圖片來源：AI 生成

Strategy and Status on AI and Digital Government in Taiwan

Department of Digital Service
Ministry of Digital Affairs
Cheng-Ming(Ken) Wang

2024 Global AI Capability Rankings

Tortoise Media's Global AI Index (83 countries/122 indicators)

Asia Rankings:

Country	Global Rank
China	#2
Singapore	#3
South Korea	#6
Japan	#11
Taiwan	#21

Source：The Global AI Index

Implementation

Talent focuses on the availability of skilled practitioners in artificial intelligence solutions. # 28

Infrastructure assesses the reliability and scale of access infrastructure, from electricity and internet to supercomputing capabilities. # 4

Operating Environment focuses on the regulatory context and public opinion on artificial intelligence. # 71

Innovation

Research looks at the extent of specialist research and researchers, including numbers of publications and citations in credible academic journals. # 27

Development focuses on the development of fundamental platforms and algorithms upon which innovative artificial intelligence projects rely. # 15

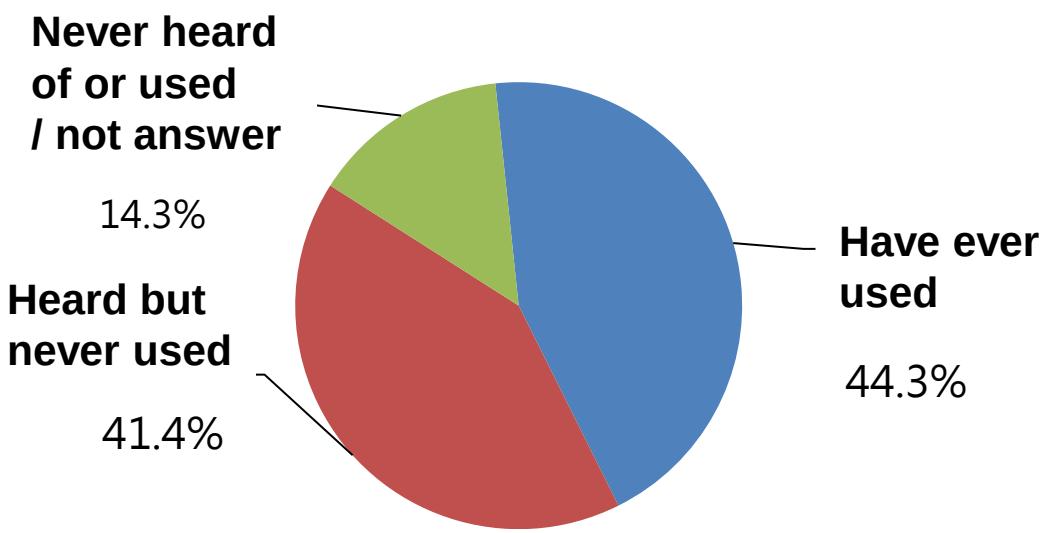
Investment

Government Strategy gauges the depth of commitment from national governments to artificial intelligence; investigating spending commitments and national strategies. # 38

Commercial focuses on the level of startup activity, investment and business initiatives based on artificial intelligence. # 19

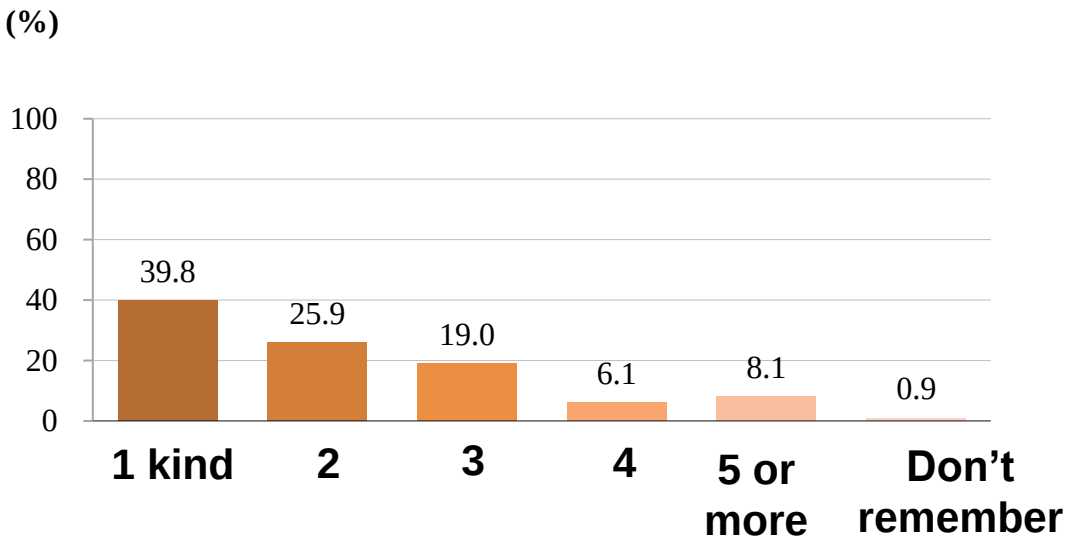
Source： The Global AI Index

Generative AI Usage Experience Among General Public



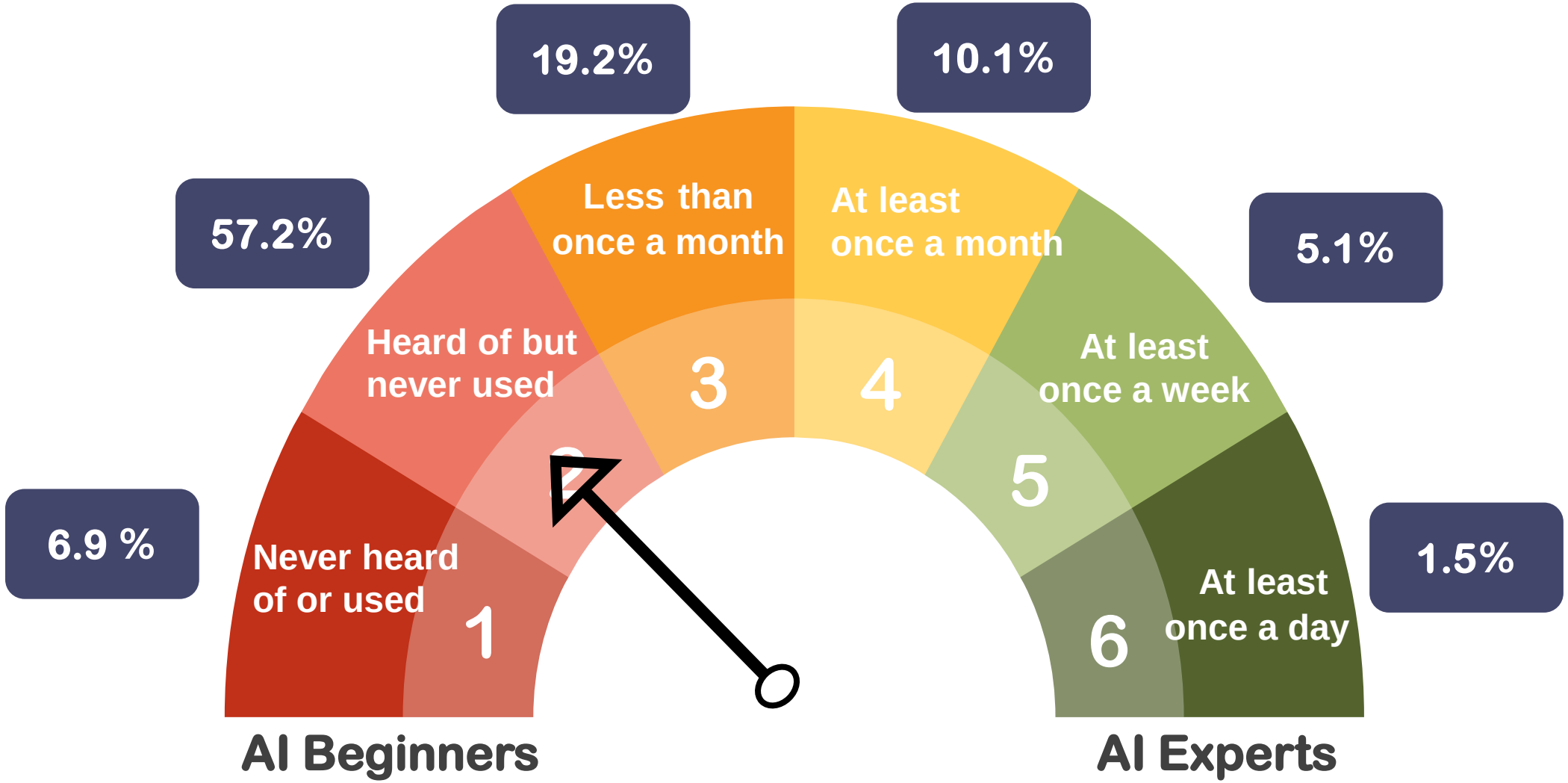
Number of AI tools used per person

(On average, 2.4 AI tools were used.)



Source：Digital Access Survey in Taiwan, MODA,2025

Generative AI Usage Experience Among Frontline Civil Servants



Source: National Academy of Civil Service 2024

AI Talent Gap in Industry

Industry urgently needs AI-ready professionals with practical skills and cross-domain knowledge

Difficulties in Recruiting Key Positions

AI Application Engineers

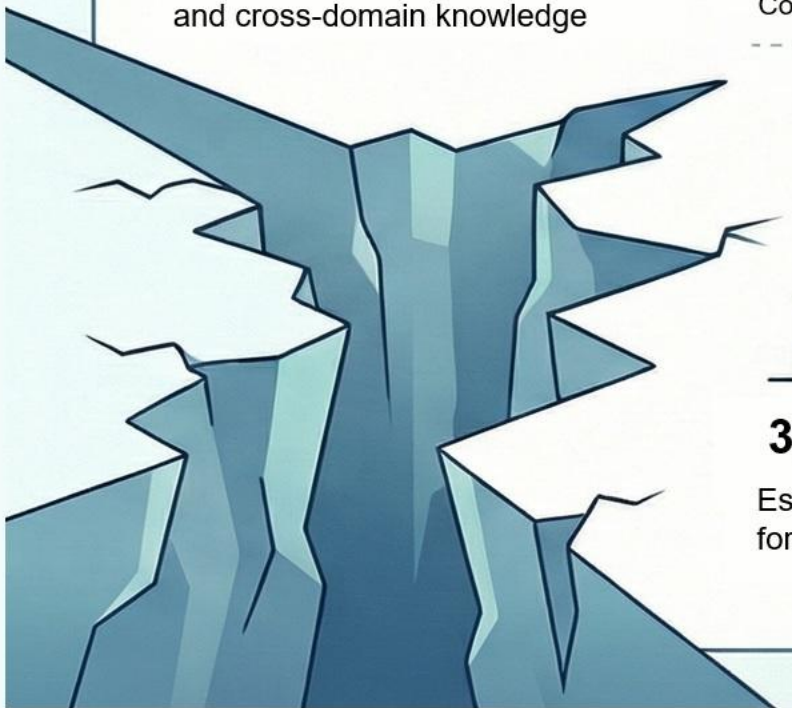
Data Scientists

AI Project Managers

AI Consultants

AI Test Engineers

AI Security Specialists



3,457–4,227 positions

Estimated annual additional demand for AI talent

NotebookLM

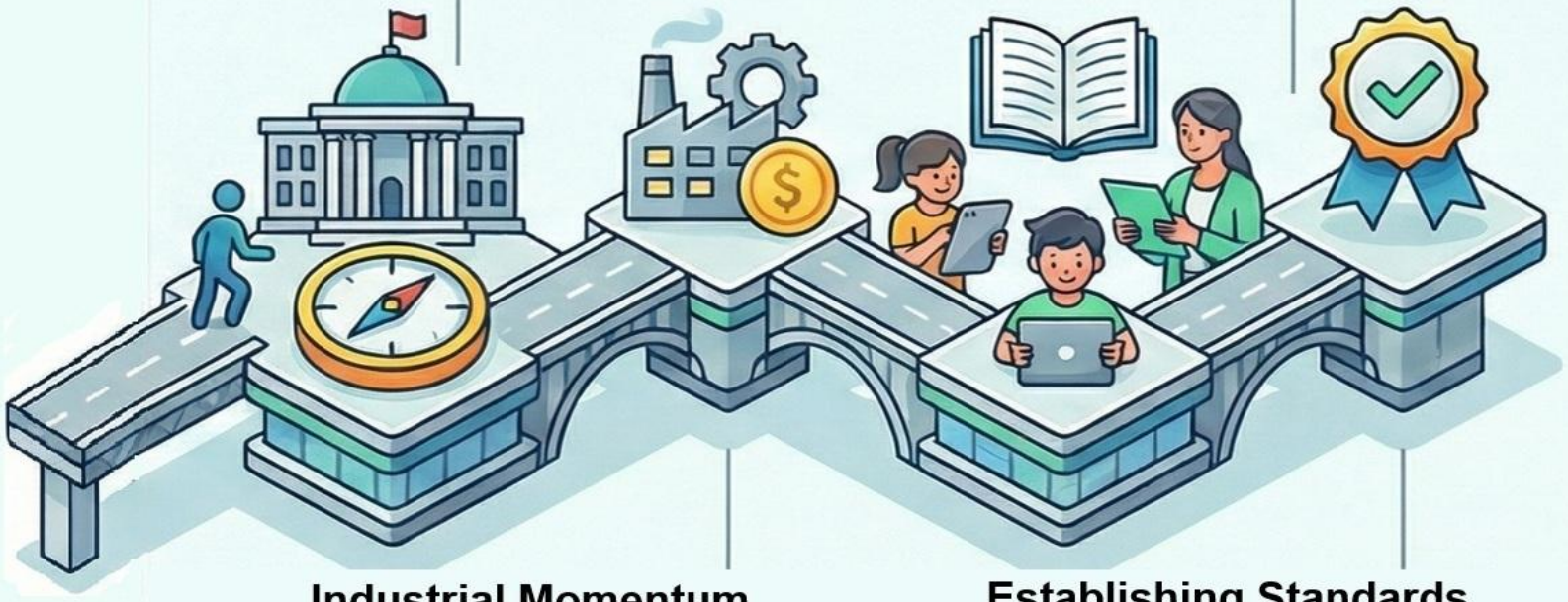
Taiwan's Holistic Strategy for Talent Cultivation

