NATIONAL STATISTICS OFFICE

ADB ASIAN DEVELOPMENT BANK

NATIONAL DATA GOVERNANCE ROADMAP

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DEC 03, 2024

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1. DEMAND AND NEEDS
2. CONCEPT OF DATA GOVERNANCE
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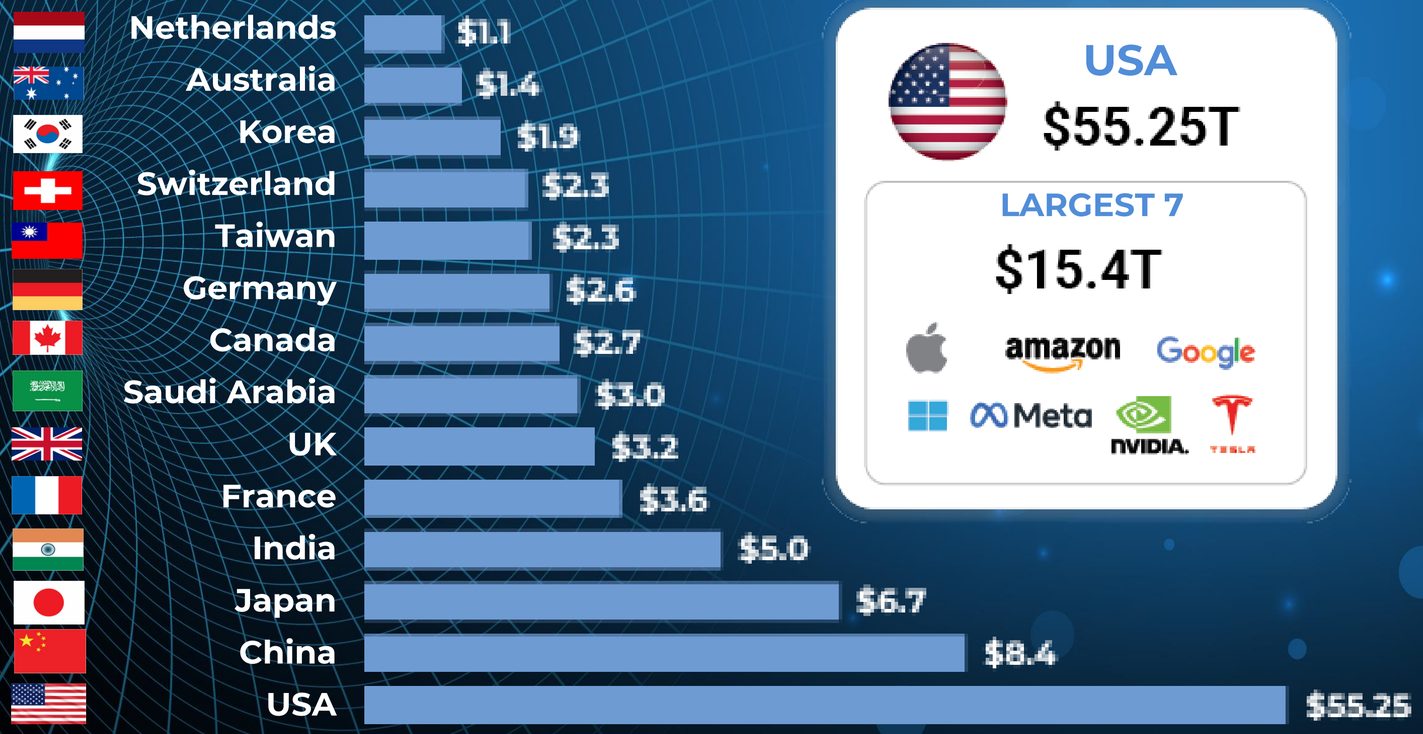
DEMAND AND NEEDS

