. It consists of data from lots of agencies in many forms, allowing data users to select and purchase data from these markets.
Data Visualization	The presentation of complex data in a user-friendly format such as charts, images, graphs, tables, or videos.
High-Value Datasets	Datasets that are in high demand, meet user needs, and can generate significant economic and social benefits. These datasets can also be used to monitor and evaluate the implementation of national plans and policies, such as the 20-Year National Strategy and the National Economic and Social Development Plan. Additionally, they can be used to assess the country's performance according to international indicators, such as the Sustainable Development Goals indicators.
Data rule	The establishment of rules for recording data within an organization to ensure consistency in data recording across the organization. This involves specifying methods for recording data in each section, such as recording dates in the format dd-mm-yyyy or using N/A for missing data.
Data Profiling	The process of inspecting data quality within an organization against the organization's data rules. This assessment determines whether data recording adheres to these rules and includes generating summary reports to enable employees or departments responsible for the data to improve the quality of datasets as appropriate.

Glossary

Term	Definition
Social welfare	The total sum of utilities of individuals in society. That is to say, higher social welfare indicates that various interest groups such as producers, consumers, and the government are more satisfied with the current economic landscapes. It can be calculated in monetary terms when considering willingness to pay and willingness to accept.
Sum-of-cost approach	A method of evaluating the value of a project, product, or anything by calculating the sum of costs involved in its creation or implementation.
Discount Rate	The rate used to convert future monetary values into present value.
Economic Internal Rate of Return (EIRR)	The rate of return used to evaluate projects or investments that impact the economy. The factors to be considered include capital costs, income, expenses, and positive and negative benefits stemming from the project. EIRR is the rate at which the total value of returns equals the total value of capital costs after calculating with a project-specific interest rate.
Benefit-Cost Ratio: BCR	A ratio used to assess the cost-effectiveness of a project or investment. This divides the total benefits generated by the project by the total investment costs. Generally, if BCR > 1, it indicates that the benefits outweigh the investment costs. So, the project is regarded as cost-effective. If BCR < 1, the investment costs exceed the benefits to be from the project.
Sensitivity analysis	This type of analysis assesses the potential impact on the outcomes or benefits of a project or investment amid changes in key variables or factors, such as interest rates, investment costs, or environmental factors that may affect the operation of the project or investment.

The importance of data and past actions

The Importance of Data in the Modern World

In today's world, data has become one of the most crucial production factors. Data can be processed to enhance government services, improve the accuracy and efficiency of policy-making, and serve as a resource for the private sector to develop new products and services, thereby increasing the country's competitiveness. Many countries are now placing significant importance on the development of national data strategies to create unity in data-driven progress. Thailand, too, has been making strides in this area.

2013
- The Cabinet approved the establishment of a central government open data center.

2017
- Digital Development for Economy and Society Act, B.E. 2017

2019
- Announcement of the 20-year Digital Development Plan for Economy and Society
- Government Open Data Center
- Central Government Data Catalog System
- Digital Government Administration and Services Act, B.E. 2562 (2019)
- Personal Data Protection Act, B.E. B.E. 2562 (2019)
- Cybersecurity Act, B.E. B.E. 2562 (2019)

2020
- Announcement of the Digital Government Development Committee on Government Data Governance
- Announcement of Committee of the Digital Government Development regarding Standards and Criteria for Digital Process and Operations Regarding the Use of Digital ID for Government Services for Thai National

2021
- Announcement of the Government Open Data Center

2022
- Management of State Affairs by Electronic Means B.E 2565
- Announcement of Committee of the Digital Government Development on Standards and Criteria for Digital Data Linkage and Exchange, Regarding the Framework for Developing Standards for Government Data Linkage and Exchange

2023
- Announcement of the list of core datasets for government agencies to publish on the central data platform
- Announcement of Committee of the Digital Government Development on Digital Government Standards for Guidelines on Creating Government Data Catalogs and Registration of Government Data Catalogs
- Announcement of Committee of the Digital Government Development on Digital Government Standards for Recommendations on Creating Data Management Policies and Practices
- Announcement of Committee of the Digital Government Development on Digital Government Standards for Data Quality Assessment Criteria for Government Agencies

2024
- (Draft) Thailand's Data Strategy

The importance of data and past actions

Operations in Developing the Data Strategy

The 1st Meeting of Committee of
the National Digital Economy and Society in 2021

Approved the implementation of the (draft) framework for developing Thailand's National Data Strategy

Framework for Developing Thailand's Data Strategy

1 Data Laws and Governance

focusing on developing mechanisms that promote data utilization through laws, regulations, practices, and technology

2 Data Integration, Availability and Sharing

Promoting data utilization through integration and sharing

3 Data Foundations and Data-Driven Policies

Developing and designing data foundations for data-driven policy-making

4 Data Infrastructure and Technologies

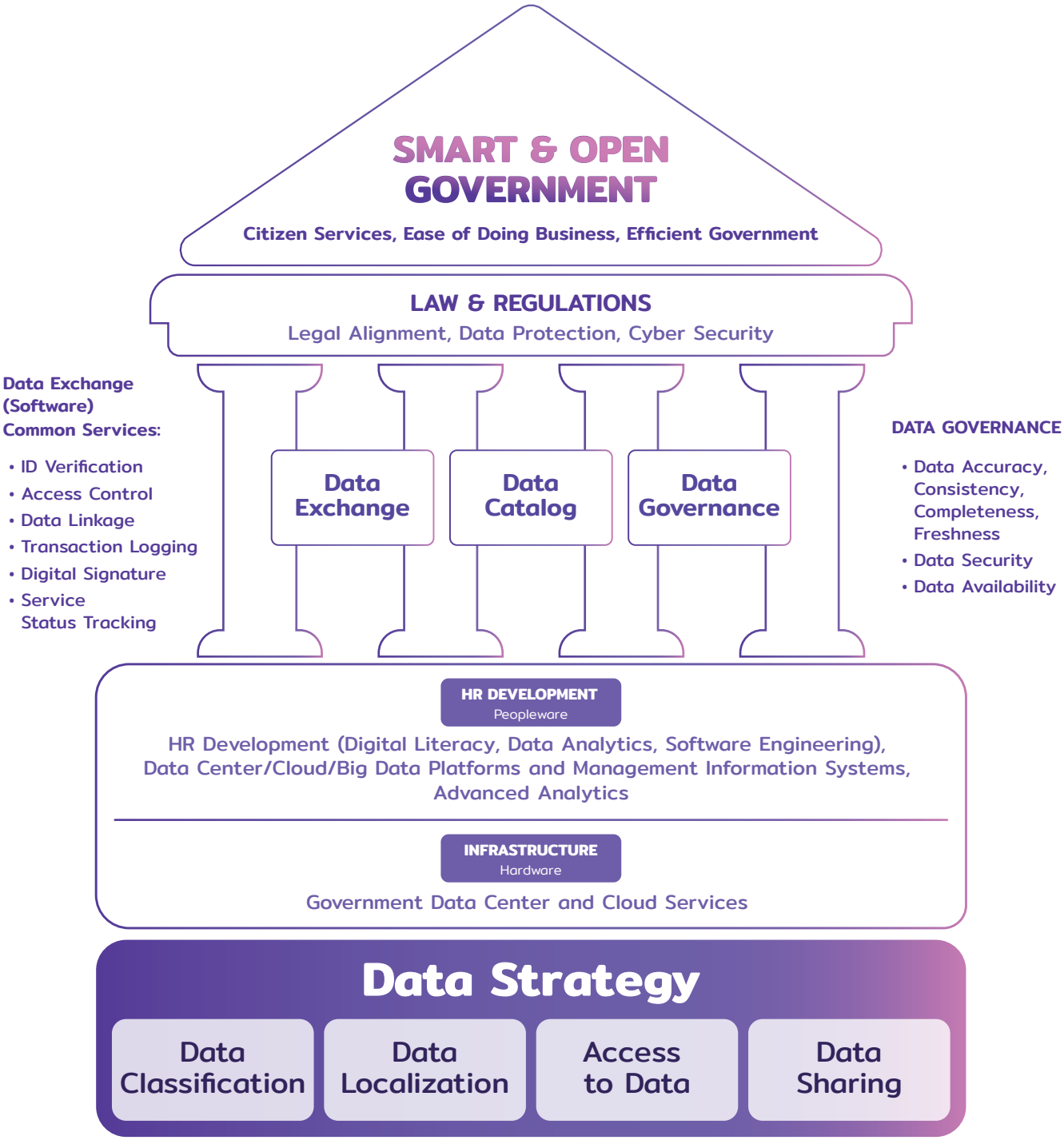
Developing data infrastructure, including the use of modern data technologies

Approved the appointment of the Specific Committee for Driving the Data Strategy to propose and develop the strategies in line with national policies and plans, and the (draft) guidelines for developing Thailand's Data Strategy.