Government as Lead
Public-Sector AI Training

Systematic AI and data-skills training for civil servants

Universal Access
From Schools to Lifelong Learning

Promoting **K-12 tech education** and **" Hour of AI "** activities to encourage AI use among all citizens



Industrial Momentum
Assisting Enterprises in Adopting AI

Subsidizing the development of AI tools for industry, with a maximum of **NT$4 million** per case

Establishing Standards
iPAS Professional Competency Assessment

Connecting AI competency standards for civil servants, the public, and industry; standardizing courses and certification

Establishing AI Basic Act

- **Legislative Purpose**

  To promote innovation, safeguard human rights, and protect national sovereignty and cultural values

- **Legal Positioning**

  Serves as the fundamental administrative guideline for AI development

(1) Seven Fundamental Principles *(Articles 1–3)*

1. Sustainability
2. Human Autonomy
3. Privacy Protection and Data Governance
4. Safety
5. Transparency and Explainability
6. Fairness
7. Accountability

(2) Four Key Areas of Implementation

(Articles 4–7) Innovation Cooperation and Talent Development

- Support AI R&D and applications through incentives and subsidies
- Foster environments for innovation and experimentation
- Promote public–private and international cooperation
- Develop AI talent and strengthen AI literacy

(Articles 8–11) Risk Management and Responsible Use

- Promote AI risk classification
- Establish AI assessment and supervisory tools and mechanisms
- Strengthen human control over AI systems
- Establish AI risk and liability frameworks
- Prevent unlawful uses of AI

(Articles 12–15) Protection of Rights and Data Utilization

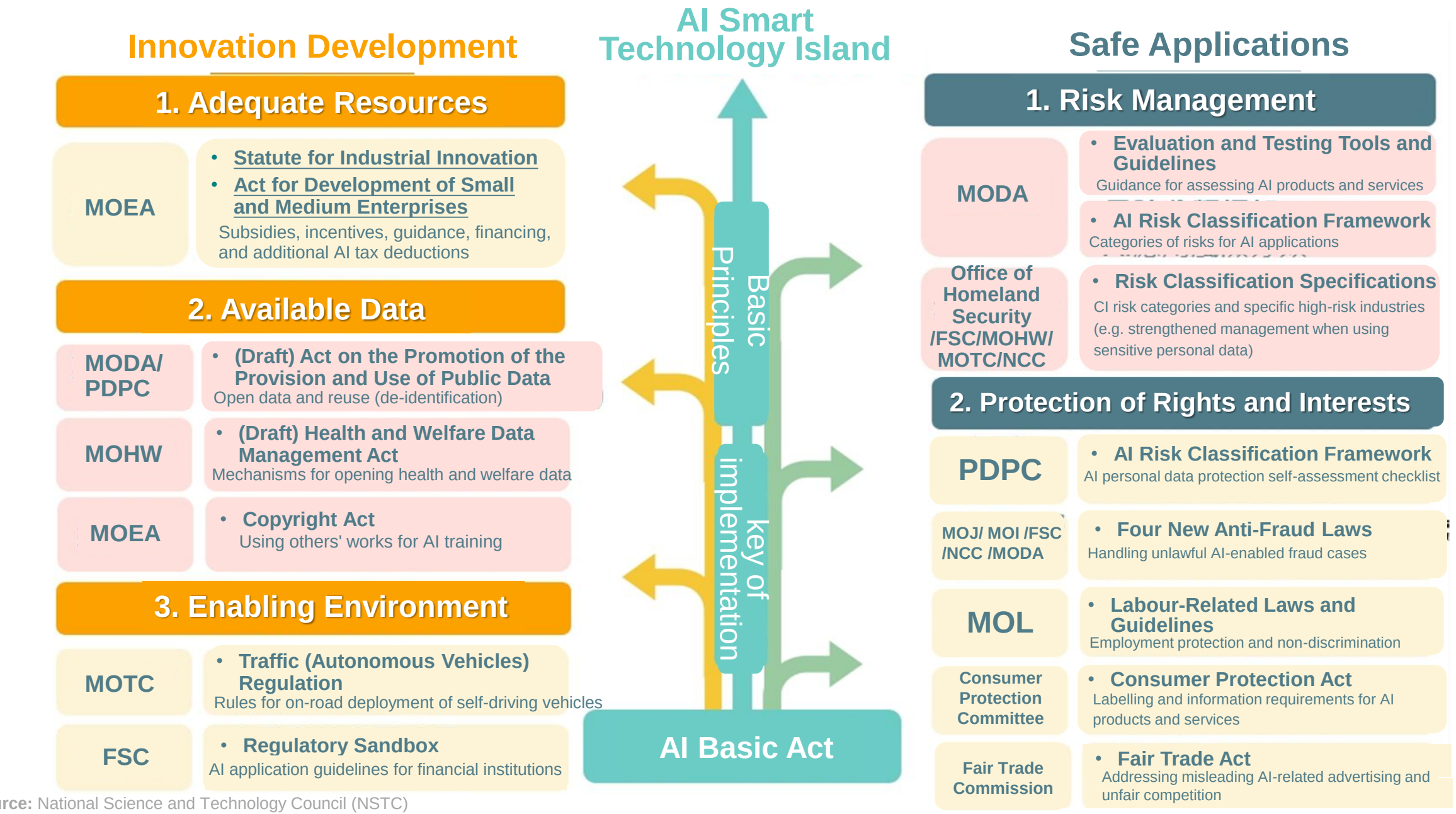
- Set principles for government use of AI in official duties
- Protect workers' rights and support employment transitions
- Safeguard personal data privacy
- Promote data openness and reuse
- Enhance protection of cultural value and related property rights

(Articles 16–17) Regulatory Alignment and Review of Administrative Functions

- Review and align mandates, operations, and regulations with this Act, and issue guidelines where needed
- Interpret existing laws lacking AI provisions in accordance with this Act

- The draft AI Basic Act was approved by the Executive Yuan on 28 August 2025 and submitted to the Legislative Yuan for deliberation.

Supporting Measures of AI Basic Act



Source: National Science and Technology Council (NSTC)

AI Risk Classification Framework

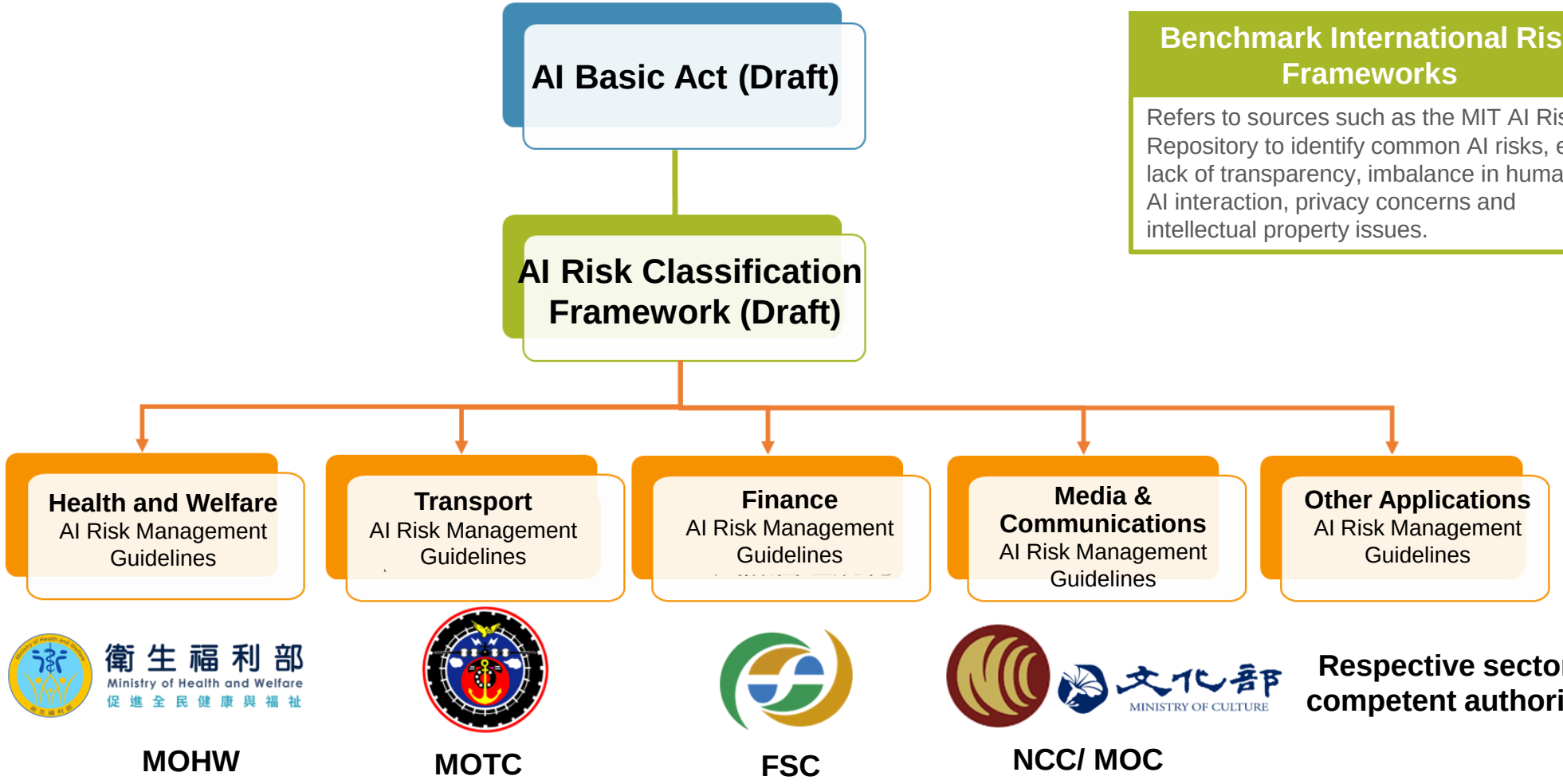
Under the draft AI Basic Act, MODA is promoting an AI Risk Classification Framework, and sectoral authorities will set risk categories and rules for their own domains.

Draft AI Basic Act Article 9, Paragraph 1

MODA shall, with reference to international standards and norms, promote an internationally interoperable AI risk classification framework.

Draft AI Basic Act Article 9, Paragraph 2

Each sectoral competent authority shall, in light of its AI risk management needs, establish risk-based, tiered management regulations based on this framework.



Benchmark International Risk Frameworks

Refers to sources such as the MIT AI Risk Repository to identify common AI risks, e.g. lack of transparency, imbalance in human–AI interaction, privacy concerns and intellectual property issues.

