AI THAILAND

Annual Report 2023

Thailand national AI strategy and action plan

(2022 - 2027)

Annual Report 2023

**Thailand national AI strategy
and action plan (2022 – 2027)**

Ministry of Higher Education, Science, Research and Innovation
Ministry of Digital Economy and Society

Produced by
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Office of the National Digital Economy and Society Commission

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Publish
August 2023

Integrate AI ecosystem

for Thai's better living

Content

01

Executive Summary

Executive Summary

Thailand national AI strategy and action plan (2022-2027) was approved from the Cabinet on July 26, 2022. The Prime Minister signed the appointment order of committee for Driving the National Artificial Intelligence Development Plan on August 17, 2022.

In the inaugural meeting on December 8, 2022, which the Director of the National Science and Technology Development Agency (NSTDA) and the Secretary-General of the Digital Economy and Society Commission (DESC) serve as members and secretaries, the meeting committee agree to form working group to support the AI development plan.

The main objective of the AI development plan is to strengthen the AI ecosystem, facilitate its application in various sectors to drive economic growth, and improve the quality of life for the people of Thailand. In the first year, the plan has initiated projects and activities in line with its five strategic objectives as follows:

(1) Promoting AI Ethics:
- Announcing AI ethics guidelines
- Conducting activities to promote AI understanding among various agencies
- Establishing AI ethics advisory clinics

(2) Enhancing AI Infrastructure:
- Establishing and providing supercomputers to support high demand of power computing
- Creating an AI service platform on the Government Data Center and Cloud platform (GDCC)

(3) Accelerating AI Talent Development:
- Coordinating a network of collaboration led by the AI Association of Thailand to conduct intensive AI skills training
- Institutes under AI Engineering Institute (AIEI) have opened AI engineering courses through the Ministry of Higher Education, Science, Research, and Innovation and Society's "sandbox" mechanism

(4) Promoting Key Projects in Two Target Groups:
- In the first phase, focus on healthcare and public services, collaborating with the Medical Services Department to collect medical data and using AI for disease diagnosis
- Working with the Office of the National Economic and Social Development Board to use AI for large-scale population data analysis (Thai People Map and Analytics Platform - TPMAP) to enhance planning and problem-solving

The successful implementation of the AI development plan has led to a higher ranking for Thailand in the "Government AI Readiness Index," moving from 59th in 2021 to 31st in 2022.

as assessed by OxfordInsights.

The next phase of the AI development plan are comprised of a set of projects and activities to promote AI development and application in ten target industries as well as research and development of core AI technologies. These initiatives aim to foster innovation and create long-term value for Thai entrepreneurs.
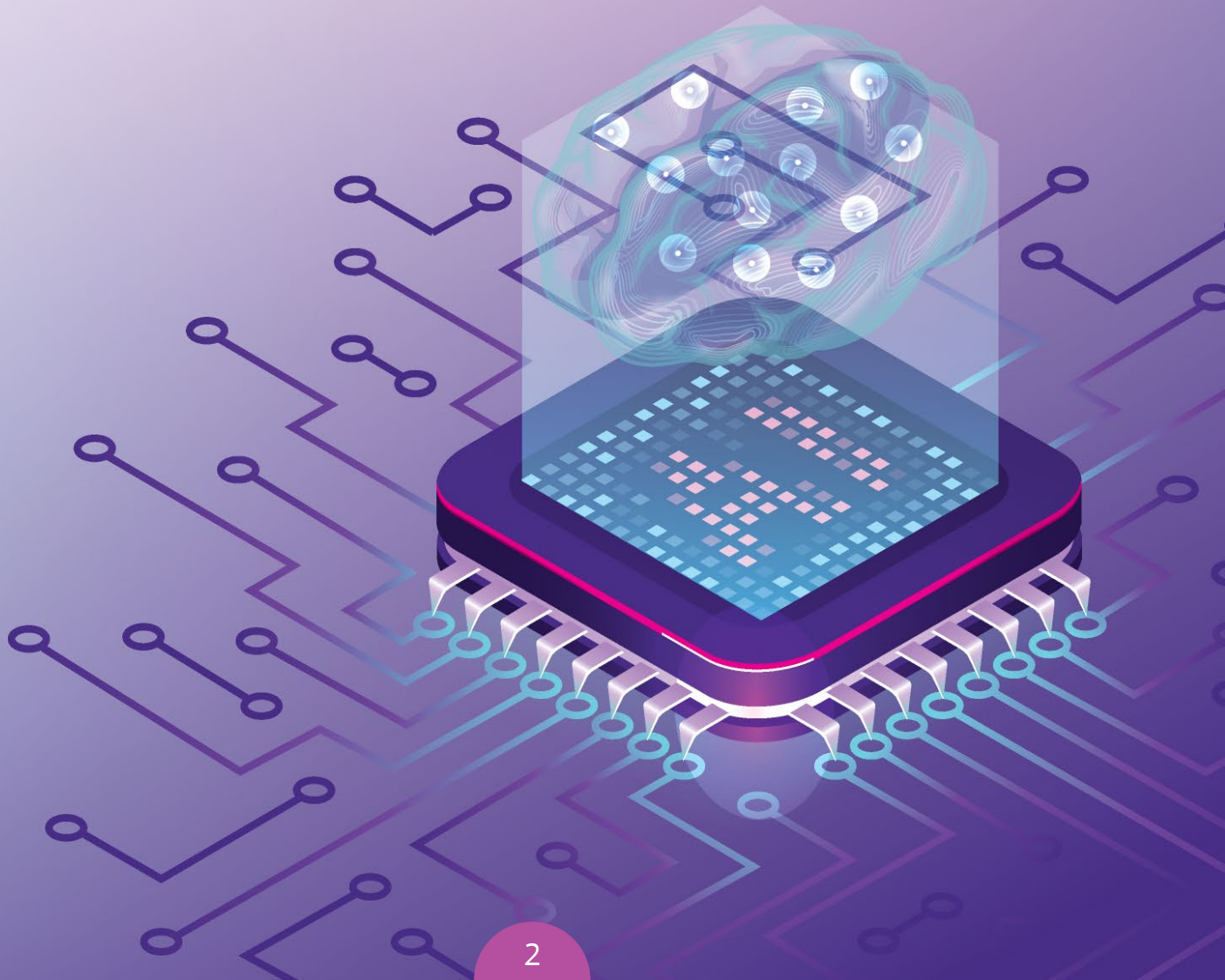
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Background