GLOBAL STOCK MARKET
IN TRILLION-DOLLAR

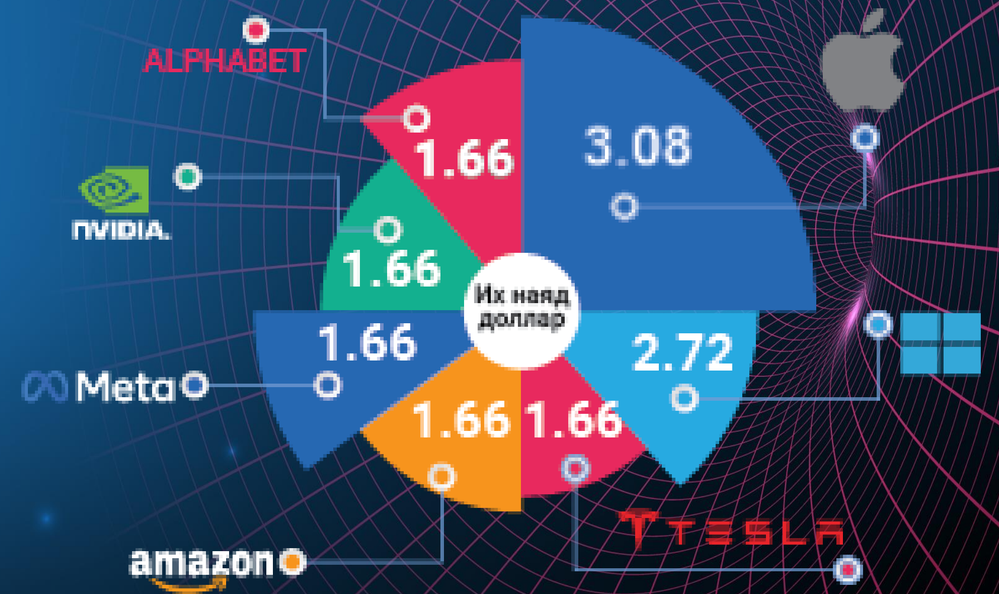


USA
$55.25T

LARGEST 7
$15.4T

amazon Google Meta NVIDIA. TESLA

MARKET CAPITALIZATION OF 7 TECH COMPANIES IN THE USA
IN TRILLION-DOLLAR



Other: 24.13

As of July 2024

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DEMAND AND NEEDS

1 USD INVESTMENT 32 USD PROFIT

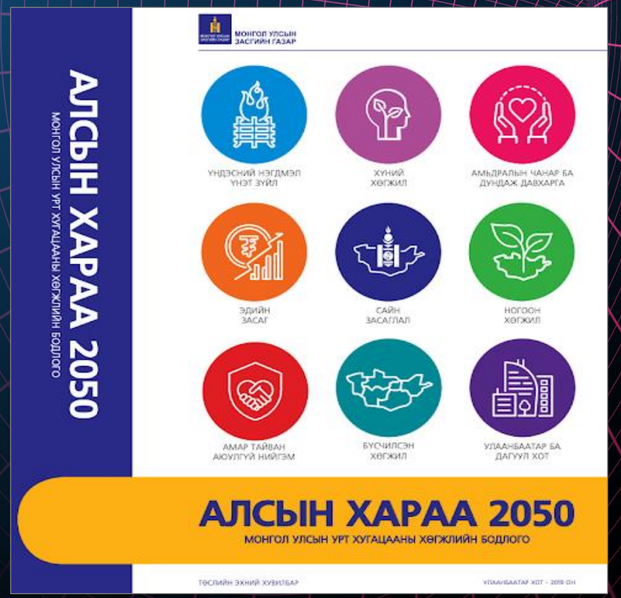
DATA SYSTEM & GOVERNANCE

DATA AS AN ASSET

NATIONAL ACCOUNTING SYSTEM

2025

DIGITAL GOVERNANCE



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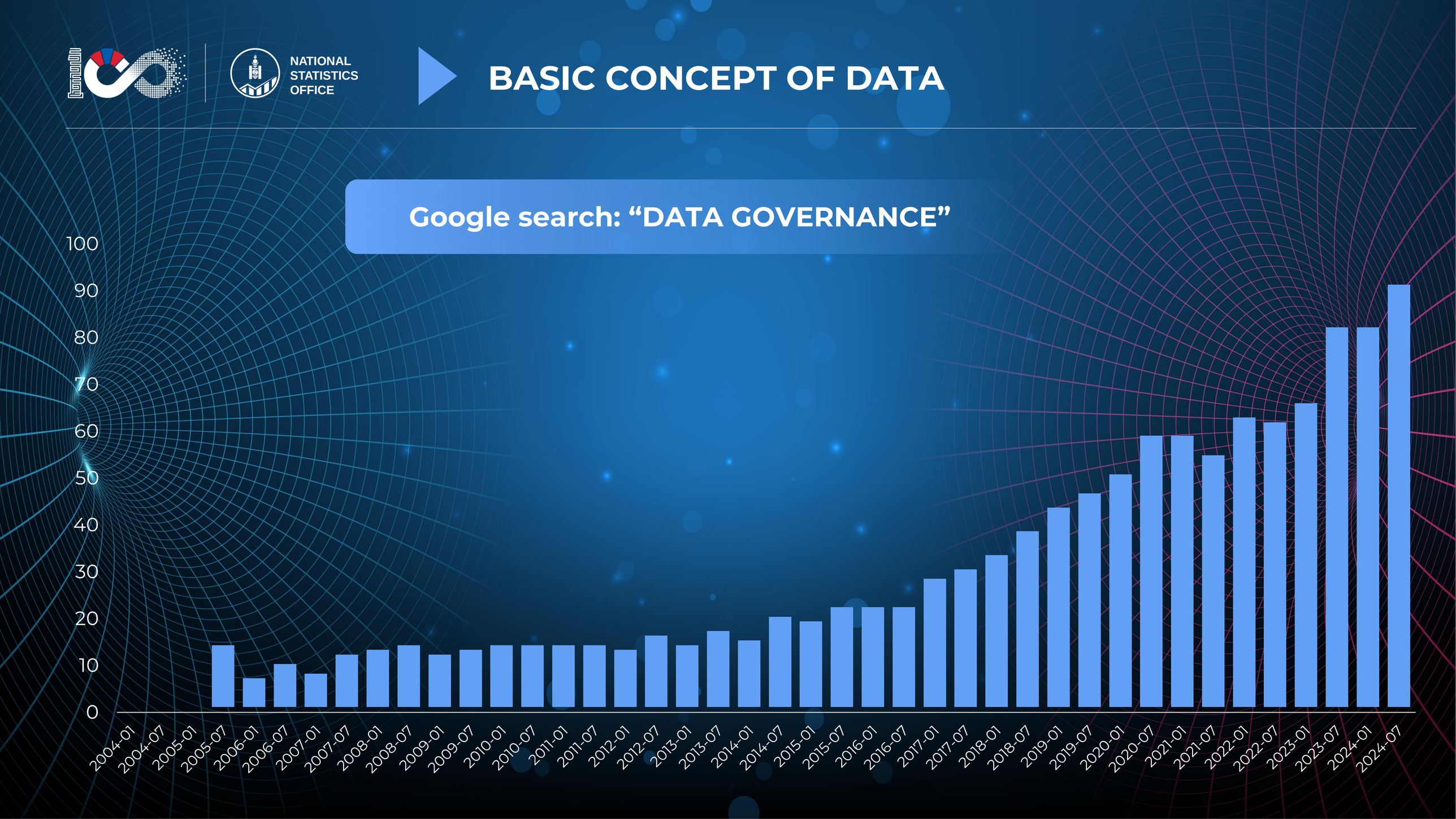
BASIC CONCEPT OF DATA

Google search: “DATA GOVERNANCE”



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BASIC CONCEPT OF DATA

UNITED NATIONS DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS

COMPONENTS (6)

- Standard classification of data
- Data sharing, exchange & interoperability
- Data security (protection)
- Data privacy (ethics)
- Data infrastructure
- Digital identity

BASIC (4)

- POLICY AND REGULATIONS
- INSTITUTIONS
- PROCESSES
- HUMAN RESOURCES

PRINCIPLES OF SDGs (3)

- Accountability
- Effectiveness
- Inclusiveness

Source: STATS BRIEF (March 2024 | Issue No.34): Data Governance: Practices in Asia and the Pacific, UNESCAP

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BASIC CONCEPT OF DATA

The Economic and Social Commission for Asia and the Pacific

GOALS OF THE VISION 2050

DATA MANAGEMENT & RESPONSIBLE ORGANIZATIONS

DATA CONTROLLER

DATA EXCHANGE, ACCESS, INTEGRATION

RISK AND ITS MITIGATION

Source: STATS BRIEF (March 2024 | Issue No.34): Data Governance: Practices in Asia and the Pacific, UNESCAP