Overall Planning

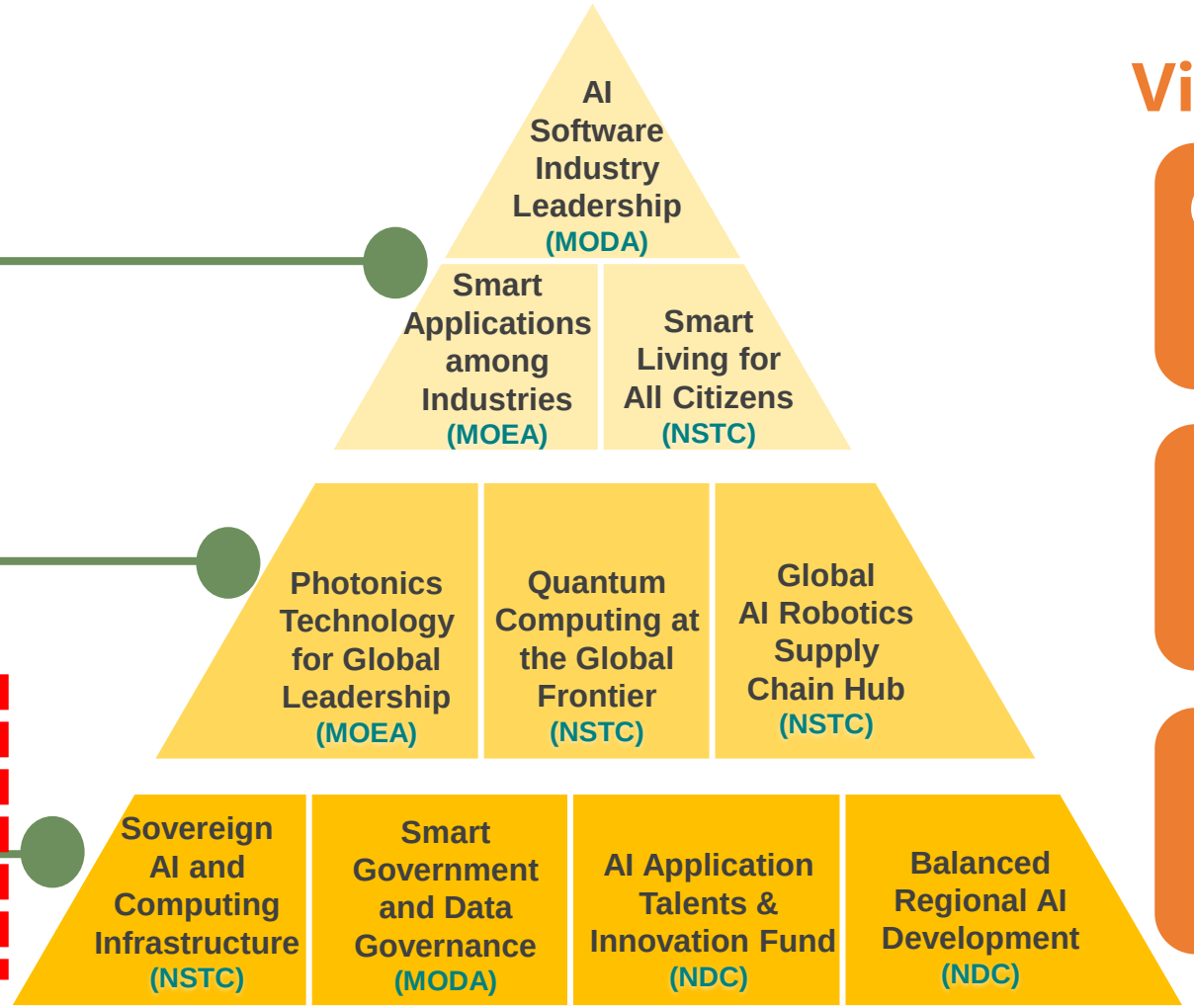
10 Major AI Infrastructures

Ten Major AI Infrastructure Projects

Smart Applications
Driving comprehensive AI development

Key Technologies
Building an AI National Defense Cluster

Digital Foundation
Advancing AI ranking into the global top five



Vision for 2040

Over NT$15 Trillion
Industrial Output Value

500,000+
High-Paying Job Opportunities

3
International AI Laboratories

Smart Nation 2.0 (2025-2028)

Smart Technology Task Force
(NSTC / MOEA / MODA)

- **Advance sovereign AI** across compute, corpora, international cooperation and core R&D.
- **Strengthen digital infrastructure**, from next-generation networks to secure satellite systems.
- **Invest in frontier technologies**, including semiconductor innovation and quantum research.

Smart Industry Task Force (MOEA/ MODA)

- **Expanding Smart Applications** across data-driven innovative services.
- **Driving Industrial Digitalization and Net-Zero Transition** by cloud services for micro, small and medium enterprises, enabling technologies.
- Build **resilient, trusted and democratic global supply chains**.
- Promote AI industrialization and broad AI adoption in all industries.

Smart Nation 2.0

Smart Governance Task Force
(MODA/ NDC)

- **Advance digital legal and regulatory alignment.**
- **Enhance smart government services** through high-quality digital public services, AI-enabled policymaking, and climate-resilient, internationally connected digital governance.
- **Strengthen Public–Private data governance** to support evidence-based policymaking, responsible private-sector data use, and interoperable multi-source databases.
- **Develop civic technology** via public–private hackathons and experimentation that foster co-creation and innovation with citizens.

Smart Inclusion Task Force
(MOE/ MODA)

- **Promoting inclusion and social cohesion** by protecting digital human rights, advancing inclusive AI, and empowering diverse, older and new immigrant communities.
- **Cultivating digital talent** by developing cross-disciplinary digital skills in schools, upgrading workforce competencies, and nurturing startup and innovation talent.
- **Enhancing learning environments** through technology-integrated smart teaching and the development of smart, digitally enabled campuses.

Governance Structure for Smart Nation 2.0

行政院
Executive Yuan

Steering Committee

Convener: Vice Premier of the Executive Yuan

(17–24 members)

Deputy Conveners: Ministers without Portfolio

Members: Heads of central ministries and agencies, chair of the Civil Advisory Committee, and representatives from academia and experts

Executive Secretary: Executive Secretary, Office of Science and Technology Policy, National Science and Technology Council (NSTC)

Executive Secretariat

Supporting Unit: NSTC Science and Technology Office

- Coordination across task forces, ministries and local governments
- Integrated policy planning **with AICoE** and DSET

Civil Advisory Committee

(40–50 members)

Smart Technology

Lead Agency: **NSTC**
Co-Lead Agencies: **MOEA / MODA**

- Sovereign AI Advancement (NSTC/MODA)
- Digital Infrastructure Enhancement (MODA/MOEA/NSTC)
- Strategic Frontier Technology R&D (NSTC/MOEA)

Smart Industry

Lead Agency: **MOEA**
Co-Lead Agencies: **MODA**

- Smart Application Expansion (MODA/MOC/MOEA/MOE/FSC)
- Industrial Digitalization and Net-Zero Transition (MODA/MOEA/EPA/MOTC)
- Global Democratic and Resilient Supply Chains (MOEA)
- AI Industrialization & Industrial AI Adoption (MOEA/MODA/MOA)

Smart Governance

Lead Agency: **MODA**
Co-Lead Agencies: **MOEA**

- Digital Legal and Regulatory Adaptation (NDC/NSTC/MODA/PDPC/NCC)
- Smart Government Services (MODA/MOA)
- Public–Private Data Governance (MODA)
- Civic Technology Development (MODA)

Smart Inclusion

Lead Agency: **MOE**
Co-Lead Agencies: **MODA**

- Social Inclusion and Cohesion (MOE/MODA/MOHW/MOI)
- Digital Talent Development (MOE/MODA/MOL/NDC)
- Learning Environment Enhancement (MOE)

Envisioning Taiwan's Digital Life in the Next 10 Years

Harnessing AI and digital technologies to build a new digital society and deliver better, more convenient lives for all.

Using Digital Technologies to Address Social Challenges and Improve Well-being

AI + smart home IoT for whole-of-home intelligent services

Smart Living

AI and smart assistive devices for independent living in old age

Senior Care

Health data analytics to shorten the path from detection to treatment

Precision Healthcare

Forward-looking net-zero technologies for a sustainable green society

Net Zero

AI-enabled technologies to strengthen disaster prevention and response

Disaster Resilience

Using land, ocean and hydrological data with AI to support adaptation actions

Climate Adaptation

Driving Industrial Upgrading and Transformation Through Innovation

Unmanned factories integrating robots for end-to-end production

Smart Manufacturing

AIoT for crop monitoring and AI-based precision irrigation and fertilization

Smart Agriculture

Data-driven financial innovation and inclusive financial services

FinTech

MR-based virtual sports venues and immersive sports experiences

Sports Technology

Human-Centered Digital Technologies for Inclusion and Equity

AI personal assistants helping new immigrants adapt to life in Taiwan

Social Inclusion

AI + VR to recreate historical scenes and traditional culture

Cultural Inclusion

6G and advanced medical testing to enable high-fidelity telemedicine

Health Equity

AR/VR for immersive and interactive learning experiences

Education Equity

AI navigation and autonomous wheelchairs for independent mobility

Transport Equity

Sources: Living Digital 2040; The World in 2040; 2040 Scenarios; 2040 World Future Report; Japan's Society 5.0; Korea's Digital Strategy

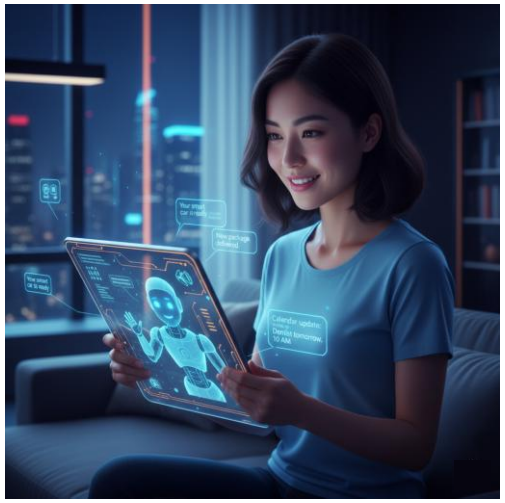
Thank you for listening

Other Key Drivers for AI Development

1. Talent Cultivation (developer and user)

2. Data Cloud (sharing and security)

3. Service Chain (adoption and Promotion)

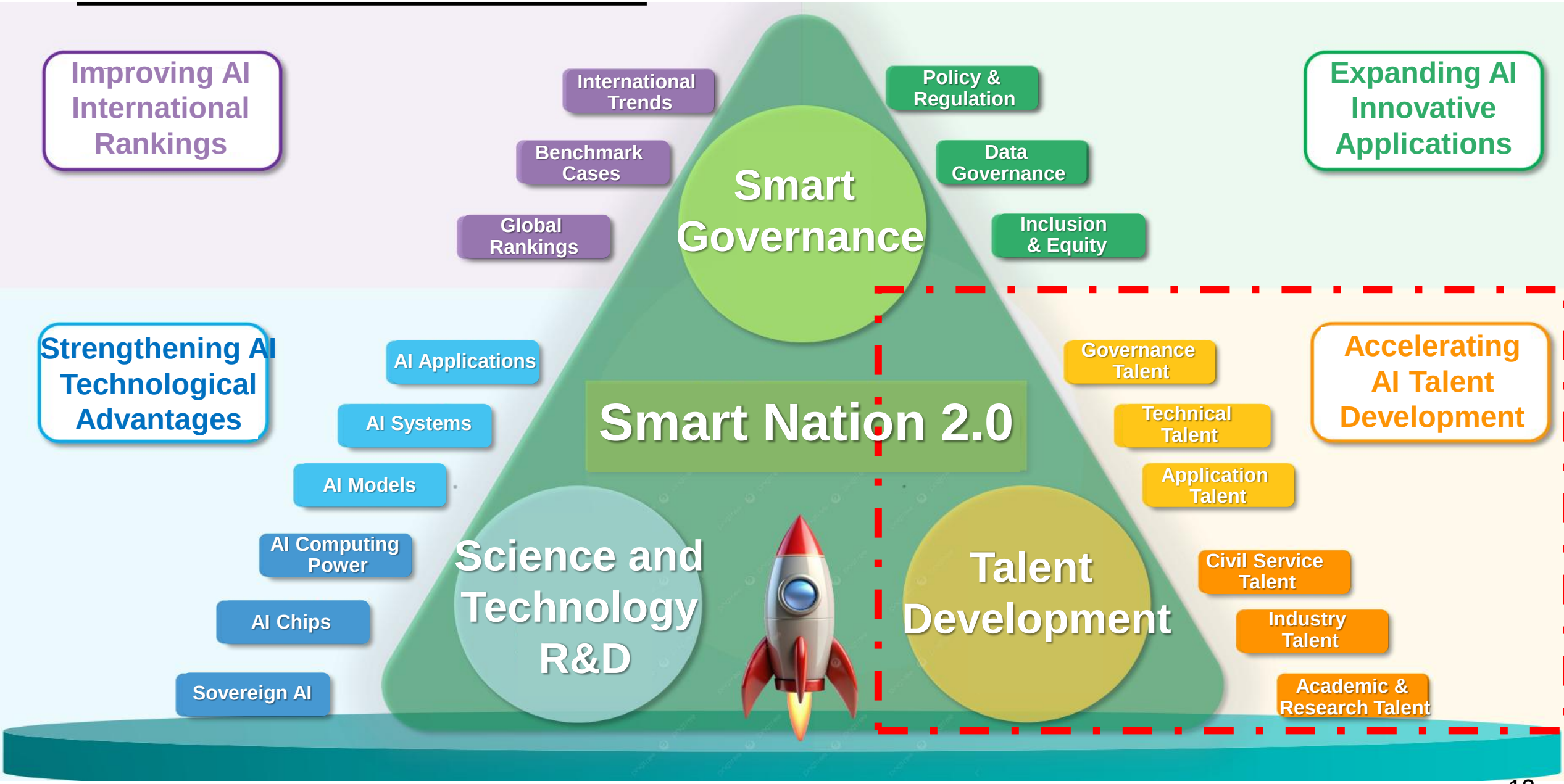


4. Computing Pool (supply and efficient use)

Others:
power supply, funding, programs, testbeds, marketing, etc.