Background
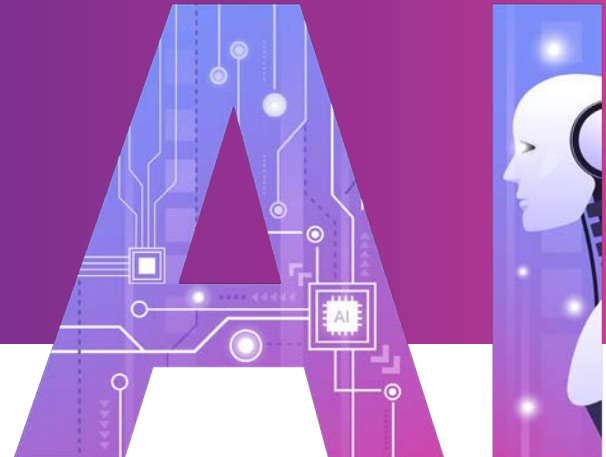
"AI", or Artificial Intelligence, is a technology that many countries are widely applying in various sectors such as the economy, industry, health, and medicine. Thailand needs to prepare to harness the potential of AI and create readiness at different levels, including developing AI technology capabilities within the country to reap the maximum benefits. This involves creating plans for raising awareness and strategies for boosting readiness among various sectors in Thailand, including government, private sector, and the education sector. It reflects the nation's vision in preparing clear government plans to respond effectively to the emergence of AI technology.

The Ministry of Higher Education, Science, Research, and Innovation (MHESI) and the Ministry of Digital Economy and Society (MDES) collaborated to conduct a study and formulate the **Thailand national AI strategy and action plan 2022-2027** This plan received approval from the cabinet on July 26, 2022. It is an inclusive effort that combines expertise and perspectives from both ministries to ensure comprehensive planning for Thailand to respond to the rise of AI technology.

03

Status of AI applications in Thailand in 2023

1. Utilization of AI in Thailand

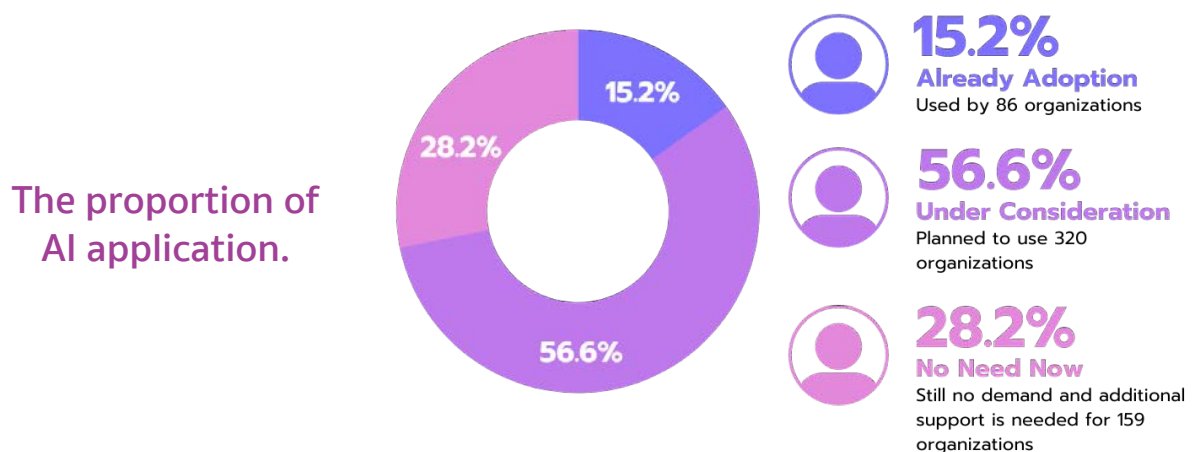**The study on "Readiness for the Application of Artificial Intelligence (AI) for Ethical Digital Services,"** conducted by the Electronic Transactions Development Agency (ETDA) in collaboration with the National Science and Technology Development Agency (NSTDA) as the joint secretariat of the AI operation plan, surveyed the organizational readiness for AI application in Thailand. The survey was conducted in June 2023, with responses from 565 organizations (out of 3,539 organizations contacted) across 10 target branches specified in the AI operation plan.

It found that the propotion 71.8 % have a potential to use AI, including units that are already using AI and those with plans to use it.

The proportion of AI application.

15.2%

28.2%

56.6%

15.2%
Already Adoption
Used by 86 organizations

56.6%
Under Consideration
Planned to use 320 organizations

28.2%
No Need Now
Still no demand and additional support is needed for 159 organizations

The results of this survey suggest that the use of AI in Thailand is likely to grow steadily. This is because numerous organizations aim to implement AI in the near future. The top three key purposes for which these organizations are turning to AI are to enhance the productivity or services within the organization, to facilitate internal management, and to increase revenue the organization.