The importance of data and past actions

The Importance of Data Strategy for National Development

Developing a data strategy is a crucial foundation to support the progression towards a data-driven society and digital government development.



The linkages of Three-Level Plans and UN Sustainable Development Goals

1st Level Plan

The 20-year National Strategy 2018-2037

- **Security** (Preventing and Solving Problems Affecting National Security)
- **The National Strategy on Competitiveness Enhancement**
  - Future Industries and Services
  - Economic Development Based on Modern Entrepreneurs

2nd Level Plan

Master Plan under the National Strategy (2023-2037)

- **Security** (Preventing and Solving Problems Affecting National Security)
- **Future Industries and Services** (Sub-plan on Digital, Data, and Artificial Intelligence Industries and Services)
- **Infrastructure, Logistics System, and Digital** (Sub-plan on Digital Infrastructure)

13th National Economic and Social Development Plan (2023-2027)

- **Thailand as the ASEAN hub for smart electronics industry and digital industry**

National Security Policy and Plan (2023-2027)

- **Strengthening cybersecurity** (Thailand is prepared to effectively prevent and handle risks from cyber threats)

3rd Level Plan

National Digital Economy and Society Development Plan and Policy (2018-2037)

- **Strategy 2: Driving the Economy with Digital Technology**

The Digital Government Development Plan Of Thailand (2023-2027)

- **Strategy 1** Enhancing Digital Transformation in Government for Flexible, Agile Administration and Expansion to Local Government Agencies Prepare data as guided by the government
- **Strategy 3** data governance framework. Adopt a fully digital work process. Employ standardized central technology and service sets
- **Strategy 4** Promoting Public Participation and Disclosure of Government Open Data (All sectors take part in transparent government

National Artificial Intelligence Action Plan for Thailand's Development 2022-2027

- **Strategy 2: Development of Infrastructure and Support Systems for Artificial Intelligence for Sustainable Development**

United Nations Sustainable Development Goals (SDGs)

- **Goal 9** Build resilient infrastructure, promote inclusive and sustainable
- **Goal 11** Make cities and human settlements inclusive, safe, resilient, and sustainable.

(Draft) Thailand's Data Strategy

- **Strategy 3: Develop data governance and data linkage**
  - **Strategy 1: Enhance government data services**
  - **Strategy 2: Promote data collaboration between the public and private sectors**

The National Strategy on Public Sector Management System Rebalancing and Development

- Government personnel are good and capable people, adhering to moral principles, ethics, conscientiousness, high capability, determination and professionalism
- Citizen-centric government
- Modern government
- Laws are relevance, appropriate for contexts, and only necessary

Modern Entrepreneurs and SMEs
(Sub-plan for creating an ecosystem conducive to business operations, entrepreneurs, and medium-sized enterprises)

Public Services and Government Efficiency
(Sub-plan for developing public administration systems and sub-plan for creating and developing government personnel)

Thailand has strong, high-potential, and competitive SMEs

Thailand has a modern, efficient government that responds to its citizens

The competitiveness of Thai entrepreneurs increases through the use of digital

Strategy 4: Transform the government into a digital government
The government services respond to citizens and entrepreneurs in all sectors conveniently, quickly, and accurately. Citizens can easily and appropriately access government information.

Strategy 5 Refine the workforce to be ready for the digital economy and society era, with sufficient quality and quantity of digital professionals

data governance framework. Adopt a fully digital work process. Employ standardized central technology and service sets for government services. Public officials receive comprehensive and continual training and digital skills

for government services. Public officials receive comprehensive and continual training and digital skills

operations that can be audited under several channel. Public disclosure of information can be done without citizen requests. Citizens can utilize and participate in expressing opinions)

To introduce an integrated national-level central platform to support the development and provision of artificial intelligence and data services

Strategy 3: Development of skills and knowledge related to artificial intelligence at every level of learning throughout all stages of life To develop quality workforce and education in the field of artificial intelligence and maximize skills of workers in the industrial sector to the fullest extent.

industrialization, and foster innovation.

Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all.

Strategy 4: Develop data skills for personnel in the public and private sectors

Data Strategy

Vision

Implement data-driven initiatives to formulate precise policies, elevate public services, and enhance efficiency while generating added value for society and the economy.

Objectives

1. Government agencies have complete data, leading to appropriate policy decision-making.
2. Government agencies utilize the data to upgrade public services.
3. Valuable data is disclosed to add value and competitiveness.

Main Goals

- Increase in digital competitiveness and utilization rate of government data
- User satisfaction level of at least 80%

Strategies

Strategy 1	Strategy 2	Strategy 3	Strategy 4
Enhance government data service	**Promote data collaboration between public and private sectors**	**Develop data governance and data linkage**	**Develop data skills for personnel in the public and private sectors**
Development goal	Development goal	Development goal	Development goal
Government data is complete, with prioritization of high-value data	Promote private sector participation in data. Ensure completeness of important national datasets.	High-quality data are seamlessly integrated and securely linked	Improved data skills for personnel in public and private sectors, especially in SMEs

Data Strategy

1 Improve the level of public data services

Goals

- Plan, collect, and store data efficiently
- ?Utilize data to drive national development

Strategies

- Create understanding of data benefits for government agencies to evaluate benefits and store efficiently
- Collect high-value datasets
- Require regulators to collect all necessary data comprehensively
- Encourage government agencies to prepare data-driven plans.
- Disclose data and metadata to facilitate easy data search.
- Promote the disclosure of Data to the Public
- Promote data utilization to drive national policies and development

2 Promoting Data Cooperation Between Government and Private Sectors

Goals

- Private sector participates in driving data initiatives
- Measures support data sharing between government and private sectors

Strategies

- Define key datasets as framework for driving government-private exchange
- Form alliance between government and private sectors
- Establish clear, easily-implemented framework for government-private data sharing
- Implement security certification measures for platforms or applications
- Provide incentives to private or civil sectors for disclosing or sharing data to further develop for public benefit

3 Developing Data Governance and Data Integration

Goals

- High-quality data with efficient integration between the public and private sectors.
- Data security

Strategies

- Promote understanding in government agencies to follow digital government standards
- Ensure that private entities connecting their data with government agencies must manage and design their data architecture to meet the same standards. Adhering to digital government standards as a minimum.
- Develop specific personal data governance practices for each production sector
- Promote the use of securely managed cloud services in accordance with standards
- Elevate data security and integrity certification processes
- Public agencies must introduce cybersecurity threat response guidelines

4 Developing Data Skills for Personnel in Government and Private Sectors

Goals

- Promote and support capacity building for SMEs
- Increase personnel with data skills