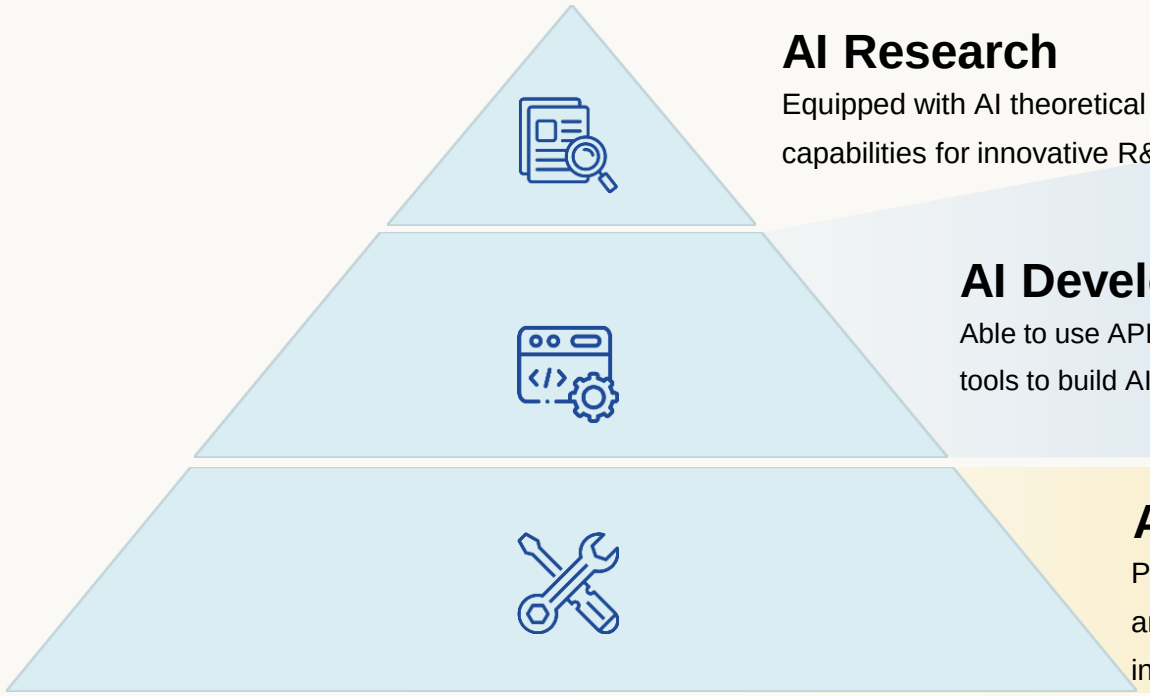
Images generated by AI

1. Talent Cultivation



Source: Directorate-General of Personnel Administration, Executive Yuan – Executive Yuan Council briefing

AI Talent Categories



Talent Categories

Capability Types

AI Research

Equipped with AI theoretical knowledge and capabilities for innovative R&D

AI Development

Able to use APIs and development tools to build AI applications

AI Application

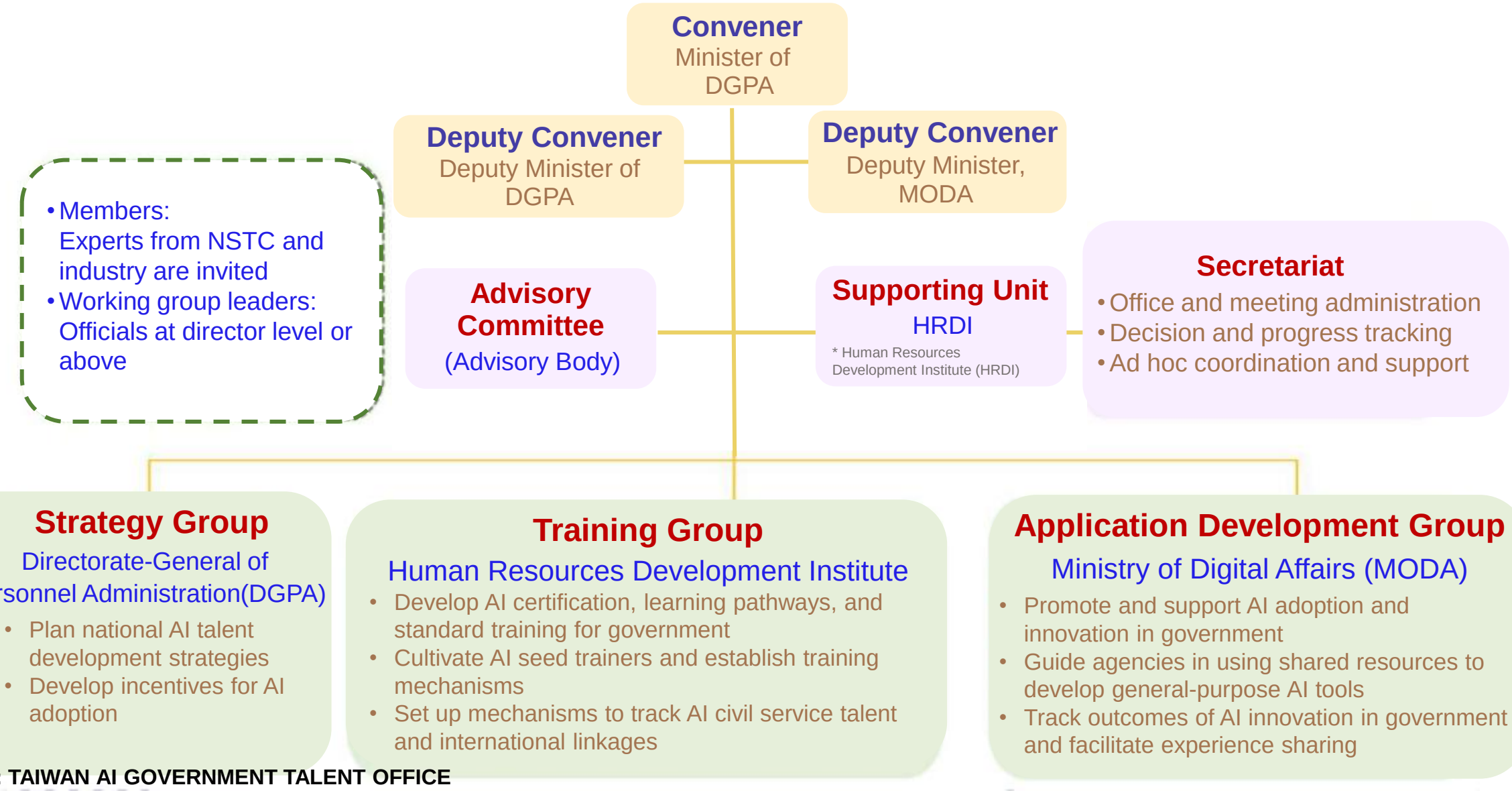
Possessing basic AI literacy and the ability to use AI tools in practice

- AI Programming and Implementation
- AI Model Training
- AI Model Training
- AI Application Literacy
- AI Tool Utilization

Combining public, academic and private-sector training and certification resources.

Source: AI Industry Talent Recognition Guideline

TAIGTO AI公務人才發展辦公室
TAIWAN AI GOVERNMENT TALENT OFFICE



Source: TAIWAN AI GOVERNMENT TALENT OFFICE

2. Data Cloud- Data Governance Strategies for AI

1. Promote legislation of the 《Data Innovation and Utilization Development Act》
2. Launch the 《Taiwan Sovereign AI Training Corpus》
3. Establish the 《Taiwan Sovereign AI Training Data Licensing Terms》
4. Develop mechanisms for deploying privacy-enhancing technologies

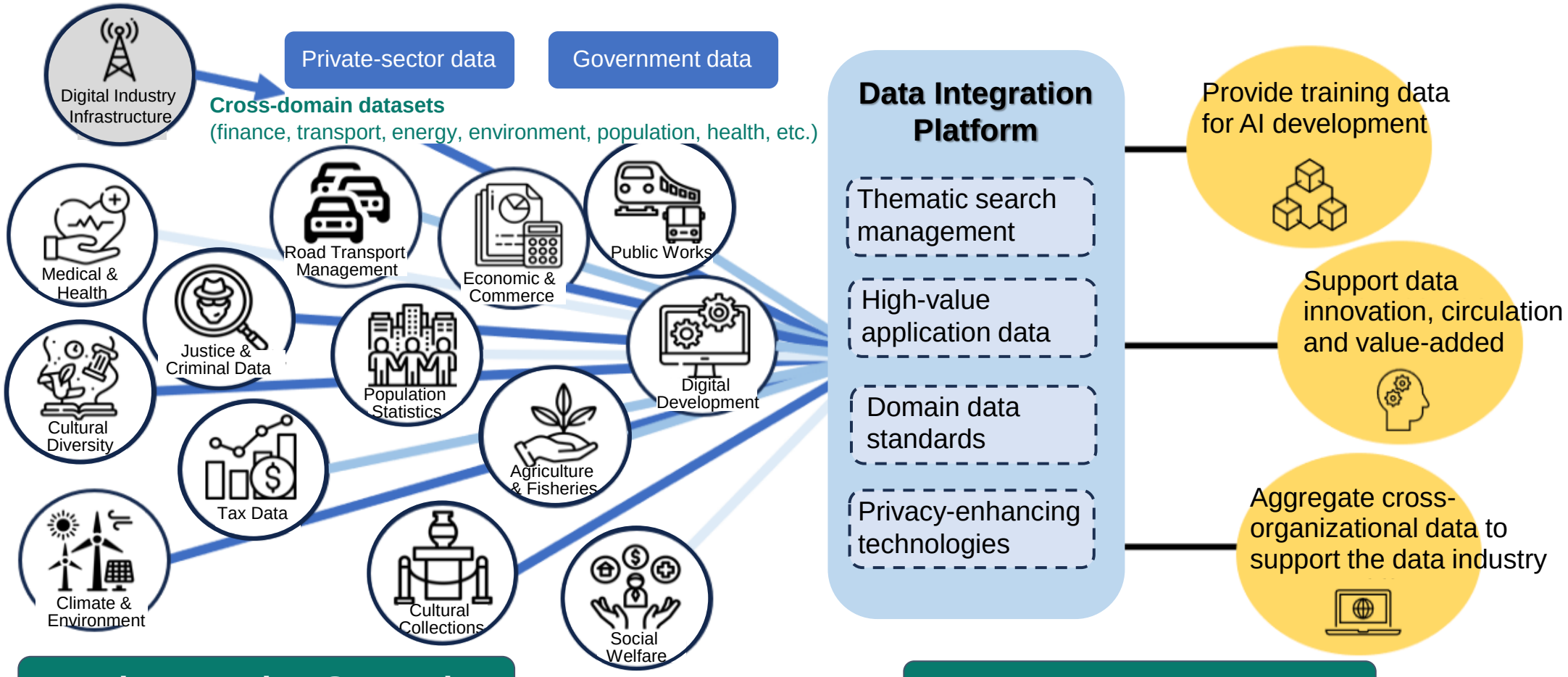
Project Objectives

1. Support training needs of Taiwan’s sovereign AI models.
2. Enable lawful and compliant corpus sharing.
3. Broaden the scope and diversity of training data.

Implementation Strategies

1. Develop the Taiwan Sovereign AI Training Corpus.
2. Establish unified licensing terms for training data.
3. Incentivize corpus release by public and private sectors.