50%
To increase the production or service efficiency of the organization

43%
To apply for management within the organization

36%
To increase income for the organization
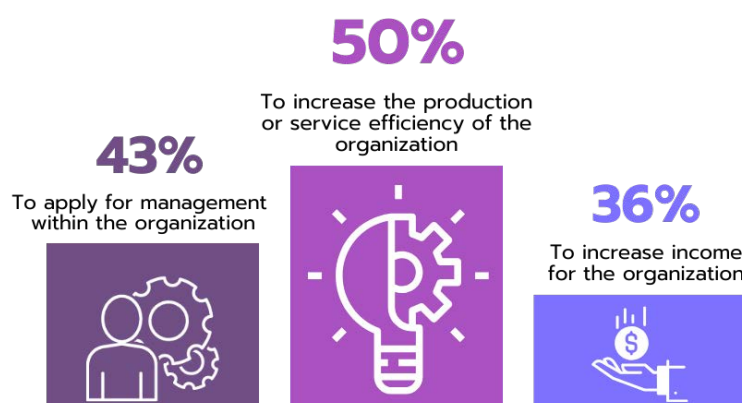
Note: The purpose of AI application is repeatable answers.

Common Characteristics of AI Technology Application Found in Organizations, Both in the Private and Public Sectors in Thailand

Computer Vision

Inspecting product quality in the production process to meet quality standards.

Data Analytic & Signal Processing

• Analysis of product and machinery data within the factory

• Using CRM data to process customer behavior, for promoting activity and designing various services

Natural Language Processing

Processing data, images, and sound to support the system ChatGPT/Chatbot that can help answer basic questions or frequently asked questions

However, when considering the significant reasons why organizations do not immediately adopt AI, there are three nontrivial factors:

1. In Exploration Phase: Some organizations are still in the phase of researching and gathering information because they are unsure about how to apply AI.
2. Lack of Readiness: There is a lack of readiness in various areas, such as foundational structures, human resoures, and budget, among others.
3. Unawareness: There is no necessity to implement AI yet.

It can be seen that these organizations still need support in multiple dimensions, especially in terms of organizational knowledge and foundational resources. This is to enable a genuine understanding and awareness of the benefits that can arise from AI. In addition, organizations should be able to choose and use AI technology appropriately according to their needs or directions.

2. AI Projects of Government Agencies

In fiscal year 2023, there were 122 AI projects in the public sector listed on Electronic Monitoring and Evaluation System of National Strategy and Country Reform (eMENSCR). This number is not much different from 2022. However, the budget for AI implementation and development has increased from fiscal year 2022.

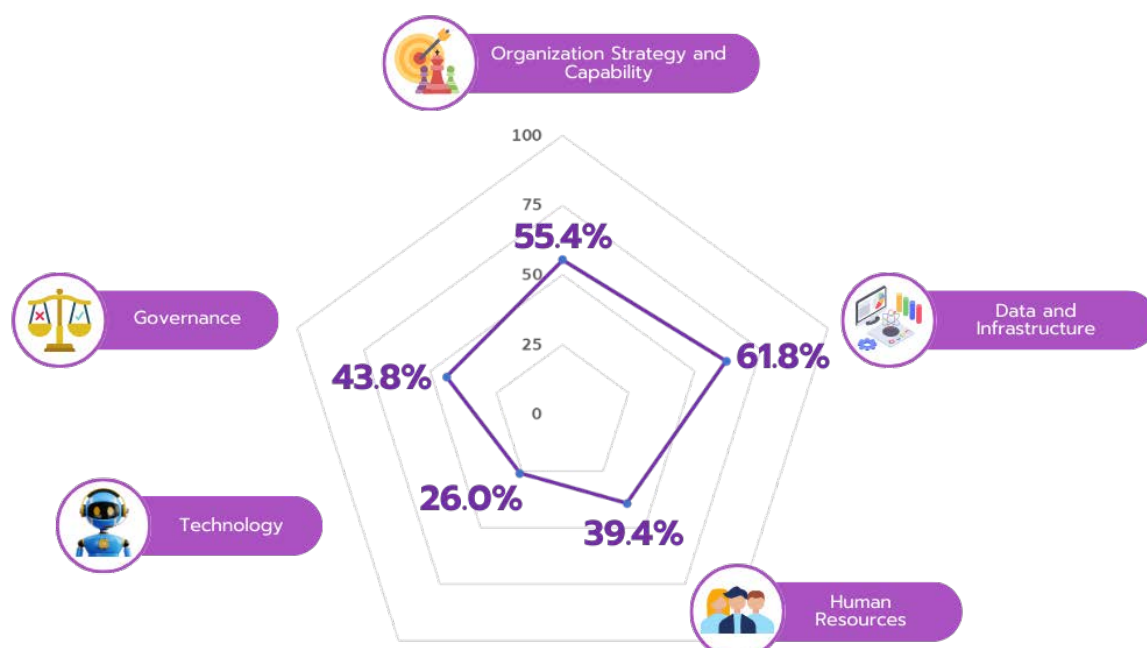|	2022	2023
Number of projects	144	122
Budget amount Total (million baht)	6,410.80	7,354.57
Number of departments (Department level)	67	68

Source: Data from the eMENSCR system (2023)

In the year 2023, a budget of approximately 7,354.57 million baht was allocated for AI initiatives, carried out by 68 government agencies (at the department level). The projects encompass activities in human capacity development to effectively utilize AI technology. They focus on keeping the workforce updated with AI advancements. Additionally, these projects involve the development of infrastructure and data that supports AI utilization, as well as research and development in both technological aspects and regulations/guidelines. The aim is to prepare for the widespread expansion of AI technology applications.

3. Organizational Readiness for AI Implementation

In 2023, marks the first year in which organizations that have adopted AI in both the private and public sectors in Thailand began measuring their readiness for AI implementation. This initiative serves as a foundation for assessing the effectiveness of operations under the AI strategy, including plans for artificial intelligence. The assessment aims to identify areas that require further development to strengthen Thailand's capabilities in applying AI. Ultimately, this effort is geared towards realizing economic and societal benefits in alignment with the objectives of the artificial intelligence strategy.