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BASIC CONCEPT OF DATA

WORLD BANK

	NATIONAL	INTERNATIONAL
INFRASTRUCTURE POLICY	▪ Universal access to broadband ▪ Internal infrastructure for data exchange, storage and processing	▪ International technical standards for hardware and software ▪ Regional cooperation in data infrastructure
LEGISLATION & REGULATIONS	▪ Protection and security measures against data misuse ▪ Enable data sharing between stakeholders	▪ The Conventions on Cybercrime for cooperation in the fight against cybercrime ▪ Interconnection standards that enable cross-border data exchange
ECONOMIC POLICY	▪ Anti-monopoly of data platform business ▪ Commerce and services that may use data ▪ Taxation of data platform business	▪ Allocation of taxing rights and international tax treaties ▪ Agreement on cross-border trade in data-based service
INSTITUTIONS	▪ Government organizations to control, regulate and protect data ▪ Set standards for other stakeholders and increase data availability and reuse	▪ Promote collaboration and standardization for data governance ▪ Cooperation on international regulation and implementation issues

Source: World Development Report 2021: Data for better living, World bank, 2021

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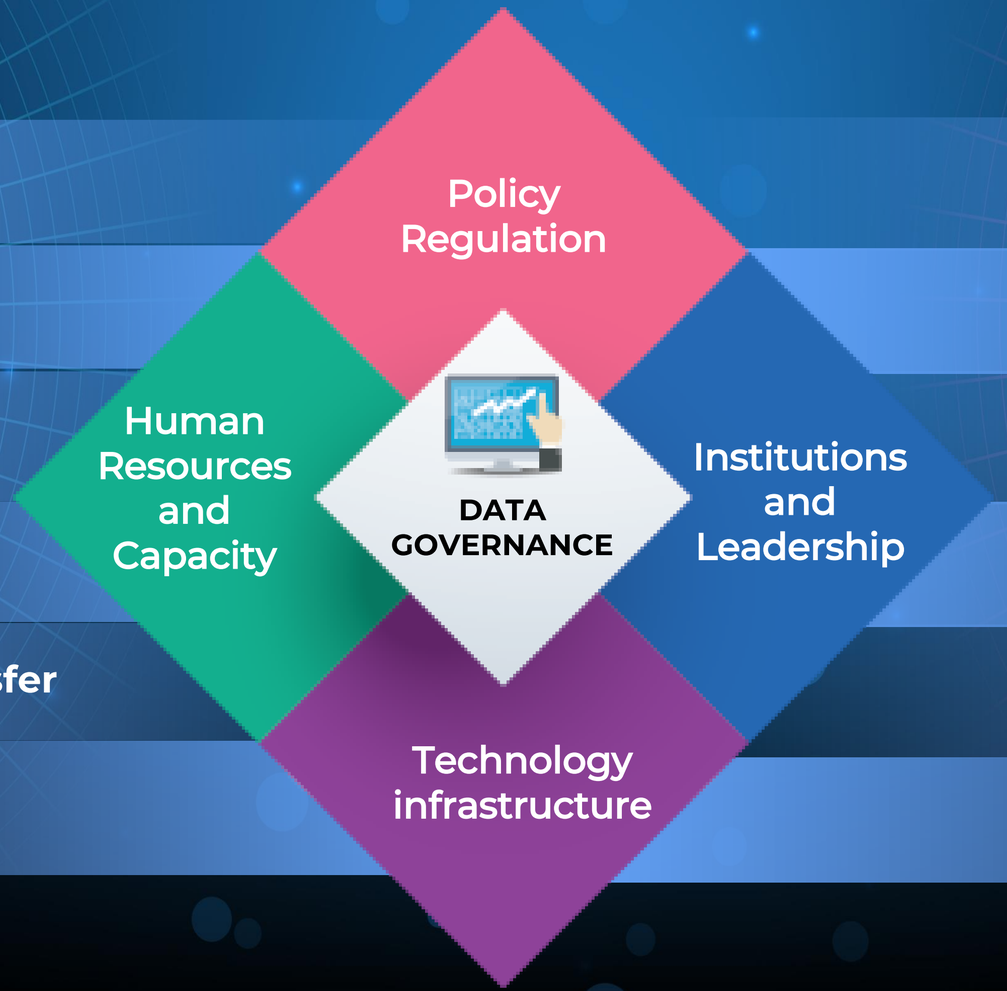
DATA COVERNANCE OF MONGOLIA