Specific AI Models for Government Services



Implementation Strategies

1. Data integration and privacy deployment frameworks
2. Privacy-preserving, secure data integration platform
3. High-value thematic data-sharing solutions and ecosystem

Expected Outcomes

- Secure, compliant cross-domain government data flows
- Stronger privacy protection, more data sharing and innovation, and a trusted data environment for the public

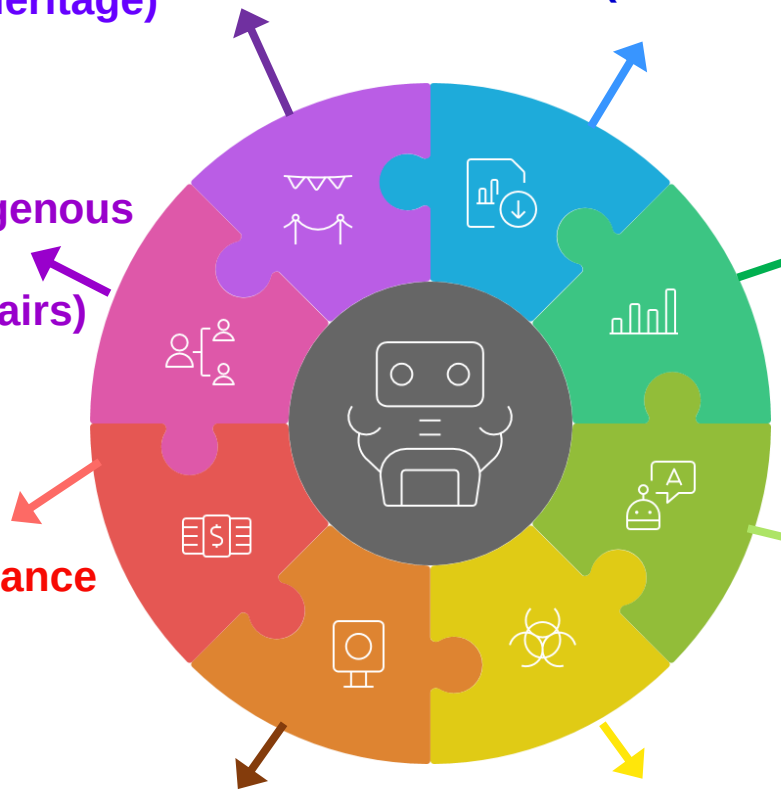
Develop AI Models for Key Service Domains

National Palace Museum
(Cultural Heritage)

Ministry of the Interior
(Base Model)

Council of Indigenous Peoples
(Indigenous Affairs)

Ministry of Economic Affairs
(Data Services)



Ministry of Finance
(Taxation)

Ministry of Justice
(Legal Services)

Ministry of Environment
(Environmental Pesticides)

Ministry of Environment
(Toxic and Chemical Substances Management)

Training Data Providers

Taiwan Sovereign AI Training Corpus

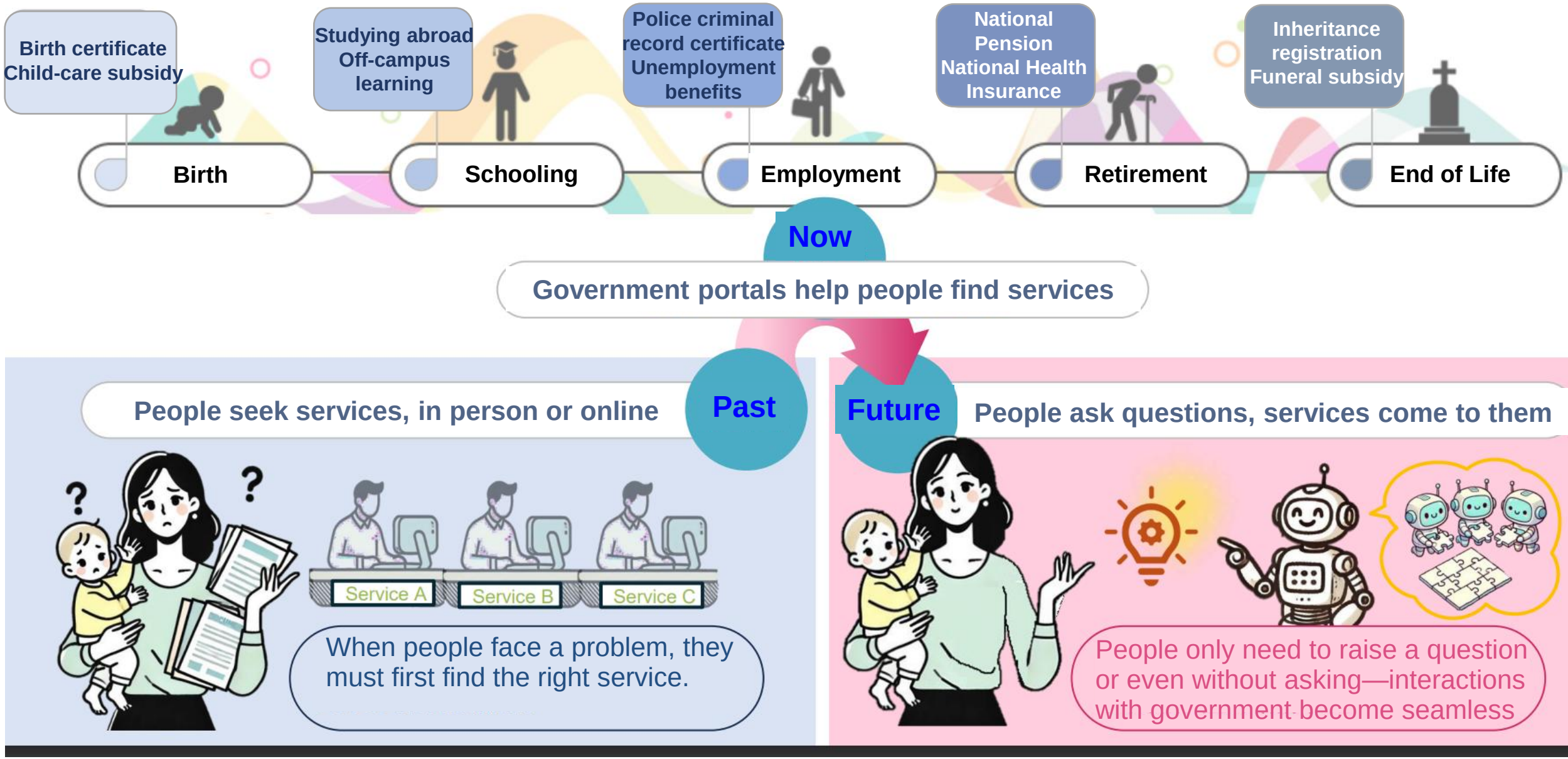
MODA

Prioritizes the release of high-quality traditional Chinese corpora by central second-level agencies

Training Data Demand Side

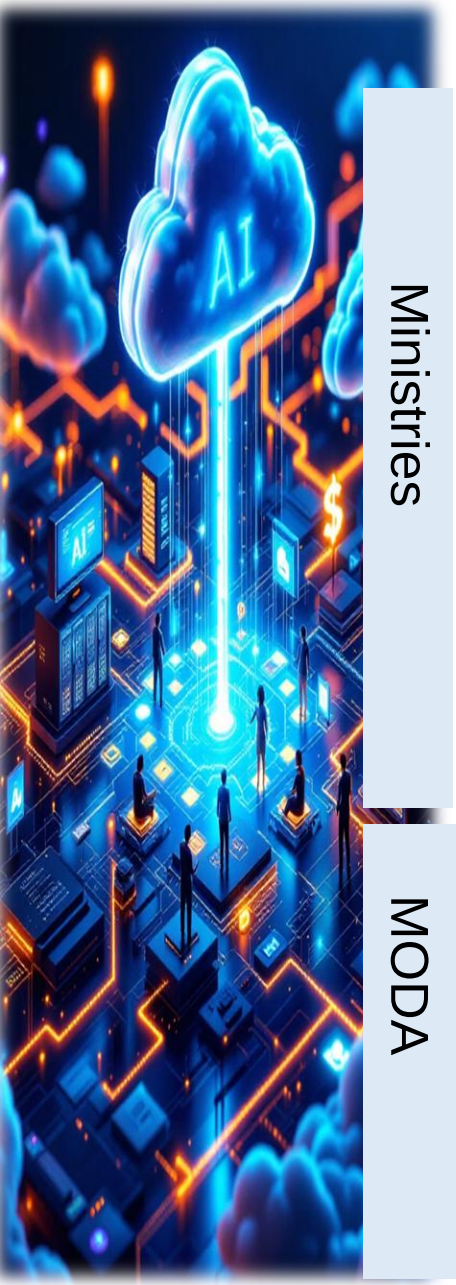
AI model training and learning

3. Service Chain



Images generated by AI

Digital Government Program of Taiwan



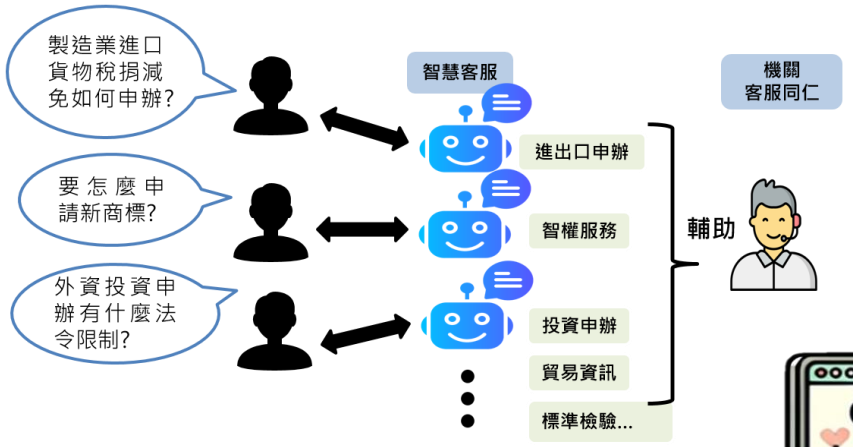
Ministries

MODA

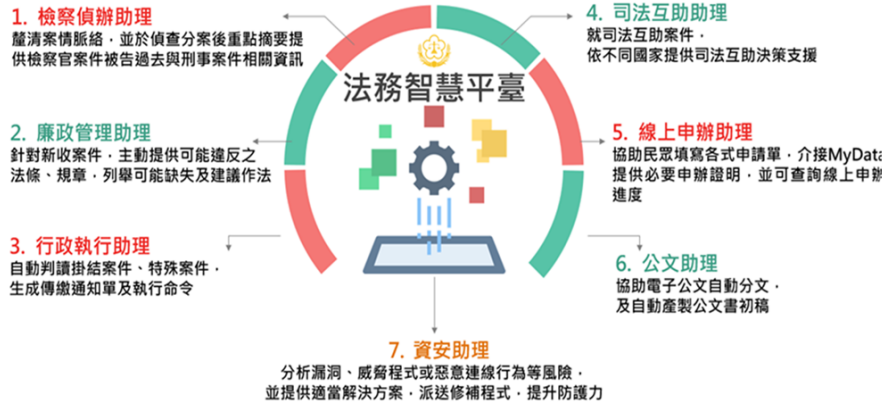
Execution Strategies	2026	2027	2028	2029	2030
1. Develop Smart Public Services	Smart customer service systems		Smart secretaries and smart service counters		
	Smart service environments				
2. Build Smart Administrative Services	Operational data preparation	1. Smart information assistants 2. Smart administrative assistants 3. Smart business assistants			
3. Establish Data and Model Foundations	1. Data Architecture and Privacy-Enhancing Technologies 2. AI models for core government business				
4. Promote Inclusive and Equitable Smart Government Services	User experience design, service accessibility, feedback mechanisms, and service performance metrics and evaluation				
5. Strengthen the Enabling Environment for Government AI Applications	1. Data convergence mechanisms and base infrastructure 2. Backbone government network connectivity 3. AI competency training and AI application guidelines for government staff 4. Testbeds for government large language model applications 5. Cross-domain digital services				

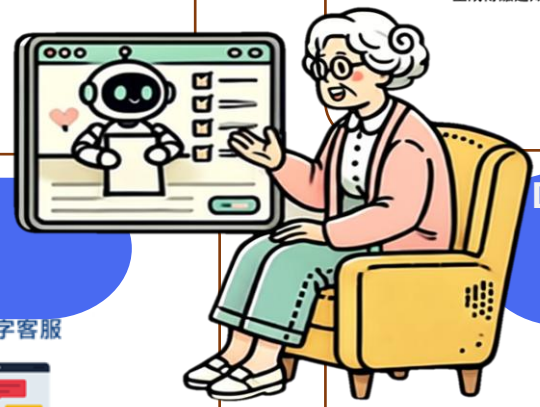
Examples：Smart Services for the Public

Ministry Of Economic Affairs
Smart Customer Service for Core Services



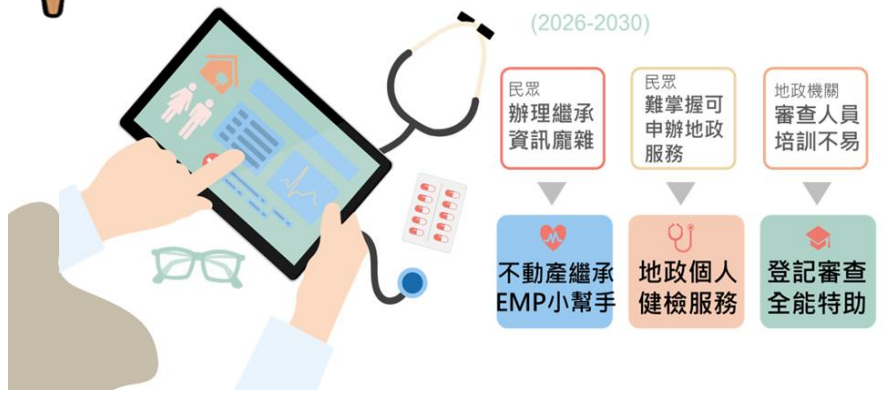
Ministry Of Justice
Smart Justice Platform and AI Assistant