The dimensions used to measure AI readiness consist of five main aspects:

(1) Organization Strategy and Capability, (2) Data and Infrastructure, (3) Human Resources, (4) Technology, and (5) Governance. Results of the survey of 86 organizations that have already adopted AI showed that the average readiness score from all 5 dimensions was 45.3%. This is classified as the "AI Aware" level, meaning that there is an awareness of AI usage. The average scores in each dimension are shown in the figure below:

Sources: The study on Readiness for the Application of Artificial Intelligence (AI) for Ethical Digital Services.

04

Overview of Thailand national AI strategy and action plan

(2022 – 2027)

Thailand national AI strategy and action plan
(2022 – 2027)

Vision

Thailand has an effective ecosystem to promote AI development and application

to enhance the economy and quality of life within 2027

Objectives

To develop human capacity and technology	To create economic growth	To create social and environmental impact

5 Strategies
15 Work plans and Key Indicators

5 Strategies
15 Work plans

1
AI Ethics, Law, and Regulations

◆ Developing law, standards, and policy for AI

◆ Driving awareness and education for AI Ethics

2
AI Infrastructure

◆ Creating AI expert networks

◆ Creating a national platform for advanced data analytics and management

◆ Creating a national AI service platform

◆ Developing High Performance Computing (HPC) infrastructure

3
AI Manpower

◆ Improving AI education and knowledge creation at all levels

◆ AI Scholarship programs

◆ Cooperation with international researchers and experts

4
AI Research, Development, and Innovation

◆ Applying AI technology and innovation for target sectors

◆ Developing AI core technology and platform

5
AI Application

◆ Promoting AI use in government sector

◆ Promoting AI use in target industries

◆ Promoting system integrator industry with AI capability

◆ Developing mechanisms & sandboxes for business innovation and AI startup

Key Indicators:

600,000 Thai citizens have awareness of AI ethics. An AI law/regulation is enforced.

Increase in AI investment **10% per year**

Creating **30,000 AI talents**

Creating **100 innovative prototypes** with business & social impact of **48 billion Baht**

600 agencies use AI innovation

AI Development in 10 Target Sectors

To enhance the competitiveness of the Thai economy and promote the adoption of AI technology for service development, meeting the needs of businesses, as well as developing knowledge and preparing for the development of AI technology in the country to support the future growth of AI businesses, the AI Action Plan has set the scope of AI technology application focusing on 10 industries, namely:

Energy and Environment
- Energy management
- Environmental geospatial analytics

Government Services
- Smart e-Government

Financial and Trade
- Credit scoring
- Customer Relationship Management

Agriculture and Food
- Digital farm
- Food quality

Logistics and Transportation
- Intelligent transportation
- Transport map

Medical and Health
- Self-care
- Chronic disease

Security and Safety
- Public surveillance platform
- Crime response system

Manufacturing
- Industry 4.0

Tourism and Creative Economy
- Smart guidance and planning

Education
- Smart education
- Geography of educational opportunities

1st Phase (2022-2023)

2nd Phase (2024-2027)

10 Target Sectors

1st phase target group (2022 - 2023)

- Government administration, Government services
- Digital farm, Food quality
- AI in self-care, Chronic disease, Medical assistant

2st phase target group (2024 - 2027)

- Credit scoring, CRM
- Intelligent transportation, Transport map
- Public surveillance platform, Crime response system, Cyber security

- Smart guidance and planning, Tourism service quality, Smart tourism area
- Smart education, Geography of educational opportunities
- Energy management, Environmental geospatial analytics
- Smart manufacturing, Industry assessment and testbed
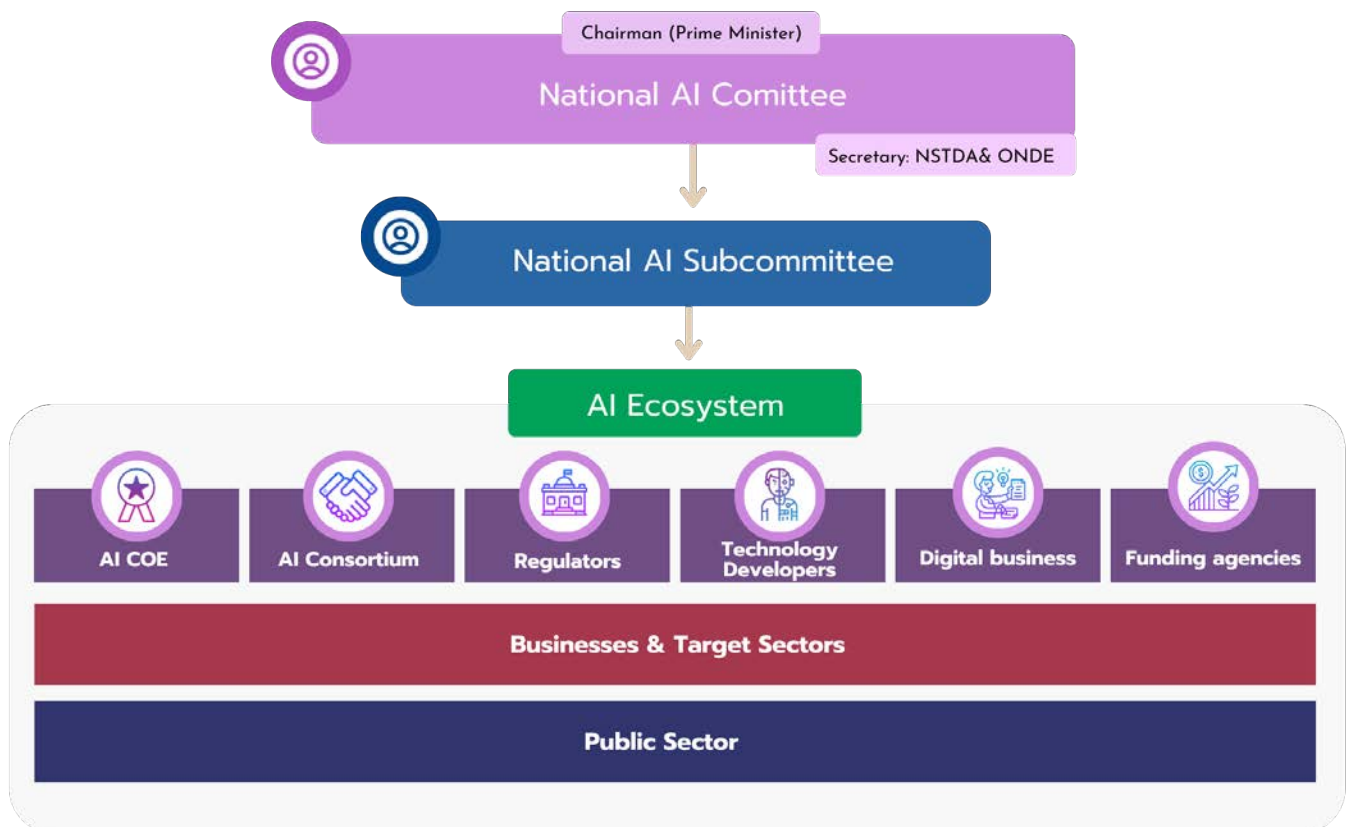
05