MONGOLIAN DATA GOVERNANCE MODEL

PROCESS

- Demand
- Planning
- Environment
- Collection & linkage
- Processing & Transfer
- Preparation



DATA

- Standard classification
- Quality
- Security
- Privacy & Ethics
- Sharing & Exchange
- Data Integration

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CURRENT SITUATION:

Findings from the Policy and Coordination Assessment, by stages

	Adequate	To be improved
Data policy and planning	Legal coordination is in place.	A lack of regulation to create an integrated database.
Data collection, integration and use	Data collection is regulated by the Law on Statistics.	To introduce regulations for **linkage**, **storage** and **use** of databases
Data processing and dissemination	Processing and internal use of data by a data controller is fully reflected in the legislation.	To develop a technological environment for creating an integrated database
Evaluation and improvement of a database	According to the Law on Statistics, it is assumed the responsibility to evaluate the quality and accuracy of administrative data.	To design policies and plans for database evaluation and improvement
Security and protection	Data security is regulated by relevant laws.	To improve the anonymization processes whereby the data subject could not be identified.

There is **a lack of clear regulations** on integrating data and creating an integrated database.

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CURRENT SITUATION:

Findings from the Institutional and Leadership Assessment, by stages

	Adequate	To be improved
Data policy and planning	A Government Resolution on the creation of a big data database was approved.	To identify the role and functions of data management and data governance
Data collection, integration and use	A core government data exchange system is aimed more at delivering government services to the people.	To look into and implement changes to the core government data exchange system, or create a new system based on a comprehensive assessment
Evaluation and improvement of a database	Government institutions are collecting data and using it to evaluate policies and programs and make decisions.	To implement and evaluate data quality management at each stage of data governance and create an integrated database
Security and protection	A data security system and responsible organizations are defined and operating by legislation.	Regularly perform relevant measures such as data security risk assessment and audit

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CURRENT SITUATION:

Findings from the Human Resources and Capacity Assessment, by stages

	Adequate	To be improved
Data analytical capacity	More than 40.0% of government institutions have units and employees responsible for data processing and data security.	To improve the 1) descriptive, 2) diagnostic, 3) predictive and prescriptive skills of civil servants
Data management capacity	In government institutions, IT and statistics staff are undertaking tasks related to data policy and operation.	There is a need to define and create data management and governance functions in detail at the national level and at the level of sectors and organizations.

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CURRENT SITUATION:

Findings from the Technology and Infrastructure Assessment, by stages

	Adequate	To be improved
Data policy and planning	Government institutions use different systems and software.	To create and implement a metadata management system and data catalogue
Data collection, integration and use	Prototypes of the Integrated Government Database and Integrated Metadata Database have been launched.	To have interoperability and standard architecture of the Integrated Government Database, Metadata Database, Core Government Data Exchange System
Evaluation and improvement of a database	There are good practices in data integration at the sectoral level.	To use metadata procedures, standards, classifications and codes, and to create dedicated channels for data exchange
Security and protection	Back-ups of the core and specialized databases are scheduled to be transmitted to the National Data Center on a regular basis.	To implement a data security system