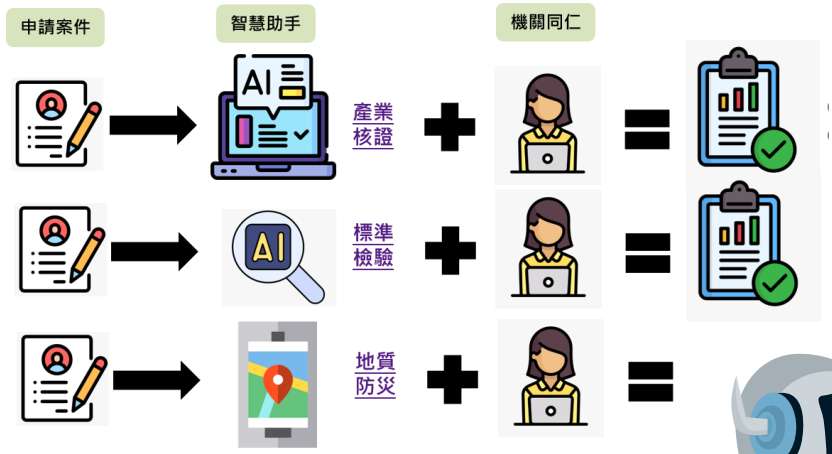
Ministry Of Health and Welfare
Online Smart Customer Service Platform for the Public

Department of Land Administration, MOI
Smart Land and Property Administration System

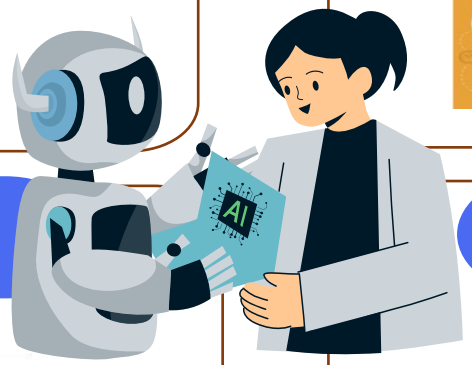


Examples：Smart Administrative Services

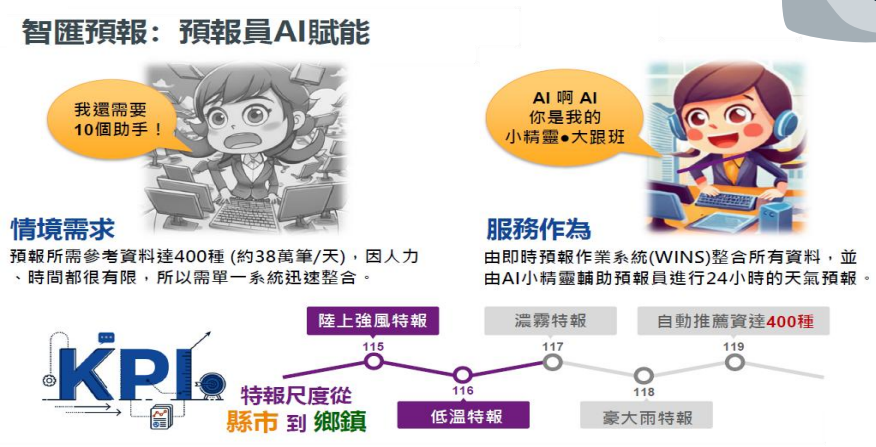
Ministry Of Economic Affairs
AI-Assisted Review System



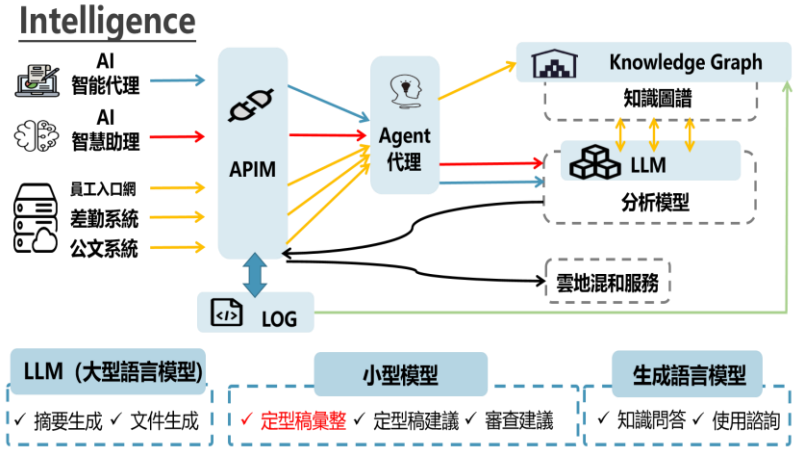
Ministry Of Environment
Smart Administrative Collaboration Assistant



Central Weather Administration
AI Assistant for Weather Analysis



Ministry Of Civil Service
Smart Document System and AI Assistant



AI Testbeds for Agency PoC Trials

Government AI Application Sandbox (TryAI Platform)

Large Language Model Environment

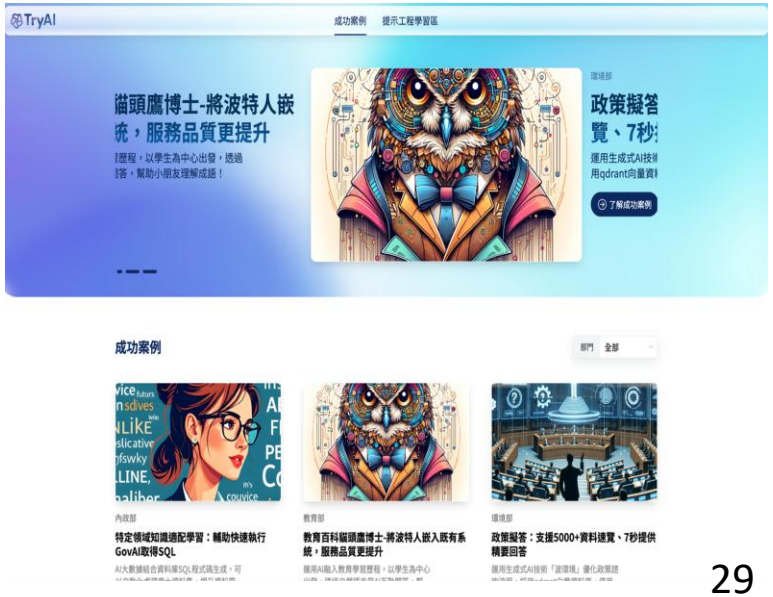
- with over 30 commercial and open-source large language models (LLMs)

AI Bot Marketplace

- Compile over 20 reusable, interoperable AI bots
- Incubate domain-specific AI bots and publish them on the platform
- Share prompt engineering practices

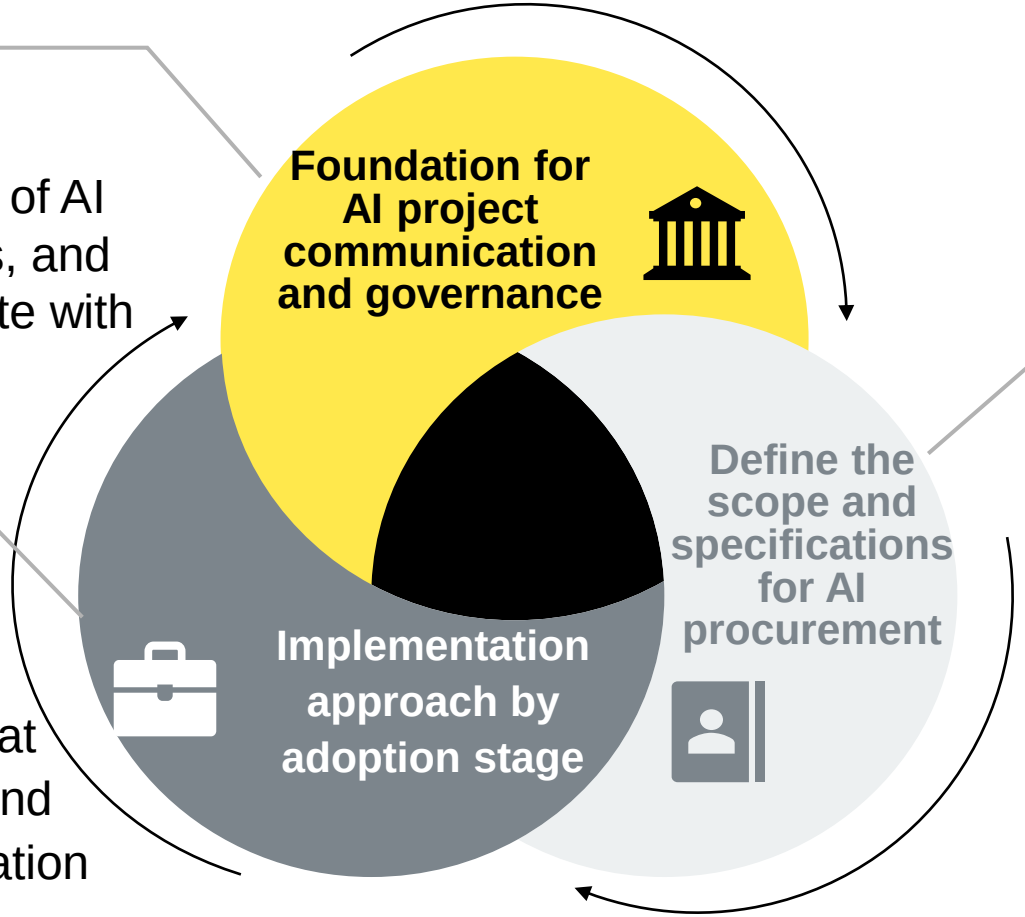
Share Successful Use Cases

- Facilitates cross-agency exchange of AI innovation cases
- Sustain operations and scale adoption



Public Sector AI Playbook: Guiding Service Implementation

AI Literacy
Basic understanding of AI capabilities and risks, and ability to communicate with AI team members



AI Implementation Approach

Ability to assess readiness at each stage of AI adoption and choose suitable implementation paths (products or projects)

AI Procurement

Ability to define AI procurement scope (products or projects) and prepare required compliance documents after initial assessment

Inclusion:
Building Inclusive and Equitable AI-Enabled Government Services

Improving the User Experience of AI Digital Services

Conduct usability testing for AI applications and their related websites, apps or web interfaces, and refine the user interface and workflows based on the results

Ensuring Accessibility in AI Digital Services

Ensure that AI applications and their related websites, apps or web interfaces comply with accessibility design standards and obtain the accessibility certification issued by MODA

Gathering Feedback on AI Digital Services

Design robust feedback mechanisms for AI applications, and use the feedback to continuously improve AI digital services

Collecting Performance Metrics for AI Digital Services

Develop automated tools to collect performance data on AI digital services across agencies, and use these metrics as a basis for ongoing service improvement.

4. Computing Pool – Resource Options

Testbed Resource Investment – Approaches A B C

A. Commercial Models

For use cases without sensitive data, agencies are encouraged to directly use existing commercial models or API-based services (e.g. ChatGPT, Gemini)

B. On-Site Service Deployment

Invite major international vendors to deploy on-premise and closed AI application services, ensuring sovereign AI and data security

C. Self-Built Resources

Work with NCHC to use self-built computing power, models and front-end interfaces, and promote their adoption by government agencies

Computing Power Pool- C：Self-Built Resources

Provider		Computing Pool Name	Approx. Computing Power (PF)	GPUs
Government	NSTC / NCHC	Taiwan Chip-based Industrial Innovation Program	16 (planned to 100)	H100 DGX 96 GPUs H200 DGX 128 GPUs (planned to 100)
	NSTC / NCHC	Southern Taiwan Smart Technology Industrial Ecosystem Plan	(under planning)	(under planning)
	Administration for Digital Industries (ADI), MODA	the “AI Computing Power” initiative	1.58	H100 DGX 32 GPUs MI300X 8 GPUs
Private	Foxlink+Ubitus+Shinfox	Ublink (Phase 1 AI Green Computing Center)	45.82	H100 DGX 1,024 GPUs
	NVIDIA Taiwan AI Research Center	Taipei-1(NVIDIA)	22.3	H100 DGX 512 GPUs L40 OVX 256 GPUs
	Holtek / Realtek	GMI Cloud	11.15	H100 DGX 256 GPUs
	Foxconn Group	Foxconn Supercomputing Center	6.12	H100 DGX 128 GPUs
	Foxconn Group	High-Speed Rail Park - Advanced Computing Center		
	Xiang-Yao Industrial	XY Industrial AICC	46.54	H200 DGX 1,024 GPUs
	AMD Taiwan	AMD Taiwan AI Research Center		