Mechanisms to Drive Thailand national AI strategy and action plan

(2022-2027)

Mechanisms to Drive
Thailand national AI strategy
and action plan

(2022 - 2027)

Chairman (Prime Minister)

National AI Comittee

Secretary: NSTDA& ONDE

National AI Subcommittee

AI Ecosystem

| AI COE | AI Consortium | Regulators | Technology Developers | Digital business | Funding agencies |

Businesses & Target Sectors

Public Sector

There are committees, subcommittees and related working committees such as

(1) National AI Committee
(2) Subcommittee AI Workforce Development
(3) Working Committee for National AI Action Plan

1

National AI Committee

The Prime Minister signed the appointment order on August 17, 2022 , with the following components:

Chairman:	Prime Minister
Vice Chairman:	Deputy Prime Minister appointed by the Prime Minister
Committee and Secretary:	Director of the National Science and Technology Development Agency, in collaboration with the Secretary-General of Office of the National Digital Economy and Society Commission
Assistant Secretary:	Director of the National Electronics and Computer Technology Center, in collaboration with the Director of Office of the National Digital Economy and Society Commission

9 Ministry Permanent Secretaries:

1. Permanent Secretary of the Ministry of Finance
2. Permanent Secretary of the Ministry of Education, Science, Research, and Innovation
3. Permanent Secretary of the Ministry of Agriculture and Cooperatives
4. Permanent Secretary of the Ministry of Digital Economy and Society
5. Permanent Secretary of the Ministry of Commerce
6. Permanent Secretary of the Ministry of Labour
7. Permanent Secretary of the Ministry of Education
8. Permanent Secretary of the Ministry of Public Health
9. Permanent Secretary of the Ministry of Industry

5 Relevant Government Agencies:

10. Director of Budget Bureau
11. Director of Thailand Science Research and Innovation
12. Director of Electronic Transaction Development Agency

13. Director of Digital Government Development Agency (Public Organization)
14. Chairman of the Council of University Presidents of Thailand

4 Private Sector Organizations:

15. Chairman of the Federation of Thai Industries
16. Chairman of the Thai Chamber of Commerce and the Board of Trade of Thailand
17. Chairman of the Thai Bankers Association
18. Chairman of the Digital Council of Thailand

3 Expert Committees:

19. Assoc. Prof. Dr. Piyabutr Bunaramrueang, Faculty of Law, Chulalongkorn University
20. Assoc. Prof. Dr. Tiranee Achalakul, Digital Economy Promotion Agency
21. Dr. Kobkrit Viriyayudhakorn, Artificial Intelligence Entrepreneur Association of Thailand and Artificial Intelligence Association of Thailand

2

Subcommittee AI Workforce Development

The Subcommittee AI Workforce Development was appointed by the Chairman of the National Strategic Committee for the Development of Thailand's Intellectual Operation Plan on April 7, 2023, as resolved in the committee meeting. The committee serves as an additional mechanism to drive the 3rd strategy of enhancing the potential of personnel and developing education in the field of intellectual property. The subcommittee includes:

Chairman: **Subcommittee** **and Secretary:**	Permanent Secretary of the Ministry of Education, Science, Research, and Innovation Director of the National Electronics and Computer Technology Center, in collaboration with Director of the Office of the National Education Policy Commission, Ministry of Education, Science, Research, and Innovation

10 Relevant Government Agencies:
1. Director of Thailand Science Research and Innovation
2. Director of Digital Government Development Agency (Public Organization)
3. Director of Digital Economy Promotion Agency
4. Secretary-General of the Office of the National Digital Economy and Society Commission
5. Secretary-General of Thailand Board of Investment
6. Secretary-General of the Office of the Public Sector Development Commission
7. Secretary-General of the Office of the Civil Service Commission
8. Director of Institute for the Promotion of Teaching Science and Technology

9. Director of Thailand Professional Qualification Institute (Public Organization)
10. Chairman of the Council of University Presidents of Thailand

2 Private Sector Organizations:
11. Chairman of the Digital Council of Thailand
12. Chairman of the Federation of Thai Industries