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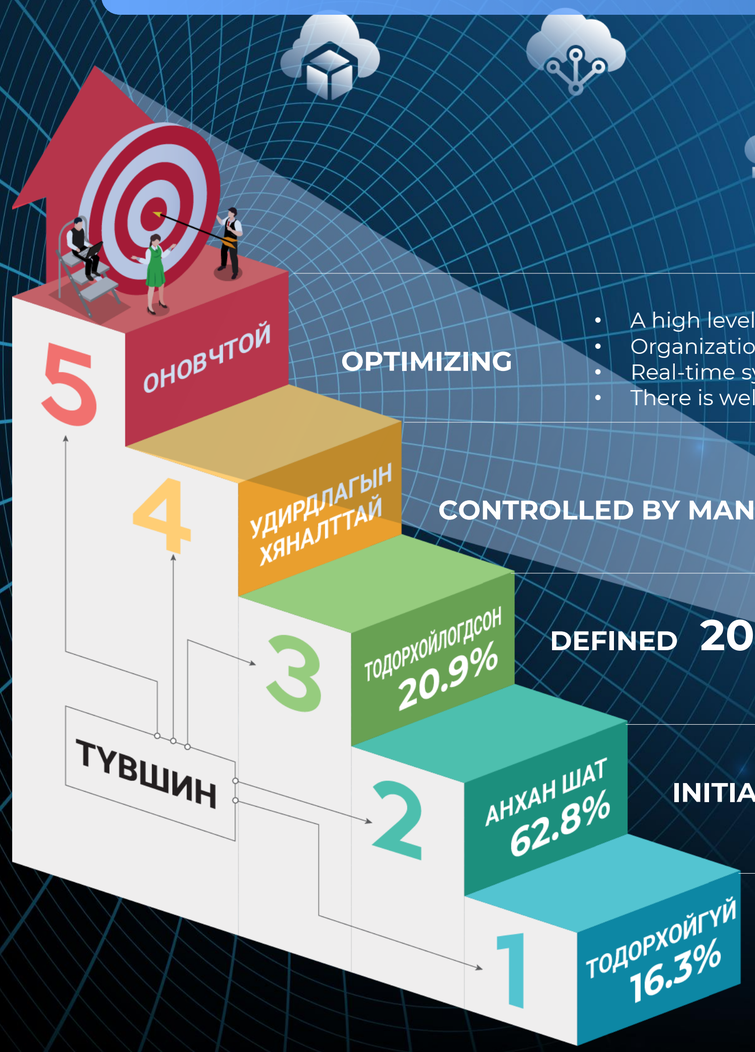
MATURITY ASSESSMENT

Gartner IT Management Process Maturity Model



OPTIMIZING

- A high level of IT cooperation is in place.
- Organizational processes are continuously improved and business planning is done well.
- Real-time systems and infrastructure are in place.
- There is well-established data governance.

CONTROLLED BY MANAGEMENT

- A system for measuring and evaluating IT service processes is in place.
- A system for integration and improvement of processes is in place.
- An infrastructure for data exchange has been created.

DEFINED 20.9%

- Integrated decision-making, planning, and performance control system for data exchange and integration solutions.
- Database and software availability and automation are in place.
- Data consistency is weak and needs to be improved.

INITIAL 62.8%

- Unified decision-making for data exchange and integration solutions is weak, departmental activities are not coordinated.
- The interoperability of systems is poor, data overlap is high, and operations are ad hoc.
- Data governance is weak.
- IT involvement in decision-making is weak.

UNAWARE 16.3%

- Decision-making and evaluation of data sharing and integration solutions are atypical and ad-hoc.
- Data is unorganized and ungovernable.
- No policy and procedures are in place.
- Inadequate and non-compliant IT operations.