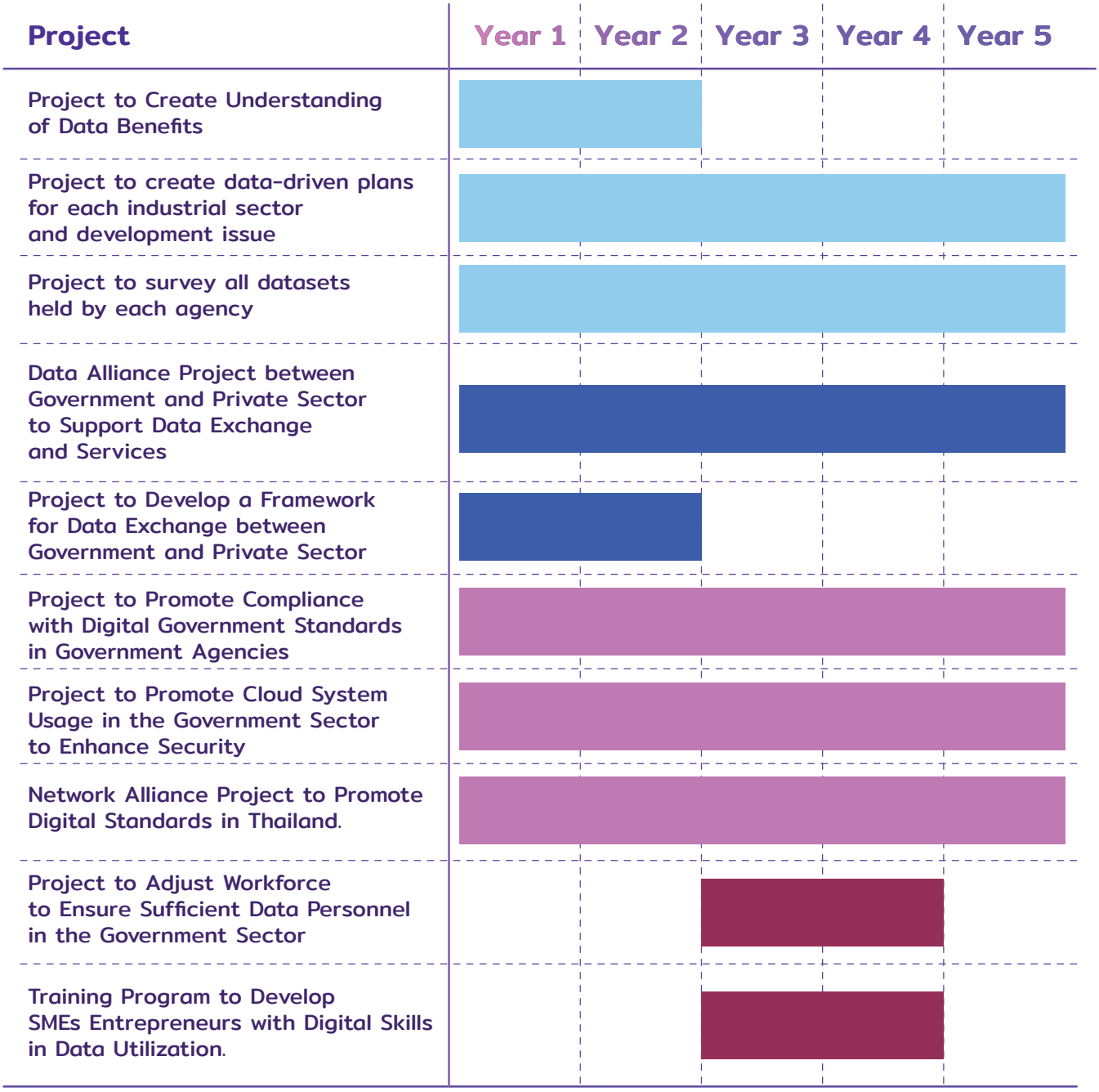
Strategies

- Develop digital expertise skills to increase the value of data benefits
- Adjust government workforce by increasing specialized data positions
- Adjust government recruitment conditions to include basic digital and data skills requirements

Roadmap of the Operational Plan for Driving Thailand's Data Strategy

Strategies Strategy 1 | Strategy 2 | Strategy 3 | Strategy 4

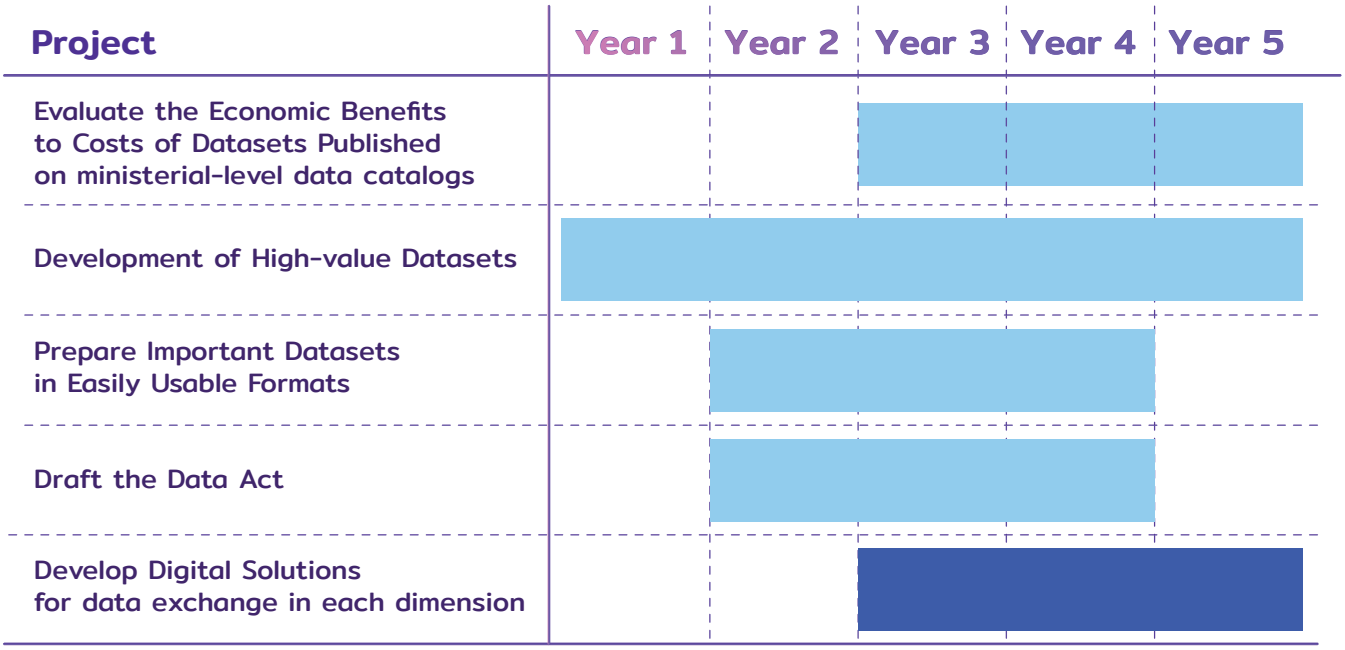
Foundation



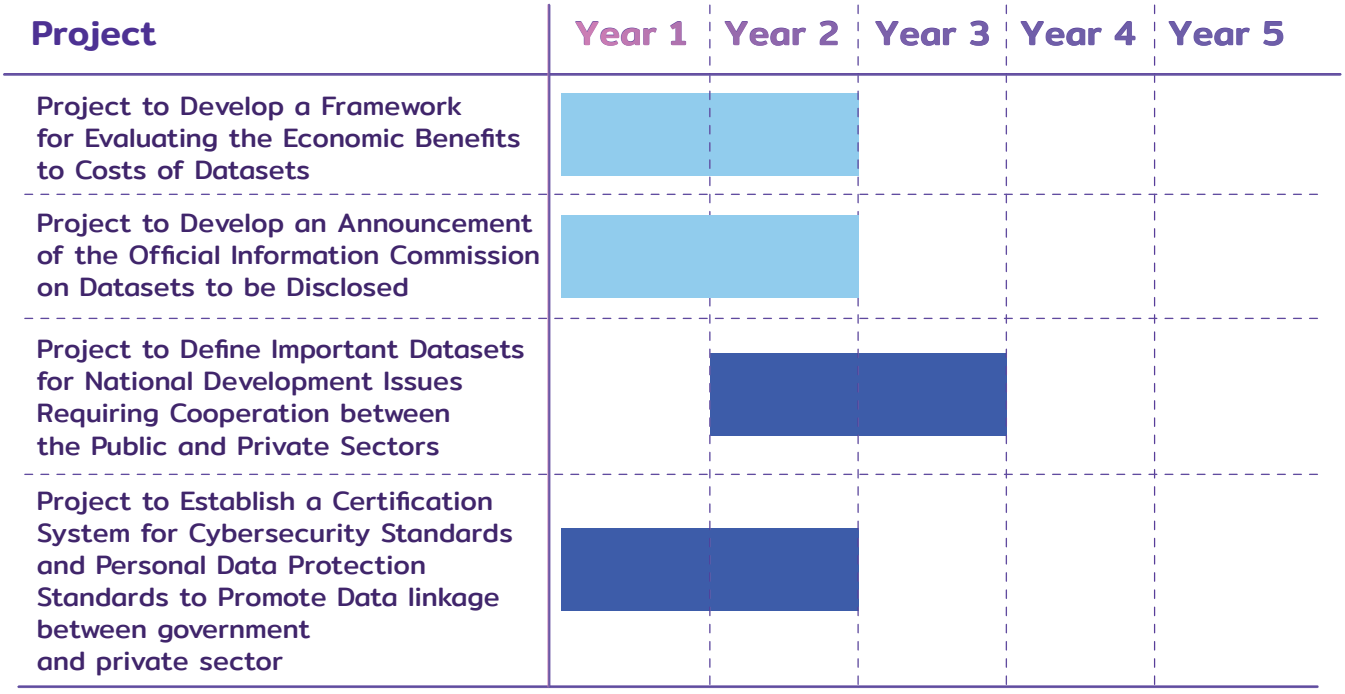
Roadmap of the Operational Plan for Driving Thailand's Data Strategy