3 Expert Subcommittees
13. Asst. Prof. Dr. Akkarit Sangpetch A.I. Engineering Institue
14. Prof. Dr. Sukit Limpijumnong, National Science and Technology Development Agency
15. Mrs. Piyaporn Mantajitr, The Siam Commercial Foundation

3

Working Committee for National AI Action Plan

The Working Committee for National AI Action Plan, appointed by the Director of the National Science and Technology Development Agency, in the capacity of the committee's secretary, was established on September 20, 2023. Its purpose is to serve as a supporting working committee to assist the coordinating units in implementing the plan. The committee is composed of the following members:

Adviser:	Director of the National Science and Technology Development Agency
Chairperson:	Director of the National Electronics and Computer Technology Center
Working Committee and Secretary:	Deputy Director of the National Electronics and Computer Technology Center

Working committee :

1. Mr.Theerawut Thongpak, Office of the National Digital Economy and Society Commission
2. Dr. Sak Sekkhunthod, Electronic Transaction Development Agency
3. Dr. Chalothorn Boonlua, Office of National Higher Education Science Research and Innovation Policy Council
4. Asst. Prof. Dr. Wannarat Suntiamorntut, Program Management Unit Competitiveness
5. Dr. Kasititorn Pooparadai, Digital Economy Promotion Agency
6. Mr. Nattawat Woranopakul , Digital Government Development Agency (Public Organization)
7. Assoc. Prof. Dr. Piyabutr Bunaramrueang, Faculty of Law, Chulalongkorn Universit
8. Miss Krissana Thongkliang, Office of the National Digital Economy and Society Commission
9. Dr. Kalaya Udomvitid, National Electronics and Computer Technology Center
10. Dr. Kobkrit Viriyayudhakorn, Artificial Intelligence Entrepreneur Association of Thailand and Artificial Intelligence Association of Thailand

06

Key Performance Indicators

Key Performance Indicators

Government AI Readiness Index
Target as per Strategy 5

In the year 2023, Thailand has risen to the 31st position (out of 181 countries) in the Government AI Readiness Index, up from its previous ranking of 59 (out of 160 countries) in 2022. This improvement, with a 23% increase in the Government AI Readiness score in the public sector dimension, is a result of the approval of the AI implementation plan following the cabinet resolution on July 26, 2023.

Source: Oxford Insights and the International Research Development Centre.

2023
31st
2022
59

ranks higher
28th positions

Government AI Readiness Index

Human Capacity Development Performance
Target as per Strategy 3

Human capacity development in AI through various projects and curriculum frameworks of organizations such as DGA, DEPA, AIAT, NECTEC, and a total of 20 projects involving 83,721 participants have been implemented. The Thailand Plus Package has certified 14 curriculum frameworks as part of the human capacity development measures.

Number of AI training participants
83,112

Support for AI Research and Development Projects (2023 - June 2024)
Target as per Strategy 4

- Thailand Science Research and Innovation Fund allocated 881 million baht.
- Digital Development Fund for the Economy and Society allocated 247 million baht.
- TOT Public Company Limited Fund allocated 161 million baht.

1,290 million baht.

AI Startup Promotion and Investment Value
Target as per Strategy 5

Measures to promote AI startups have been implemented by 7 state agencies with both financial and non-financial support. The total investment value in AI startups in Thailand in 2023 is to 639 million baht, marking a 50% increase from 2022.

7 agencies
639 million bath.
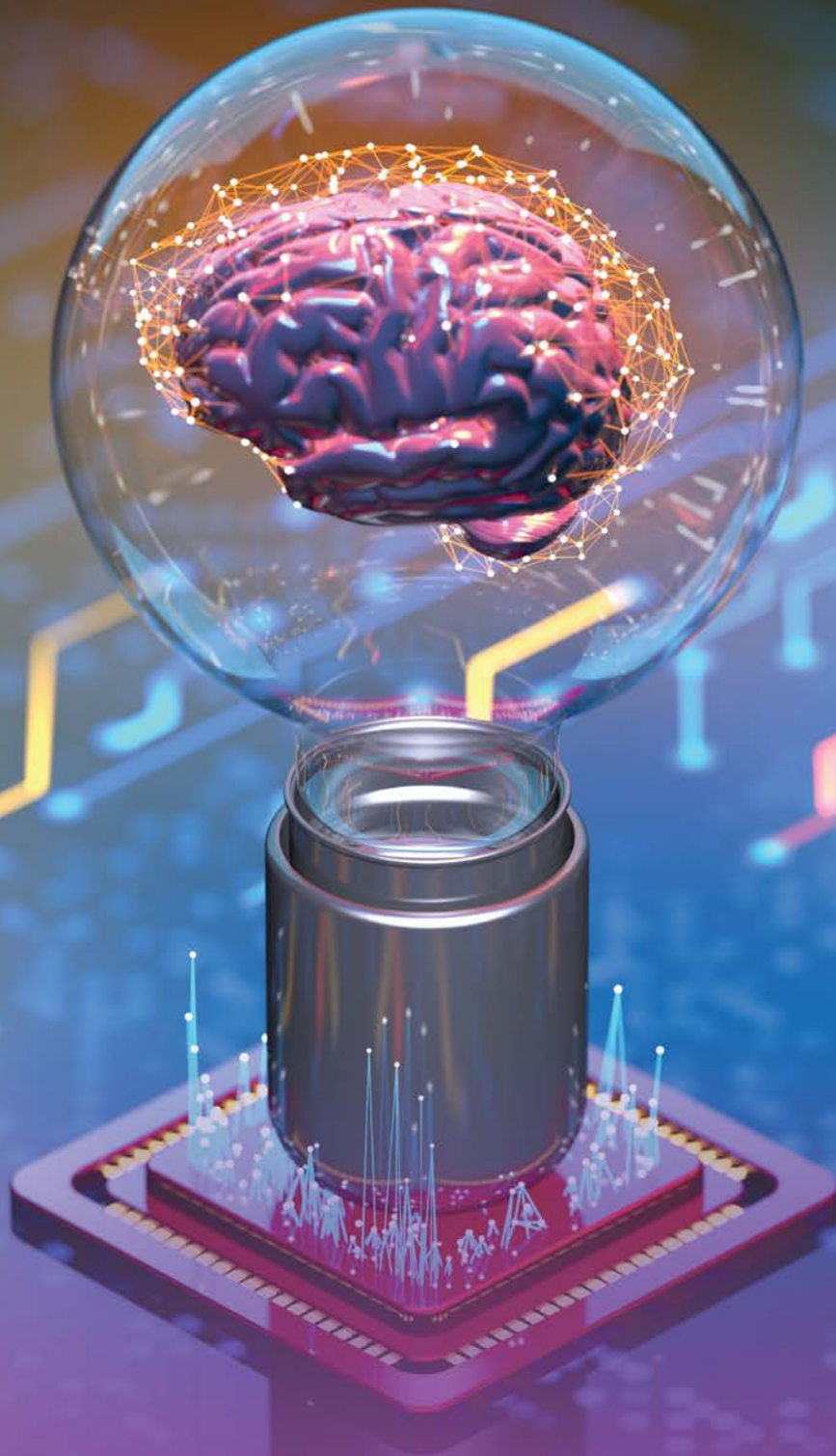
07
Acheivements