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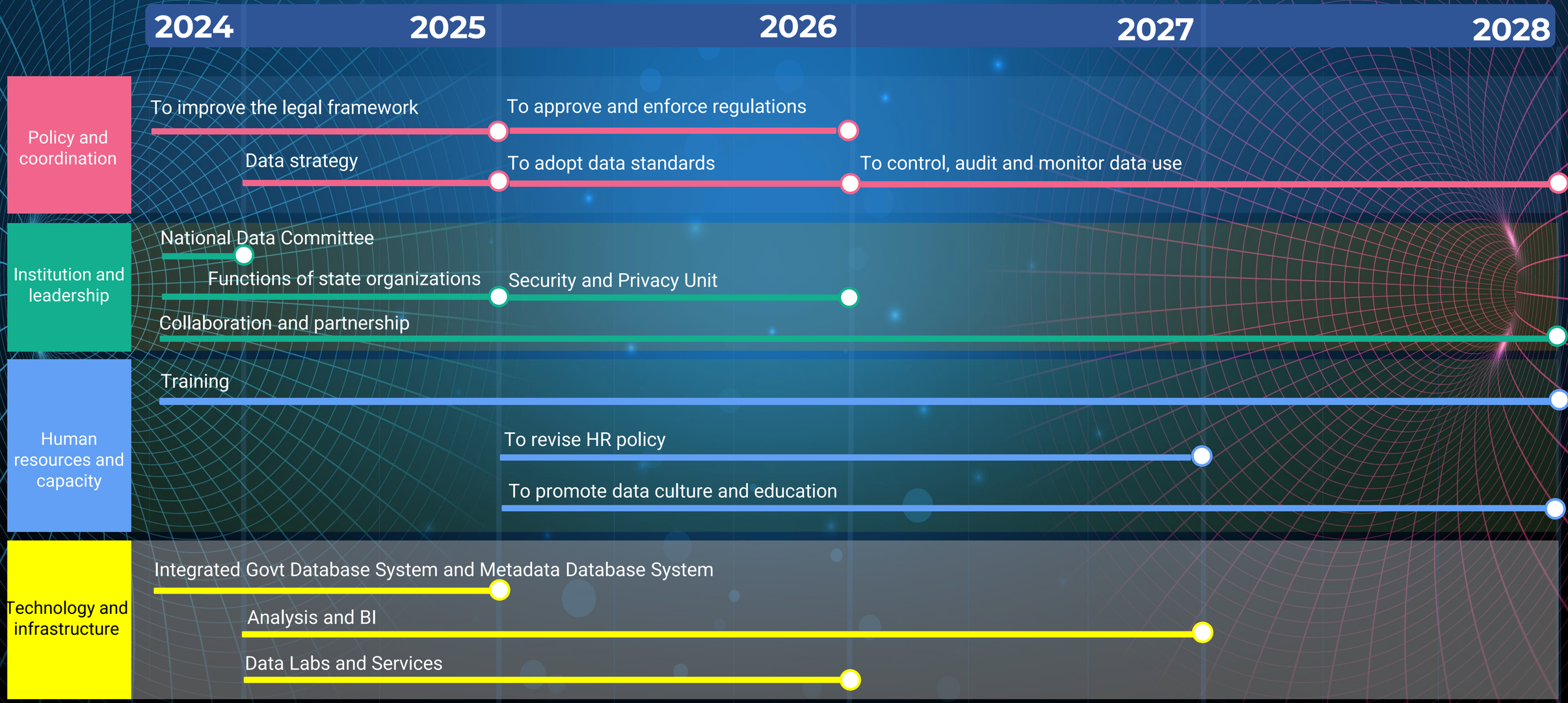
ACTION PLAN



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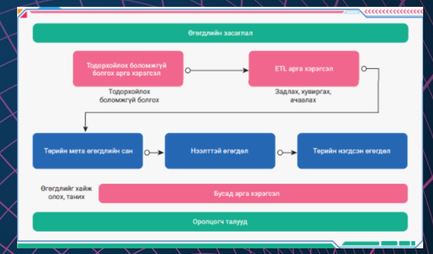
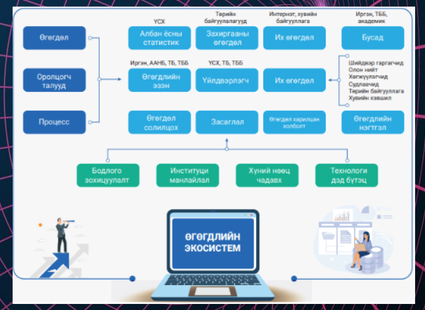
OUTCOME

- Development and improvement of the national data system
- Enhancement of data-driven decision-making at all levels
- Development of e-economy and data-based economy
- Progress towards and modernization of statistical production processes

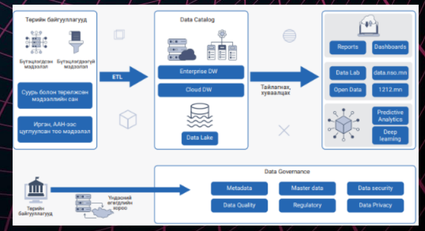
Өгөгдлийн экосистем



Өгөгдлийн экосистемийн зураглал



Өгөгдлийн архитектур



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THANK YOU
FOR YOUR ATTENTION!

DATA@NSO.MN