Strategies Strategy 1 | Strategy 2 | Strategy 3 | Strategy 4

High Impact



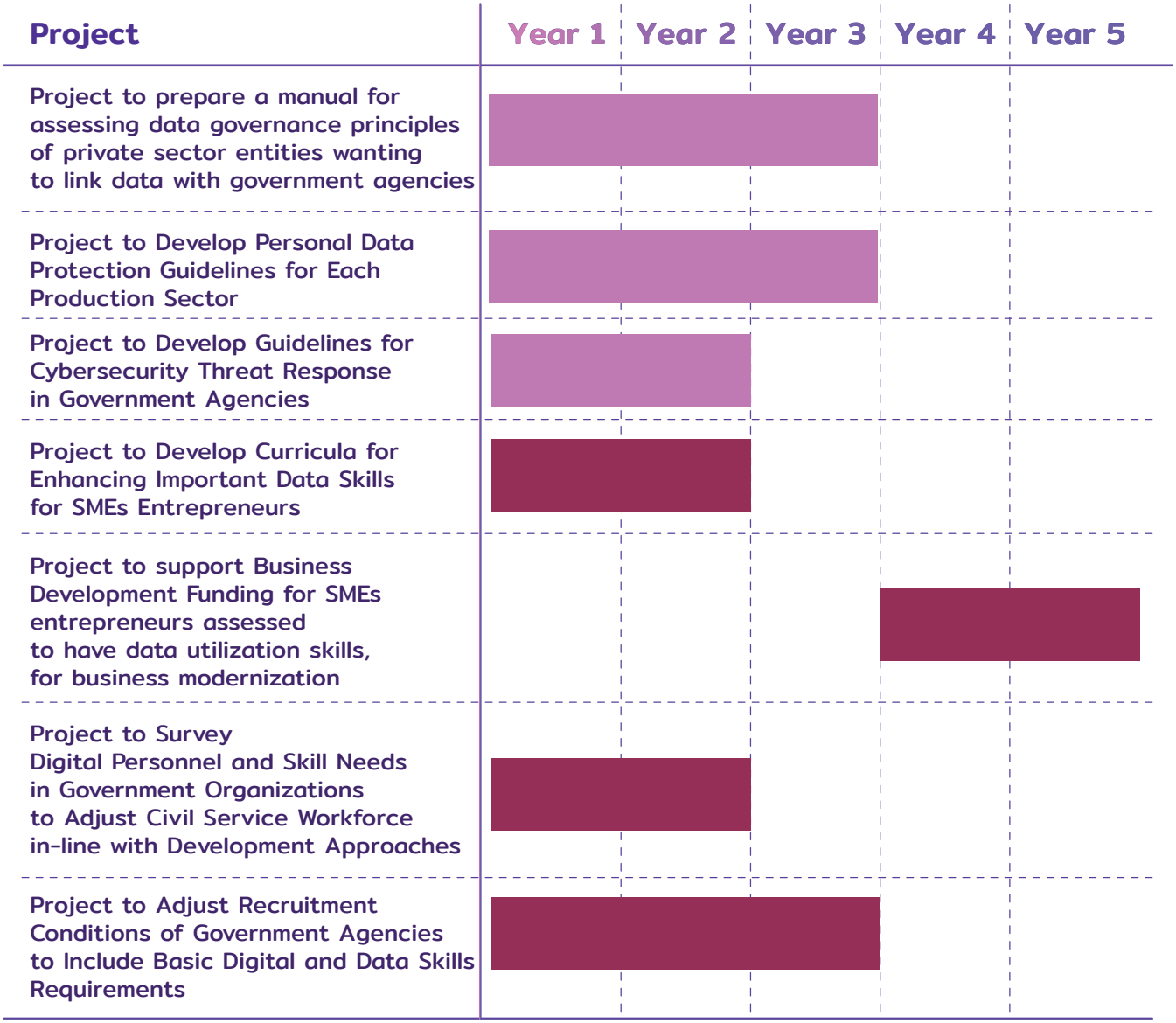
Quick win



Roadmap of the Operational Plan for Driving Thailand's Data Strategy

Strategies Strategy 1 | Strategy 2 | Strategy 3 | Strategy 4

Quick win



Summary of key objectives and outcomes

Strategy 1
Enhancing government data services

2026	★ Complete description of metadata of government agencies ★ Notify the Announcement of the Official Information Commission on Datasets to be Disclosed (2025-2026) b.e. ....
2027	★ Strategy for driving data in specific development issue
2028	★ High-value datasets
2029	★ Results of the evaluation of cost-benefit analysis of data

Strategy 2
Promoting data cooperation between public and private sectors

2026	★ Public-private alliance on urgent and necessary issues ★ Framework for data exchange between public and private sectors ★ Certification system for cybersecurity standards and personal data protection standards
2027 - 2029	★ Public-private alliance on development issues according to the strategic data-driven plan ★ Digital solutions/platforms/applications that can utilize data between public and private sector

Strategy 3
Development of data governance and data linkage

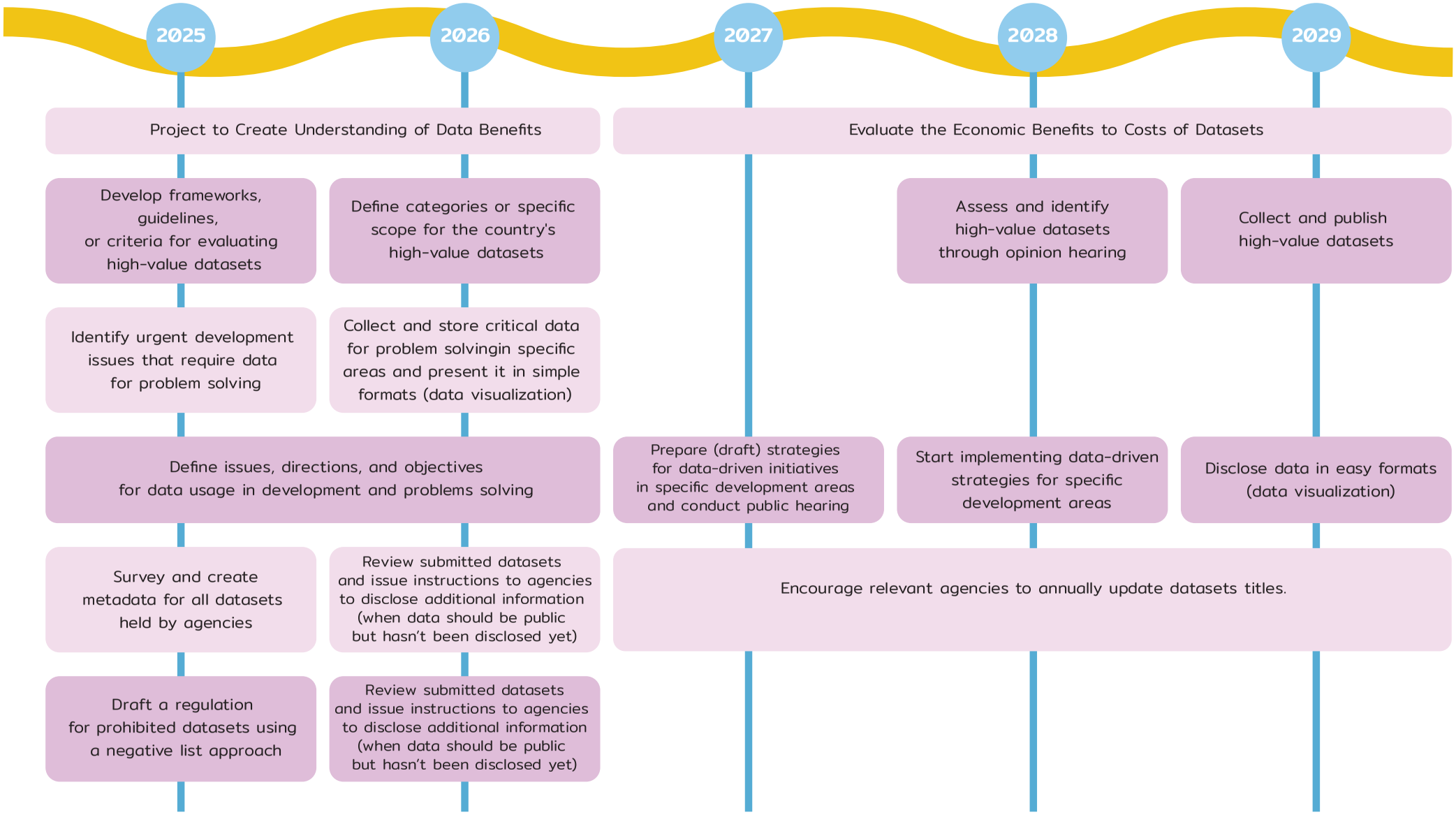
2025	★ Guidelines for the protection of personal data by industry
2026	★ Guide for cloud selection for government agencies ★ Guidelines for cyber threat response at the department level
2027	★ Guide for assessing data governance in the private sector
2028	★ Digital standards certification unit in Thailand