NCHC

TAIWAN AI RAP

From Research to Service

Milestone

TAIWAN AI RAP

1991 台灣第一個國家級超級電腦中心

1993 國網中心新竹本部成立

2003 成為國研院轄下非營利組織

2004 台灣高品質學術研究網路(TWAREN)啟用

2005 台南分部成立

2008 台中分部成立

2011 台灣首座百T主機 御風者 WINDRIDER

177 TF

2016 TWAREN 100G網路啟用

2017 新世代Peta主機 台灣杉一號 TAIWANIA 1

1.7 PF

2018 台灣首座AI超級電腦 台灣杉二號 TAIWANIA 2

9 PF AI-HPC

2019 AI 技術研發與雲端服務平台成立 TWCC TAIWAN COMPUTING CLOUD

2021 台灣杉三號 TAIWANIA 3

2.7 PF

執行第三期與第四期前瞻計畫建構先進網路建設

2021

2022 行政院核定A級資安等級 FOX交換中心啟用

2023 自主建置南北骨幹光纖啟用 國科會AI對話引擎專用主機

2024 創進一號 -預定啟用 可信賴雲端資料分析服務平台 -預定建置

3.53 PF

2025 南科聯網中心啟用

2029 大南方計畫 沙崙AI資料中心動工

2025–2029
Taiwan CbI Program and Southern Taiwan Silicon Valley Program, **deploying 480 PF of AI computing capacity**

新竹本部

台中分部

台南分部

ISO 國際標準驗證

- ISO 9001 (Plus Award) 品質管理
- ISO 27001 資安管理系統
- ISO 27017 安全雲端環境
- ISO 27018 個人隱私資料保護
- ISO 20000 資訊服務管理驗證
- ISO 27701 個人資訊管理
- ISO 50001 能源管理系統
- ISO DCOS 數據中心營運標準

來源：國網中心

Scam Prevention and Resilience

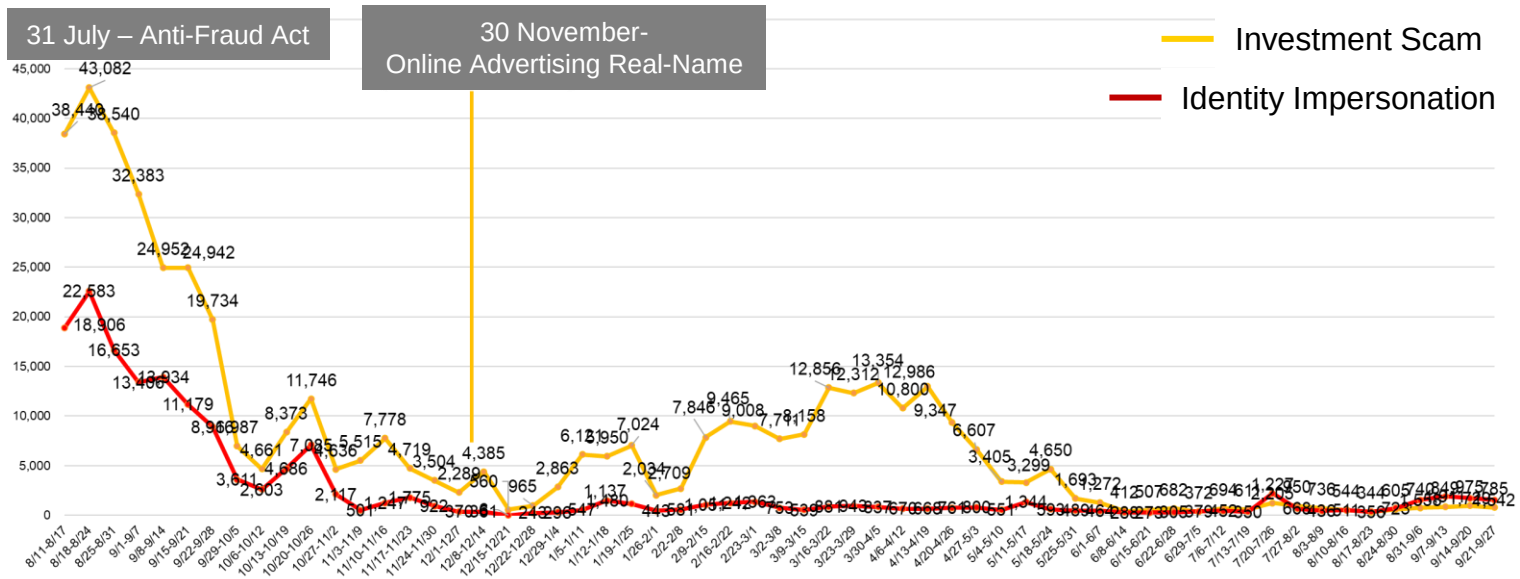
Online Scam Reporting and Inquiry Website

34,413 Downloads

7,676 Registered Reporters

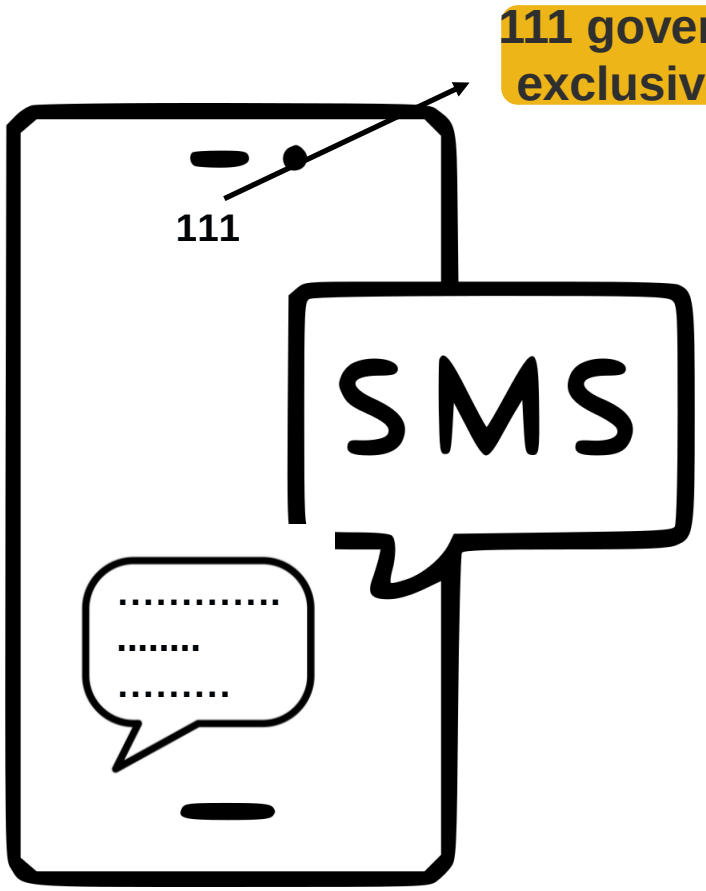
345,731 Reports Submitted

181,978 Fraudulent items taken down



Statistical period: 30 September 2024 – 30 September 2025

111 Shortcode Messages



111 government-exclusive code

Ministry of Digital Development
MyData Platform

You have applied for and agreed to download the "Certificate of Physical Fitness for Military Servicemen". The data was downloaded on 2023/4/28 at 20:53.

If this was not downloaded by you, please contact: 0800-009-868

Agency or public service name

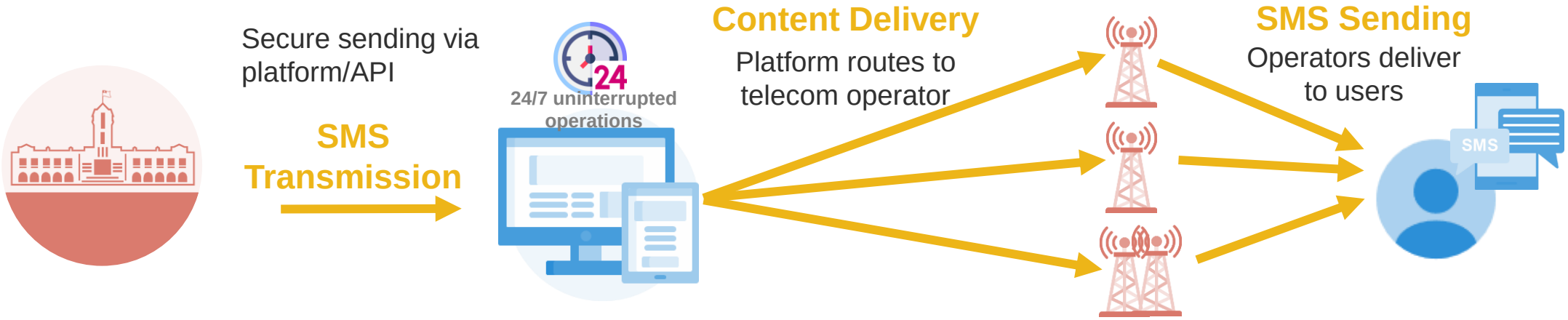
Message content

written by agency, recommended within 70 characters (longer messages split into multiple parts)

Contact phone number

at the end of the SMS

System Architecture



1. Government Agencies

- Access control & encryption
- IP whitelist & account management

2. 111 SMS Platform

- Secure, not Internet-stored
- Operated by MODA
- Direct SMS sending by agencies
- Flexible delivery & reporting
- Minimal data retention

3. Telecom Operators

- Deliver SMS to citizens
- Nationwide coverage
- Anti-spoofing protection

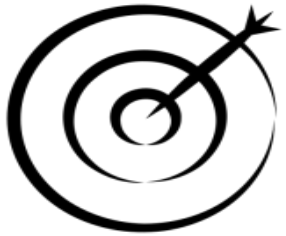
4. Citizens

- Uniquely identify official government
- Standardized SMS format

Implementation Results
Rapid Growth in 111 SMS Usage and Users

60M+

Messages sent since 2023 launch



500+

39

Government agencies & state-owned enterprises

including water and electricity payment notifications, overdue tax payment notifications, fine payments, notifications of National Pension rights, outpatient schedule changes, etc.

Risks & Challenges
First Case of Fake “111” SMS

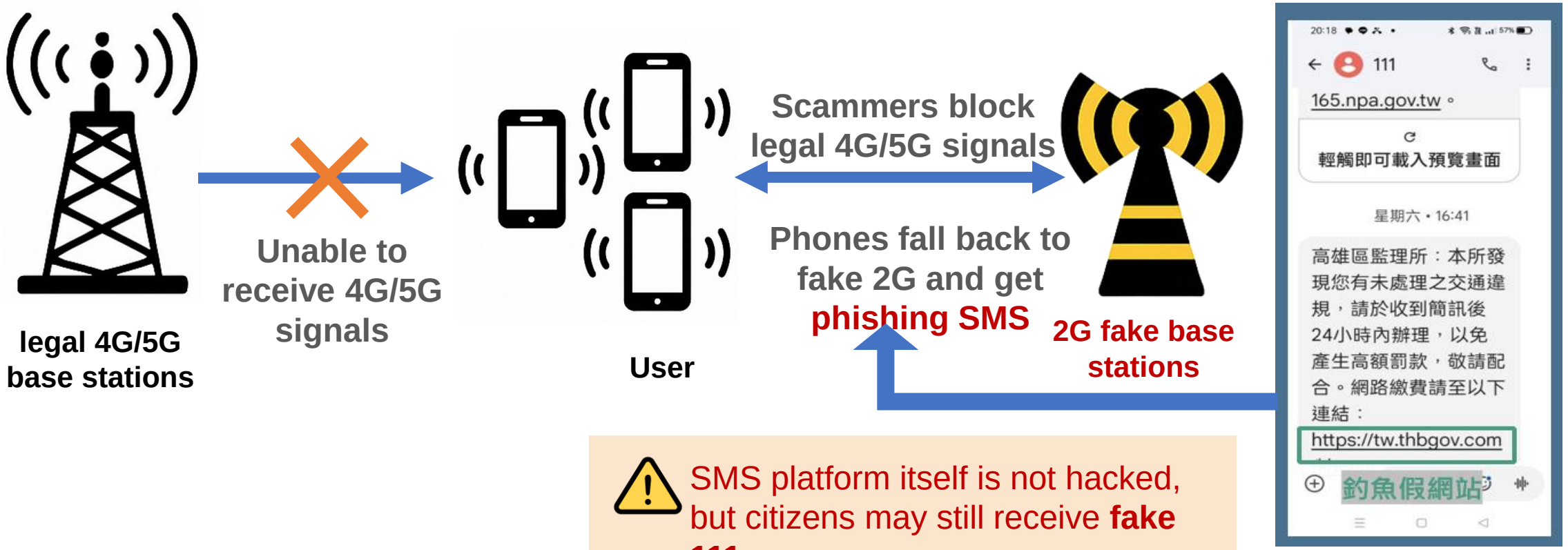
2G networks lack mutual authentication, allowing fake base stations to deceive phones and increase scam risks. Scammers use **illegal 2G base stations** to send fake “111” SMS, tricking users into **clicking phishing links** **or** **calling scam numbers**.

Source: https://udn.com/news/story/7315/8378420?from=udn-ch1_breaknews-1-cate2-news

Source: https://news.pts.org.tw/article/725454

Risks & Challenges
Illegal 2G Fake Base Stations

Criminals may exploit 2G fake base stations to send fraudulent “111” SMS



⚠ SMS platform itself is not hacked, but citizens may still receive **fake 111 messages**.