Strategy 1

Preparedness in the Social, Ethical, Legal, and Regulatory Aspects of AI Application

1. AI Ethics Framework

Office of the National Digital Economy and Society Commission (ONDE) has taken initiatives to guide, oversee, and promote the appropriate use of digital technology and AI.

1.1 Thailand AI Ethics Guideline

This includes the development of the Thailand AI Ethics Guideline to provide researchers, designers, developers, and AI service providers with guidelines for their operations, and to inform service recipients of their rights and make them aware of the risks of using AI services.

On February 2, 2021, the Cabinet of Ministers acknowledged and approved the creation of a framework to help domestic agencies understand the key concepts, definitions, and guidelines for translating AI ethical practices into action.

The framework will identify agencies that are ready to be pioneers in the initial phase of implementation, and the results of the implementation will be evaluated before expanding the framework in the future.

1.2 Regulations, Measures, and Standards for AI

Office of the National Digital Economy and Society Commission (ONDE) has drafted regulations, measures, and standards related to AI. These regulations will be used to oversee agencies, organizations, and individuals involved in the development and use of AI technology.

In February 2023, the ONDE drafted the Royal Decree on the Business of AI Service Providers B.E. ..... This draft was created under the authority of Section 175 of the Constitution of the Kingdom of Thailand, Section 32 (1), Section 33, and Section 33/1 of the Electronic Transactions Act B.E. 2544, as amended by the Electronic Transactions Act (No. 3) B.E. 2562. This draft Royal Decree will serve as a general regulatory framework for AI service providers in Thailand. It will be interconnected and consistent with the sector-specific regulations of individual agencies providing AI services. If there are specific regulations with standards that are equal to or higher than those prescribed in this draft Royal Decree, then those specific regulations shall prevail. The draft Royal Decree classifies AI into three categories: Unacceptable Risk, High-Risk, and Minimal Risk.The draft Royal Decree is based on the regulatory framework for AI developed by the European Commission.

1.3 Promoting Ethical AI Awareness

ONDE collaborated with Thammasat University to enhance clear understanding of AI ethics guidelines through online learning courses. This includes developing online courses, media, and manuals for self-directed learning. The goal is to support the ethical application of AI and drive the industry towards a responsible future.

The training courses and tools have been developed and implemented, with 4,112 individuals completing theoretical training online and 1,229 participating in practical workshops both centrally and regionally by September 4, 2022.

2. AI Governance development and use

2.1   AI Governance Clinic (AIGC)

The Electronic Transactions Development Agency (ETDA) wants to raise standards and the responsible application of AI. AIGC will be a source of knowledge and experts in AI governance from leading countries around the world. To drive the application of AI with shared governance.

AIGC has started working with important economic fields first, such as Medical and Healthcare, in collaboration with NECTEC NSTDA, Department of Medical Services, and Department of Health Service Support, to accelerate the development of frameworks, recommendations, and dissemination of knowledge regarding the governance of AI use for medicine.

> **AI Governance Clinic by ETDA : AIGC Focused on driving work in AI Governance in 4 dimensions**
>
> 1) Develop the AI Governance framework
> 2) Providing advice on creating AI Governance
> 3) Develop and disseminate knowledge and research results
> 4) Create a network of experts both domestically and abroad.

2.2 Study AI Standard Landscape

The Electronic Transactions Development Agency (ETDA), together with NECTEC NSTDA, carried out a project to study AI standards covering the whole picture, such as

(1) Policies and draft laws related to AI both domestically and internationally.

(2) AI standards that have been announced at the international level down to the association and organization level.

(3) Thai standards and regulation ecosystem to make recommendations for the development of AI standards in various formats, along with the advantages and disadvantages of each format.