Strategy 4
Developing data skills for public and private sector personnel

2026	★ Courses to enhance critical data skills for SME entrepreneurs
2027	★ Guidelines for assessing data competencies and the (minimum) number of skilled personnel in public agencies by level
2028	★ Guidelines for managing data personnel in the public sector

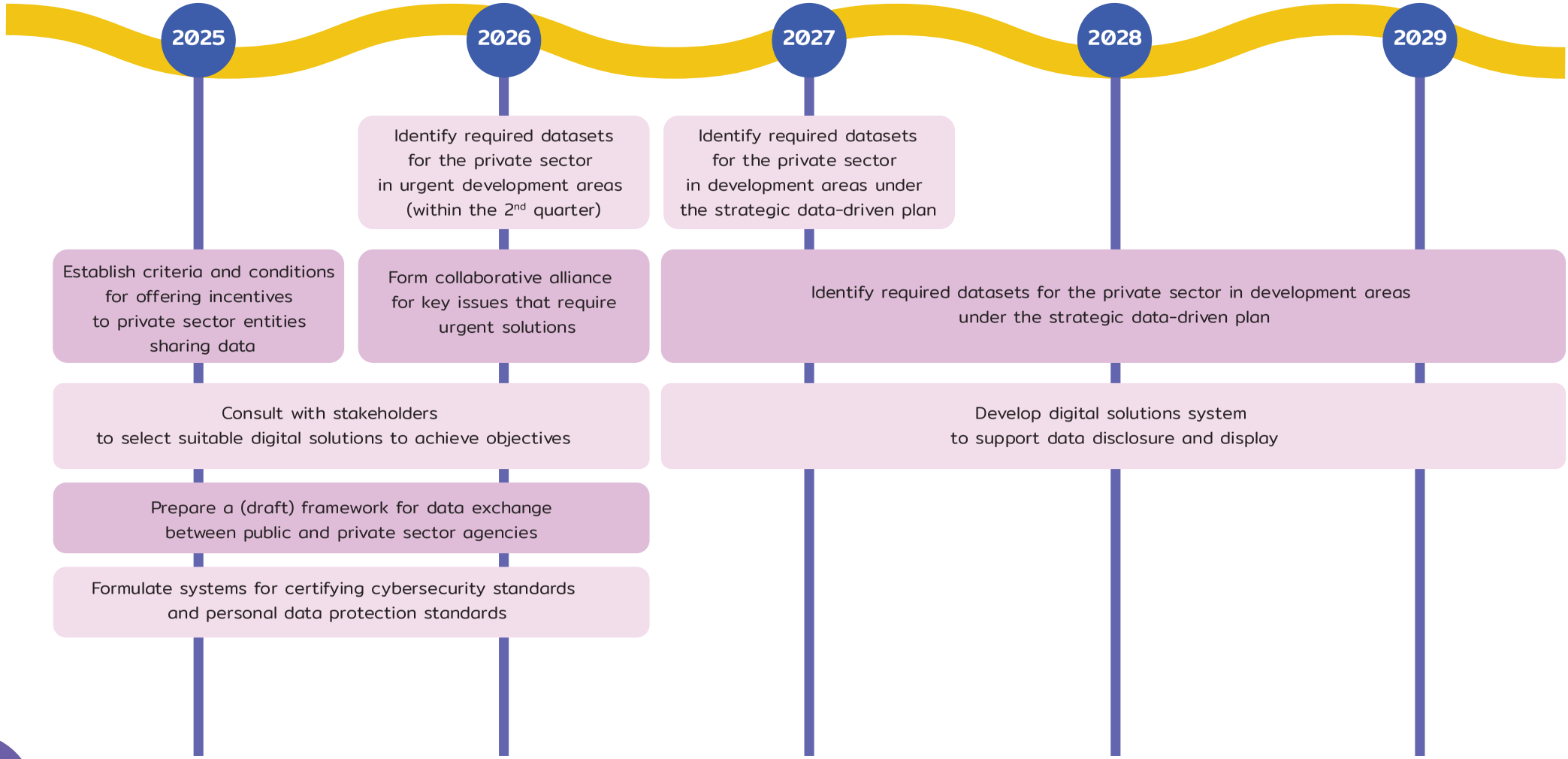
Roadmap by Strategy

Roadmap Strategy 1



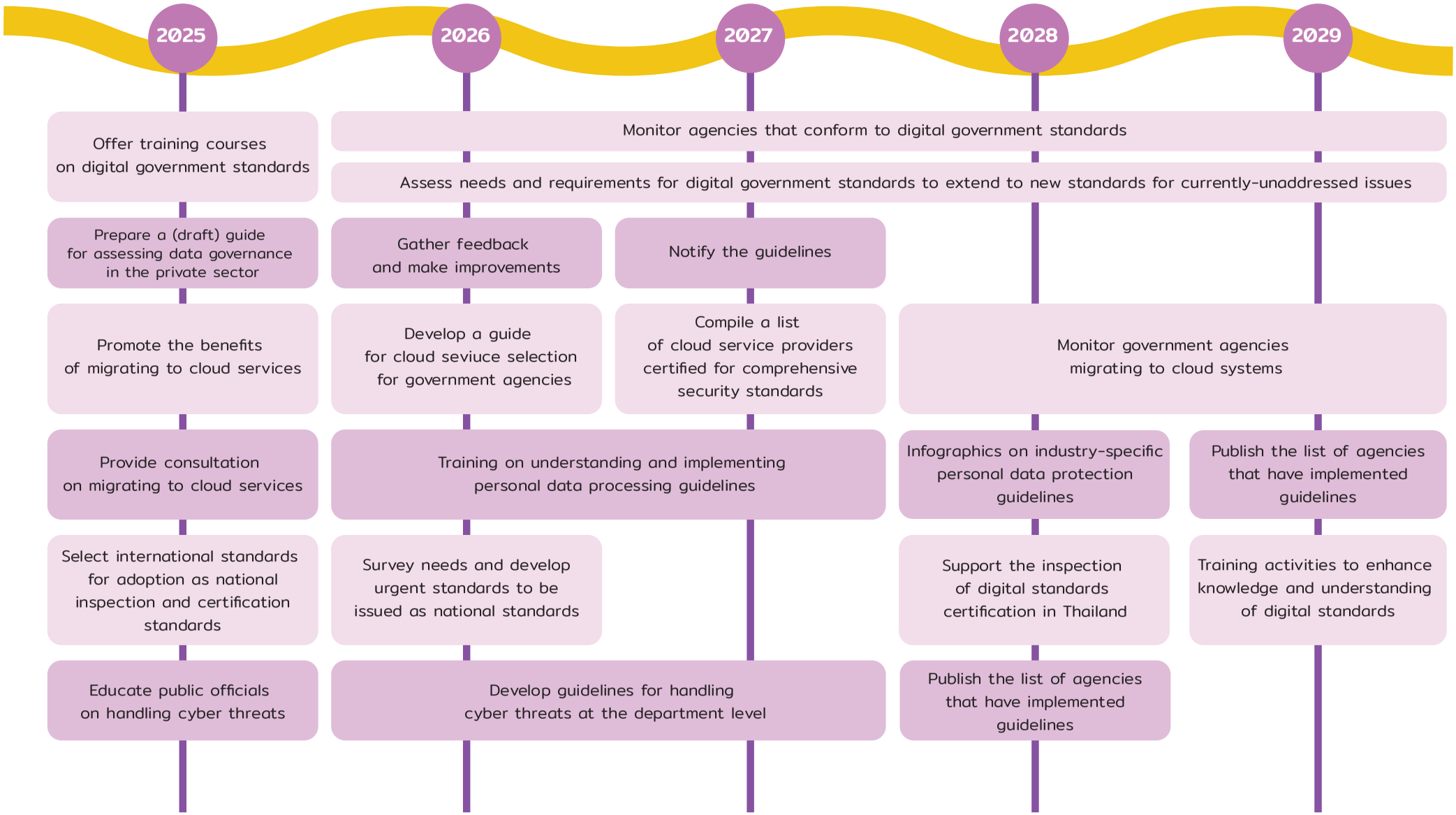
Roadmap by Strategy

Roadmap Strategy 2



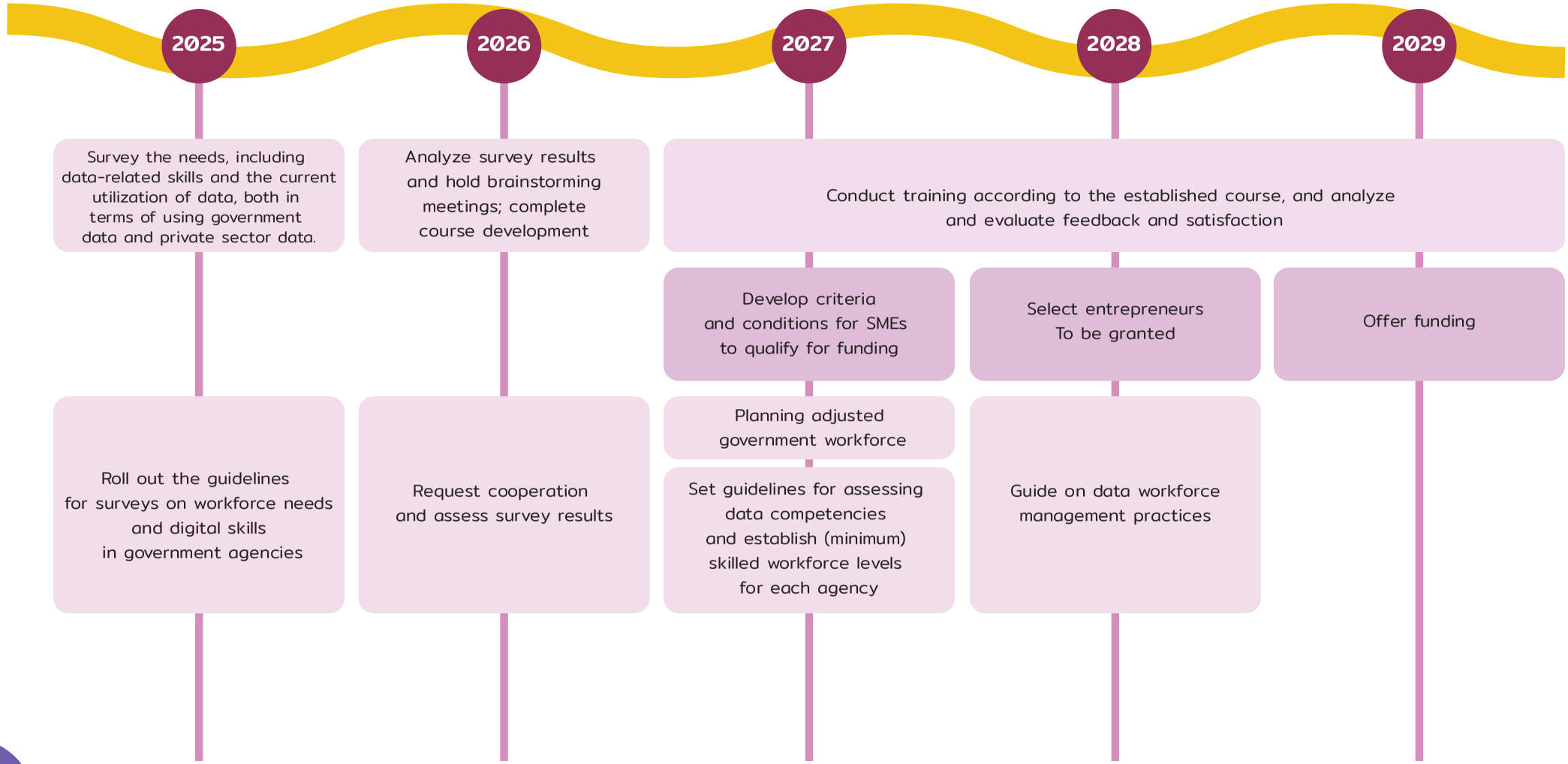
Roadmap by Strategy

Roadmap Strategy 1



Roadmap by Strategy

Roadmap Strategy 2



Driving Mechanisms

Legal Mechanism

Under the authority the Specific Committee on Driving Data Strategy:

★ Encourage agencies to implement the plan.

★ If the agencies fail to meet the goals, the Specific Committee will consider assigning new agencies and submit the proposal to the Digital Economy and Society Committee and the Cabinet.

Establish subcomittees under the Specific Committee on Driving Data Strategy

★ The Subcommittee on Driving Data Strategy in Development Dimension consists of government agencies that play roles in various development dimensions, working together to implement the plan.

★ The Joint Subcommittee between the public and private sectors consists of government agencies, private sector entities, and civil society organizations, working together to drive the data strategy on issues that require cooperation with the private sector.

Motivating Mechanism

Financial Support