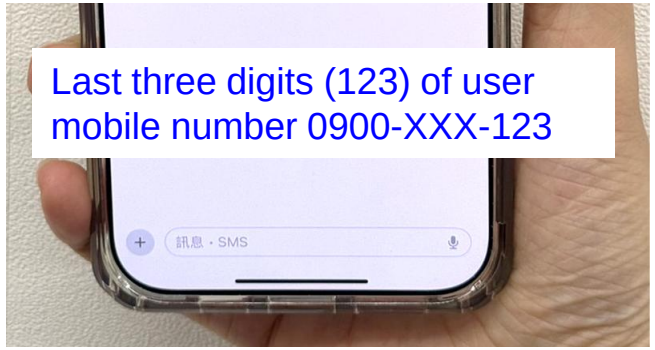
Countermeasures

Upgraded to Include the Last 3 Digits of Mobile Numbers

Before

After

Now begin with the **last three digits of the user mobile number** and the **agency name.**



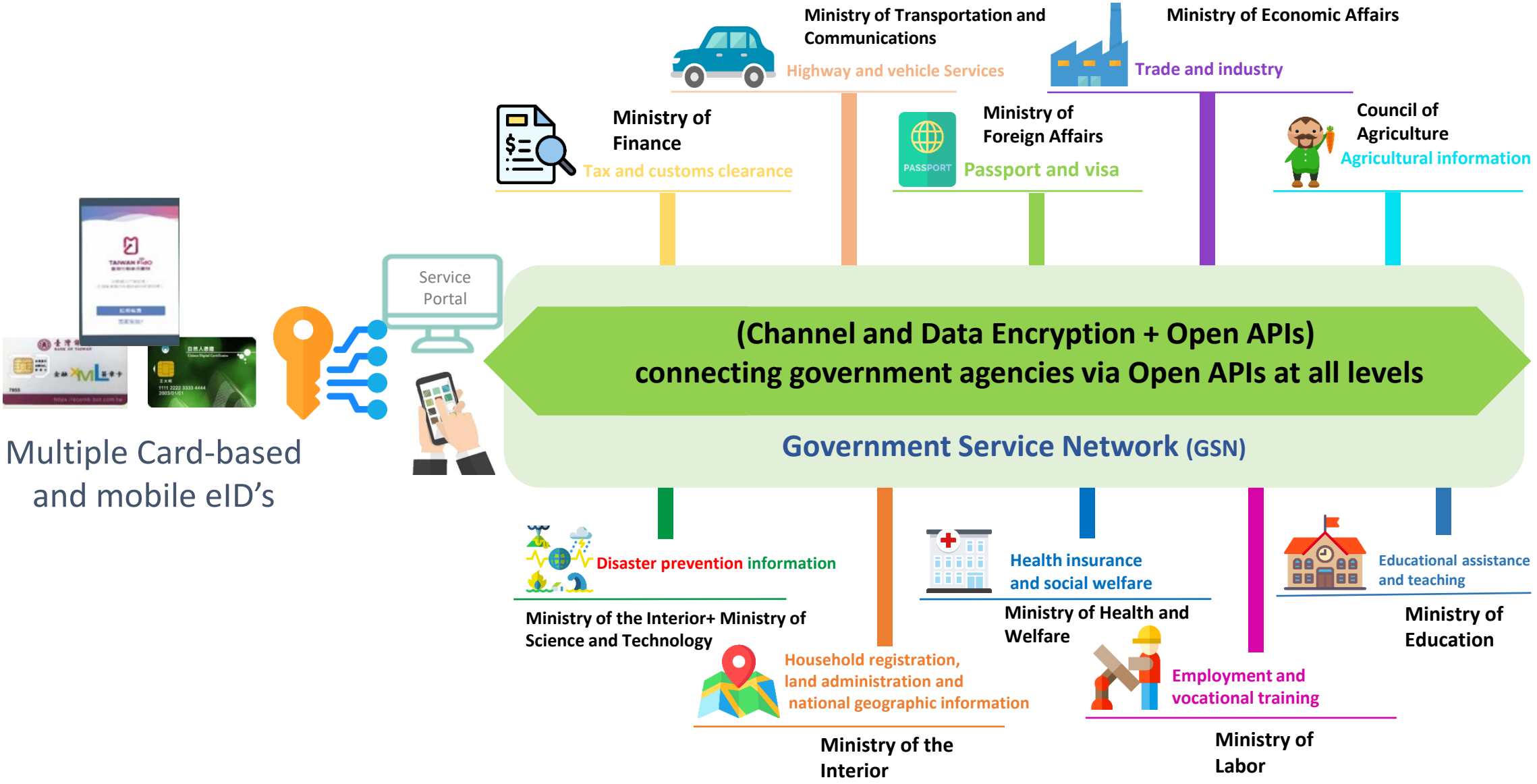
Triple Verification

source number (111)
+
last three digits
+
agency name

Key Benefits

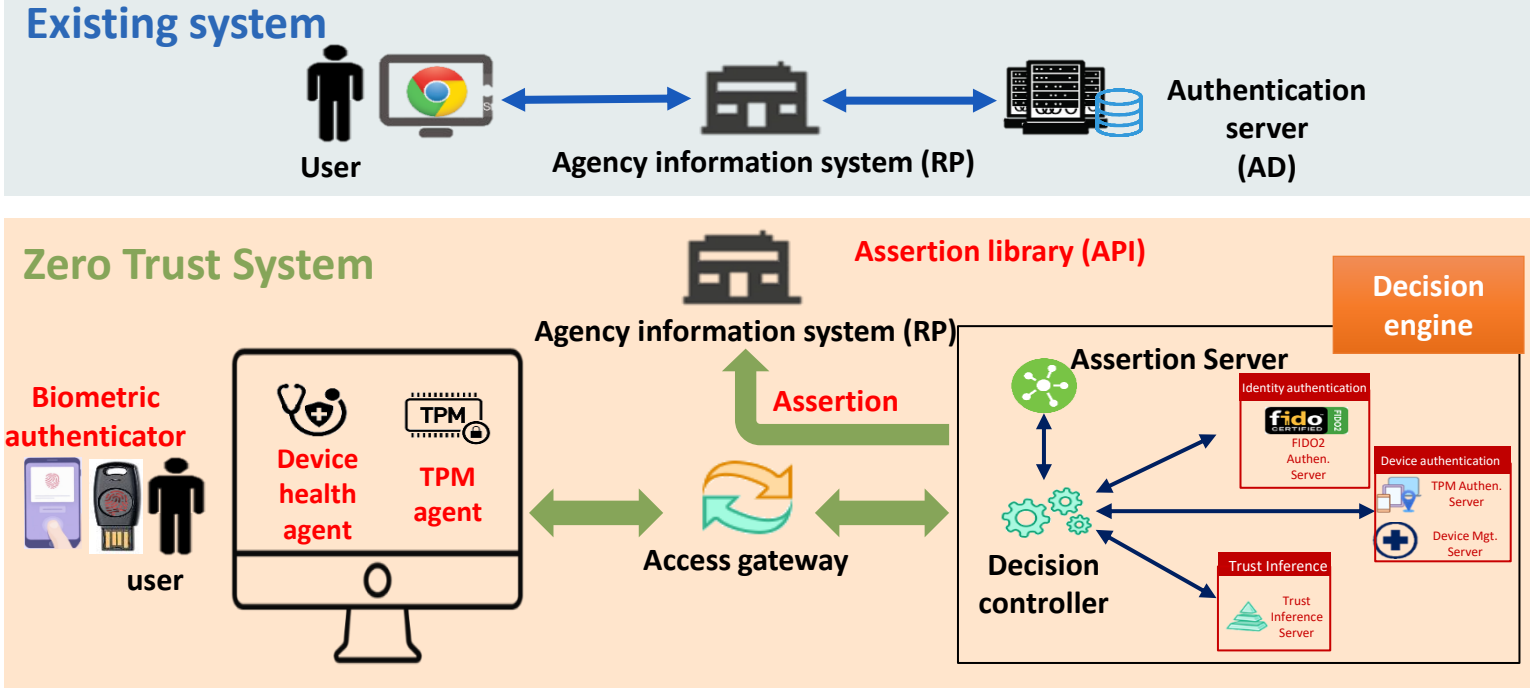
1. **Enhance SMS recognition and security**
2. **Stop government-impersonation fraud**
3. **Protect citizens' information security and rights**
4. **Build trust in digital government**

T-Road Architecture



Zero Trust Architecture

- Referring to the NIST zero trust architecture, the Resource Portal-Based Deployment method is adopted, including 3 core mechanisms:
  - Identity authentication : Multi-Factor authentication and assertion
  - Device authentication : Device identification and health management
  - Trust Inference : User scenario trust inference mechanism



*TPM: Trusted Platform Module

Cybersecurity Class A agencies must implement ZTA.

- Legislative Purpose: To actively promote the national information security policy and accelerate the establishment of a national information security environment to ensure national security and the public interest.
- Regulatory Objects: Those who have a major impact on people's lives, economic activities, and public or national security are the objects of management.

Government agency

- Central and local agencies (institutions)
- public juristic person

(excluding military and intelligence agency)

Specified non-government agency

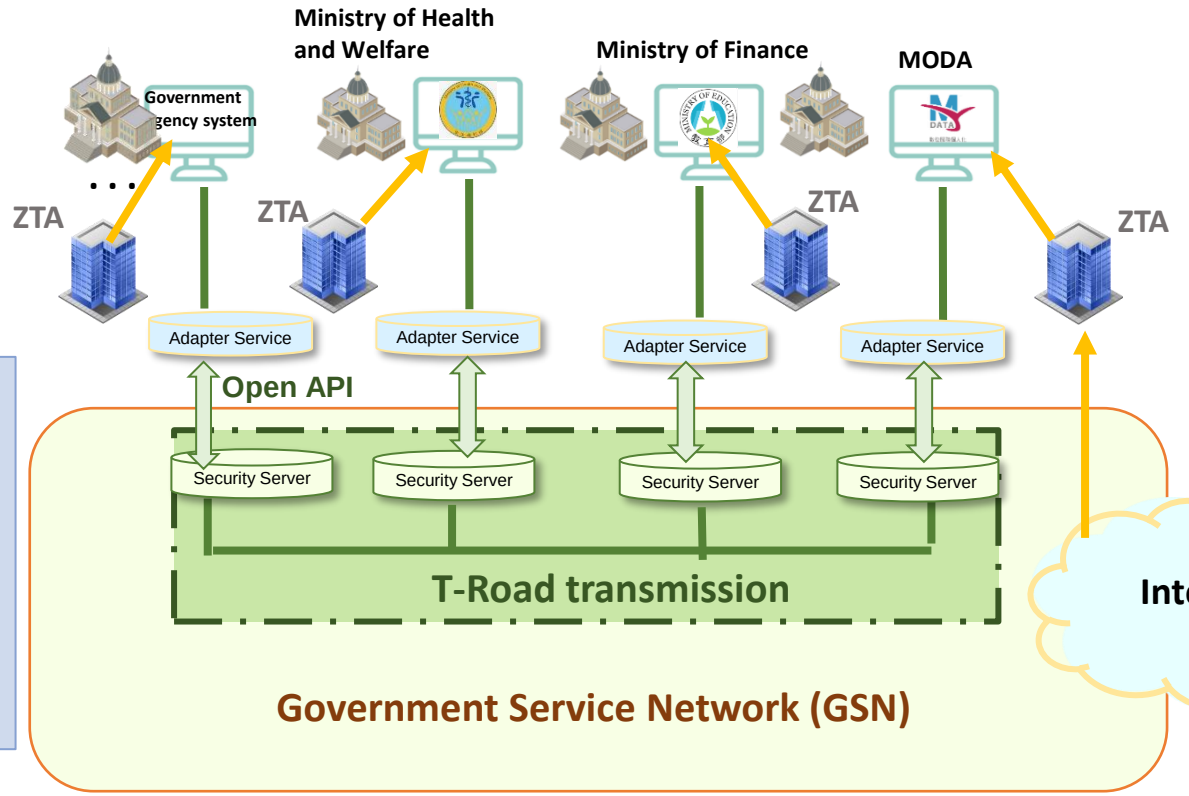
- Critical infrastructure provider
- Public sector
- Government-endowed foundation

Agency type	Class A	Class B	Grade C	Class D	Class E	Total
Central government	47	113	466	225	111	962
Local government	0	102	499	5,001	730	6,332
Specified non-government agency	45	124	147	89	21	426
all types	92	339	1,112	5,315	862	7,720

Note : As of 2/16/2023

T-road + ZTA Enhances Cyber Resilience

T-road + ZTA enhances the identification and protection of data transmission and usage. Combining with other cyber security protection mechanisms to strengthen the overall cyber resilience.



T-road :

1. Decentralized architecture avoids single point of failure
2. Enhanced transmission security
3. Unified data flow format

ZTA :

1. Strengthen the identity verification of the government agencies' information systems
2. Device authentication and trust inference mechanisms will be added in next two years