★ Fund the private sector to implement the strategy, such as subsidizing the preparation of high-value datasets (using subsidies from relevant funds, such as the Digital Economy and Society Development Fund)

★ Support risk insurance for private investors against damages arising from government policies, regulations, or actions through collaboration between the BOI (Board of Investment) and EXIM Bank. Investors who receive support from the BOI can access EXIM Bank's investment risk services with reduced insurance premiums.

Driving Mechanisms

Certification and Recognition

★ Strategic Data Plan Contribution Recognition for private sector entities participating in the implementation of the plan.

★ The government subsidizes the costs of certification of various safety standards for the private sector.

Budget Mechanism

Prioritizing Projects and Activities That Require a Budget

★ Each agency should prioritize the projects and activities so that the relevant agencies can plan their budget allocation requests from the Budget Bureau.
When multiple agencies collaborate, the host agency receiving the budget and the relevant agencies must be specified.

Budget Management

★ Continuously monitor budget usage to ensure efficient spending and to achieve strategic goals, both in the operations of individual agencies and in integrated operations to achieve joint goals.

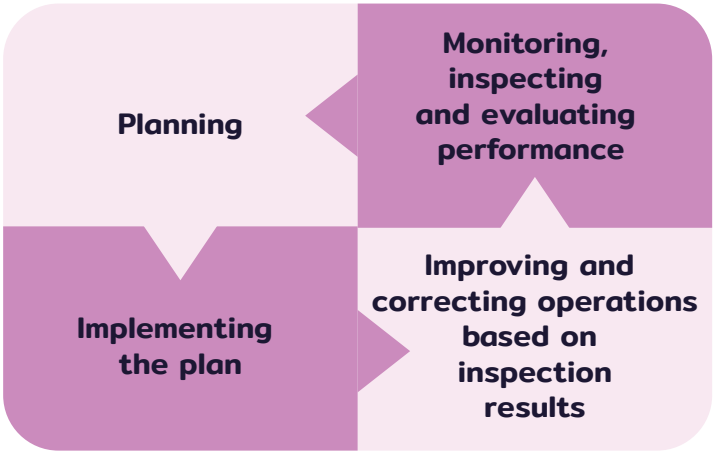
Evaluation and Improvement of Budget Usage

★ Evaluate the performance and budget expenditure, and report the results to the executives or relevant agencies on progress and outcomes.

★ Use the evaluation data to improve and develop future strategic plans and budgets.

Monitoring and Evaluation Mechanism

Quality Management Cycle



Integration of Mechanisms in Multiple Dimensions

Strategic Mechanisms

- Sort out priorities and urgency to ensure efficient use of the budget.
- Monitor regularly to appropriately adjust priorities at each phase

Driving Mechanisms

- Legal Mechanism: Use the authority of the committee and subcommittees to monitor and evaluate the implementation of the strategy.
- Monitor and assess the worthiness of subsidies provided for state-supported investment projects.

Driving Mechanisms

- Establish an advisory committee including stakeholders from various sectors to monitor and evaluate the implementation of the strategy in collaboration with the committee and subcommittees, and to provide recommendations for proper operations.

Collaboratively monitor and evaluate performance in various dimensions to achieve the goals stated in the operational plan.

Production Sector and Development Dimensions Emphasized in This Plan

Agriculture and Natural Resources

Responsible agencies:

- Ministry of Agriculture and Cooperatives
- Ministry of Natural Resources and Environment.

Public Health

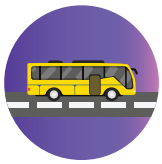
Responsible agencies:

- Ministry of Public Health

Finance and Treasury

Responsible agencies:

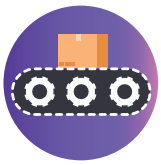
- Ministry of Finance
- Bank of Thailand



Transportation

Responsible agencies:

- Ministry of Transport



Industry and Commerce

Responsible agencies:

- Ministry of Industry
- Ministry of Commerce

Tourism

Responsible agencies:

- Ministry of Tourism and Sports

Economic, Social and Welfare Dimensions

Responsible agencies:

- National Economic and Social Development Board
- Ministry of Social Development and Human Security

*Note: The key responsible agency is the one that establishes the development plan for each development dimension, and determines the high-value datasets that urgently need development of their definition and structure. (In some cases, the responsible agency for each dimension does not necessarity be the data owner or the data collector.)

Examples of datasets that should be elevated as high-value datasets

Status of Dataset Readiness

- Stored and published, and classified as high-value data
- Stored and published
- Stored and published to a specific group
- Partially stored and/or published
- Currently being stored/ but not published
- Data storage not found

Agricultural Sector

Datasets Used to Drive Operations

Types of datasets	High-Value Datasets	Key Variables	status
Mobility and datasets for statistics management	Data traceability system for agricultural products	• Product details	
		• Product standards and warranty	
		• Producer details	
		• Raw materials suppliers	
		• Farm or plot of production	
		• Importers/distributors	
		• Shipping information throughout the supply chain	
Datasets for statistics management	Production cost dataset	• Prices of seed	
		• Prices of breeding males and females	
		• Cost and methods of transporting agricultural products	
		• Prices of animal feed	
		• Prices of fertilizer	
	Water dataset	• Volume of stored water by area and time period	
		• Rainfall	
		• Forcasted rainfall	
	Dataset on prices of agricultural products	• Prices of Agricultural product	
		• Agricultural price forecasts	

Datasets Used to Drive Operations

Types of datasets	High-Value Datasets	Key Variables	status
Geospatial dataset	Fundamental geographic dataset	• Fundamental geographic dataset	
	Soil dataset	• Soil quality	
	Disaster dataset	• Historical disaster occurrences • Disaster occurence prediction • Repeatedly flooded areas	

Datasets Used to Monitor Operations

Types of datasets	High-Value Datasets	Key Variables	status
Datasets for statistics management	Productivity and efficiency of production	• Value of local identity agricultural products • Value of safe agricultural products • Value of bioagricultural products • Value of processed agricultural products and their derivatives • Value of products using modern technology • Agricultural production data	
Statistics	Productivity and efficiency of production	• Argricultural gross domestic product • Argricultural sector productivity • Net income per agricultural household • Argricultural labor productivity	
	Food security dataset	• Quality and safety index under food security index • Food insecurity • Malnutrition • Plant and animal resources in conservation plans and the proportion of endangered animals • Prevalence of undernutrition • Income of small-scale food producers • Abnormal food price indicator	

Status of Dataset Readiness

- Stored and published, and classified as high-value data
- Stored and published
- Stored and published to a specific group
- Partially stored and/or published
- Currently being stored/ but not published
- Data storage not found

Datasets Used to Monitor Operations

Types of datasets	High-Value Datasets	Key Variables	status
Earth observation and environment dataset	Water dataset	• Amount of water in reservoirs	
		• Irrigation system efficiency	
		• Water reuse	
		• Water source quality	
		• Level of water stress	
		• Wastewater treatment	
	Dataset on protected areas classified by ecosystem	• Extent of protected areas related to marine areas	
		• Extent of natural protected areas	
		• Key Biodiversity Areas (KBA)	
		• Forest areas	
		• Total land area and degraded land areas	
		• Mountain area index and proportion of degraded mountain areas	
		• Grean space dataset	
		• Average ocean pH	
		• Plastic waste density	
	Dataset on integrated water system management	• Percentage of households with clean drinking water	
		• Percentage of households with sanitary toilets	
		• Proportion of wastewater from households and industries that is safely treated	
		• Proportion of water sources with good surrounding water quality	
		• Level of water stress	

Datasets Used to Monitor Operations

Types of datasets	High-Value Datasets	Key Variables	status
Earth observation and environment dataset	Dataset on integrated water system management	• Changes in the context of water-related ecosystems at all times	
	Dataset on Waste management	• Proportion of regularly collected municipal solid waste and properly disposed of at the final point	
		• Recycling rate	
		• Hazardous waste per capita and proportion of hazardous waste treated	
	Dataset on actions to combat climate change and its impacts	• Amount of greenhouse gas classified by economic activities, industry types, and provinces	
		• Air quality dataset	
Geospatial dataset	Dataset on agricultural areas	• Areas with sustainable agriculture practices	
		• Organic agriculture areas	
		• Areas certified under good agricultural practices	
		• Unsuitable cultivation areas	
		• Areas at risk of flooding and drought	

Public Health Sector

Datasets Used to Drive Operations

Types of datasets	High-Value Datasets	Key Variables	status
Datasets for statistics management	Mortality dataset Dataset on public behavior and knowledge	• Number of deaths categorized by cause, age, and gender	
		• Knowledge of well-being	
		• Locations of public parks and community recreational areas	

Status of Dataset Readiness

- Stored and published, and classified as high-value data
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Public Health Sector

Datasets Used to Drive Operations

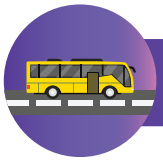
Types of datasets	High-Value Datasets	Key Variables	status
Health risk dataset	Dataset on health risk	• Daily PM2.5 levels	
		• Road accident locations	
		• Diseases and symptoms	
		• Data on behavior surveys of Thai people in 5 disease groups	
	Dataset on healthcare facilities	• Resources in each service unit	
	Data on access to public health services	• Number of public health workers by area	
		• Demand for public health workers by area	

Datasets Used to Monitor Operations

Types of datasets	High-Value Datasets	Key Variables	status
Statistic	Dataset on life expectancy and mortality	• Mortality rate from major diseases	
		• Death rate from road injuries	
		• Premature mortality rate from non-communicable diseases	
		• Healthy life expectancy	
		• Healthy ageing rate	
	Dataset on public behavior and knowledge	• Rate of well-being literacy among the population	

Datasets Used to Monitor Operations

Types of datasets	High-Value Datasets	Key Variables	status
Statistics	Dataset on public behavior and knowledge	• Health behaviors of Thai people	
		• Level of public awareness about emerging and re-emerging diseases	
		• Prevalence of risk behaviors	
	Dataset on public health coverage	• Targeted poor populations according to the Thai People Map and Analytics Platform on health dimensions that have been taken care of	
		• Coverage proportion of primary care clusters (PCC) with family care teams	
		• Number of specialized medical centers in 4 main areas across 12 health zones	
		• Overall bed-population ratio and distribution across areas	
		• Waiting time for outpataient medical care	
		• Rate of referrals outside the health zone	
		• Healthcare workforce to population ratio	
		• Doctors to population ratio across areas	
		• Capacity of health workers	
		• Level of happiness at work of health workers	



Transportation Sector

Datasets Used to Drive Operations

Types of datasets	High-Value Datasets	Key Variables	status
Datasets for statistics management	Dataset on public transportation	• Volume of public transportaion usage by area	
		• Number of public transportation users by mode of transport	

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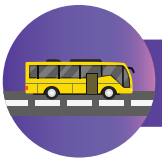

Transportation Sector

Datasets Used to Monitor Operations

Types of datasets	High-Value Datasets	Key Variables	status
Datasets for statistics management	Dataset on freight transport	• Volume of transportation and logistics catagorized by mode of transport	
		• Export volume data for goods/ services in areas connected with neighboring countries	
		• Export volume data for goods/ services between countries via transportation systems	
		• Transportaion cost data for goods/services catagorized by mode of transport	
	Passenger and freight transport	• Data of deaths from road accidents	
Geospatial data	Passenger and freight transport	• Data on bus and truck tracking via GPS systems	
Statistic	Dataset on freight transport	• Proportion of volume of freight transport by rail to total freight transport	
	Dataset on transport	• Proportion of public transportation users traveling within Bangkok and its vicinity	
		• Proportion of public transportation users traveling between citites	

Datasets Used to Monitor Operations

Types of datasets	High-Value Datasets	Key Variables	status
Statistic	Dataset on road safety	• Rate of deaths from road accidents	
		• Proportion of number of deaths from accidents involving public transportation to the total number of passengers traveling via public transportation system	

Finance and Banking

Datasets Used to Drive Operations

Types of datasets	High-Value Datasets	Key Variables	status
Statistic	Stability of the financial system	• Data on gross non-performing loans (NPLs) with overdue payments of more than 3 months	
		• Financial Soundness Indicators	
		• Regulatory capital ratio	
	Data on financial market depth	• Domestic credit allocated to the private sector	
		• Access to finance for SMEs	
	Financial stability indicators	• Teir 1 capital to assets	
		• Teir 1 capital to risk-weighted assets	
		• Net non-performing loans after deduction of expected credit loss to equity	
		• Non-performing loans to total loans	

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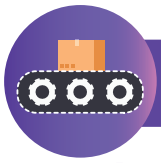
Finance and Banking

Datasets Used to Drive Operations

Types of datasets	High-Value Datasets	Key Variables	status
สถิติ	Financial stability indicators	• Rate of return on assets	
		• Liquid assets to short-term liabilities	
		• Proportion of net open position in foreign currency to regulatory capital	
	Access to financial services	• Number of commercial bank branches per 100,000 adults	
		• Number of automatic teller machines (ATMs) per 100,000 adults	
		• Growth rate of new non-large business loans (average percentage)	
	Dataset on public finance	• Structure of government expenditure budget	
		• Government expenditure budget	
		• Budget disbursement results	
		• Monitoring and evaluation system for the implementation of the National Strategy and project achivement	
		• Government revenue collection results	
		• Fiscal balance	
		• Public debt	
		• State enterprise operations	
		• Economic, financial, and trade warning system	

Tourism

Types of datasets	High-Value Datasets	Key Variables	status
Datasets for statistics management	Data on tourism circulation	• Proportion of tourists classified by country of origin	
		• Geospatial data of tourist attractions	
Statistic	Tourism gross domestic product	• Tourism gross domestic product	



Industrial Sector

Datasets Used to Drive Operations

Types of datasets	High-Value Datasets	Key Variables	status
Mobility and datasets for statistics management	Data traceability system for products[1]	• Product details	
		• Product standards and warrenty	
		• Manufacturers	
		• Raw materials suppliers	
		• Factories	
		• Importers/distributors	
		• Shipping information throughout the supply chain	
Datasets for statistics management	Dataset on support from the public sector	• Amount of subsidy given for innovation research and development classified by types of industries	
		• Amount of subsidy given for workforce skill development	
		• Investment promotion value in regional special economic zones and border economic zones	

[1]Decision No 768/2008/EC of the European Parliament and of the Council of 9 July 2008 on a common framework for the marketing of products, and repealing Council Decision 93/465/EEC

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Industrial Sector

Datasets Used to Drive Operations

Types of datasets	High-Value Datasets	Key Variables	status
Datasets for statistics management	High-value datasets Dataset on support from the public sector	• Effectiveness of projects to enhance the competitiveness of Thai enterprises	
	Dataset on employment classified by types of industries and labor skills	• Employment number	
		• Working hours	
		• Salaries, wages, and employyee benefits	
		• Job vacancy data	
	Dataset on production Standards classified By types of industries	• Data on products/parts meeting international standards in each industry	
		• Data of operators or factories classified by Thailand Standard Industrial Classification (TSIC)	
	Dataset on data infrastructure	• Number and details of datasets input into the central data storage system	
		• Database system for small and medium enterprises	
Companies and company ownership	Dataset on operator registration classified by types of industries	• Number of registrants classified by types of registrants and industries	
		• Registered capital value	
		• Registration date and registration cancellation date	
		• Employment statistics of business establishment	

Datasets Used to Drive Operations

Types of datasets	High-Value Datasets	Key Variables	status
Companies and company ownership	Dataset on operator registration classified by types of industries	• Number of small and medium enterprises registered with the Social Security Office/ for VAT/ as juristic persons/ as commercial entities	
		• Data on startups	
	Dataset of factories	• Dataset of factory registration	
Environment	Environmental dataset classified by types of industries	• Amount of greenhouse gas emissions classified by types of industries	
		• Amount of carbon dioxide emissions per unit of value added classified by types of industries	
		• Amount of PM 2.5 emissions from the industrial sector	

Datasets Used to Monitor Operations

Types of datasets	High-Value Datasets	Key Variables	status
Statistic	Dataset on macroeconomics	• National income of the industrial sector	
		• Gross domestic product classified by industrial sectors, types of business organizations, and economiczones	
	Dataset on productivity and production efficiency classified by types of products and industries	• Production volume	
		• Distribution volume	
		• Production capacity and production capacity utilization rate	
		• Selling price	
		• Production cost	
		• Industrial production index	

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Industrial Sector

Datasets Used to Drive Operations

Types of datasets	High-Value Datasets	Key Variables	status
Statistic	Dataset on productivity and production efficiency classified by types of products and industries	• Industrial labor productivity	
		• Industrial sales value	
		• Inventory	
		• Value added of products classified by types of products and industry groups	
		• Value added of small and medium enterprises	
	Dataset on international trade statistics classified by types of products and industries	• Import statistics	
		• Import statistics of small and medium enterprises	
		• Import prices	
		• Export statistics	
		• Export statistics of small and medium enterprises	
		• Export prices	
	Dataset on invesment classified by industrial sectors	• Domestic investment volume	
		• Foreign direct investment volume	
		• Government investment volume	
	Ranking of competitiveness	• Ranking of competitiveness in each aspect	

Economic, Social and Welfare Dimension

Types of datasets	High-Value Datasets	Key Variables	status
Statistic	Dataset on macroeconomic indicators	• National income	
		• Gross domestic product classified by economic activities	
		• Factor productivity	
		• Labor productivity	
		• Price index	
		• Cost of living index	
		• Foreign direct investment value	
		• Investment value	
		• National accounts	
		• Input-output table of the country	
	Dataset on labor market	• Number of employed population	
		• Job vacancies	
		• Unemployment rate	
		• Child labor statistics	
		• Number of population in the labor force	
		• Number of population not in education, employment or training	
		• Number of working hours	

Economic, Social and Welfare Dimension

Types of datasets	High-Value Datasets	Key Variables	status
Statisitc	Dataset on the development of economic cities and special zones	• Gross domestic product of special economic zones and provinces classified by economic activities	
		• Investment value classified by special zones and provinces	
		• Import-export statistics classified by special economic zones and provinces	
		• Number of cities developed as smart cities	
	Dataset on digital telecommunications infrastructure statistics	• Invesment value in digital telecommunications infrastructure	
		• Number of active fixed line numbers	
		• High-speed internet service fees	
		• Internet Bandwidth	
		• Number of households with internet connection	
		• Fixed broadband internet subscribers per 100 people classified by speed levels	
		• Number of areas with high-speed mobile internet	
		• Internet usage volume	
		• High-speed internet access rate per population	
		• Porportion of the population covered by a mobile-cellular signal, classified by technology	
		• Number of mobile phone owners	
	Ranking of competitieness	• Ranking of competitiveness in economics and infrastructure	

The project's details under the strategies

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