Strategy 2

Development of Infrastructure and Support Systems for Sustainable AI Development

1. National AI Service Platform
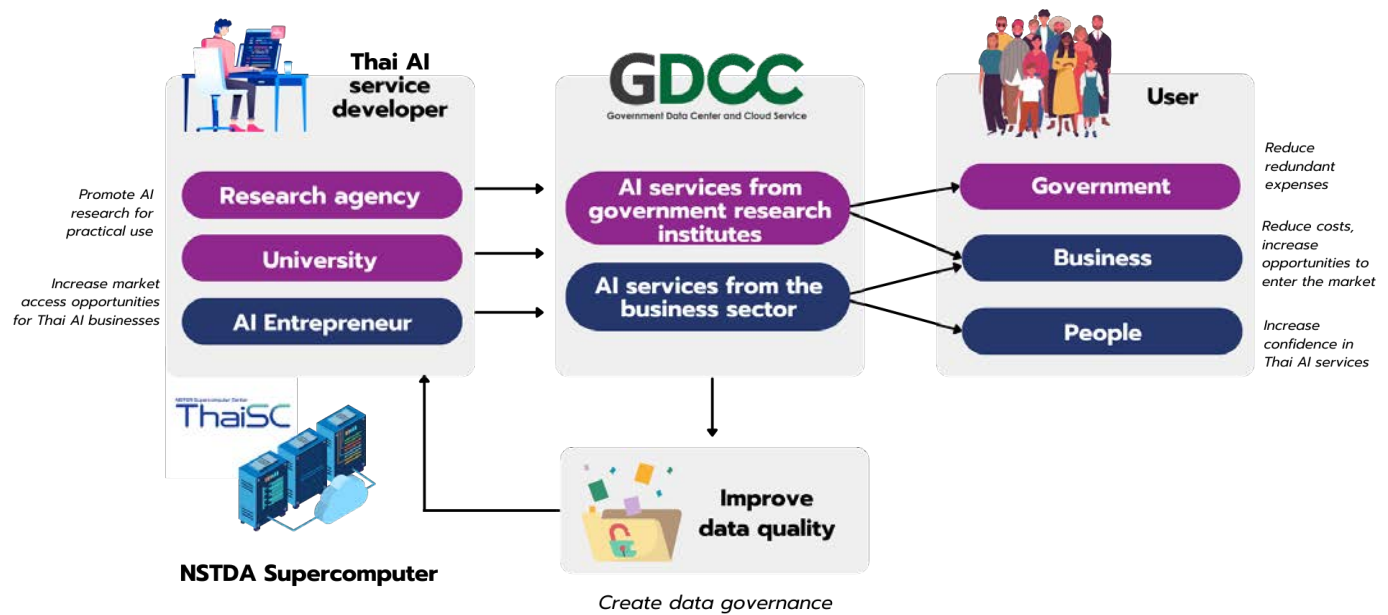
On December 8, 2022, the Committee for the Implementation of the AI Operation Plan approved the development of the National AI Service Platform in Thailand. This platform aims to provide AI services to the public sector, private sector, and the general public under the support of the Government Data Center and the National Digital Economy and Society Commission.

The platform collects data from Thai researchers, developers, research institutions, universities, businesses, and relevant associations.

It offers a variety of AI services through Application Programming Interfaces (APIs) and categorizes them to facilitate access and performance comparison.

The platform is expected to benefit organizations in both the public and private sectors by facilitating the adoption of AI without high initial investments. It supports the establishment of public hubs for testing AI services, allowing organizations to continuously improve AI services based on usage data. **The platform, with over 60 ready-to-use APIs, is set to open for testing in 2023.**

2. Supercomputer Center

The High-Performance Computing (HPC) infrastructure, known as LANTA HPC, has been prepared to support The National Artificial Intelligence Development Plan for Thailand

Installed by the end of 2022, **LANTA HPC ranks 70th globally and 1st in ASEAN** for its high computing performance.

Notably, it is the first supercomputer in Thailand using Direct to Chip Liquid Cooling technology, achieving the best Power Usage Effectiveness (PUE) and ranking 24th in the GREEN500 list.

LANTA HPC, a heterogeneous HPE Cray EX cluster, comprises AMD EPYC™ 3rd generation (Milan) CPUs (31,744 cores) and NVIDIA A100 GPUs (704 units) connected by the high-speed HPE Slingshot Interconnect at 200 Gbps and has high-performance storage with Cray ClusterStor E1000 (10 PB). This supercomputer, managed by NSTDA Supercomputer Center: ThaiSC, plays a crucial role in supporting high-performance computing power for AI-related projects.

Key Contributions in the 2022-2023 Fiscal Year:

In the fiscal year 2022-2023, TARA HPC was repurposed as the foundation for high-performance computing. Notably, it supported a team of students from Thammasat University in The 5th APAC HPC-AI Competition, where Thailand received the 3rd prize and Best HPC Performance award.


Moreover, resources were allocated for the Super AI Engineer program and other research projects aligned with the National AI Development Plan for Thailand.

Photo by: Thammasat University
https://tu.ac.th/en/thammasat-310566-5th-apac-hpc-ai-competition
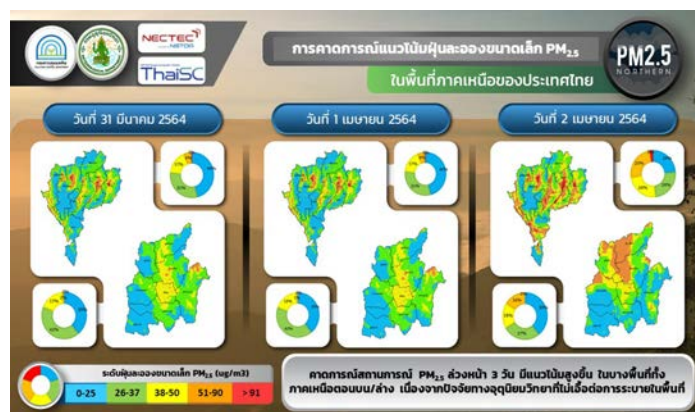
The development of a small-scale PM2.5 dust prediction system for the northern Thailand. In partnership with the Department of Pollution Control, high performance computing (HPC) was utilized for processing mathematical modeling specifically focused on air pollution, coupled with data from PM2.5 emission sources and meteorological data. This significantly reduces the processing time from the previous 11.5 hours to just 45 minutes.
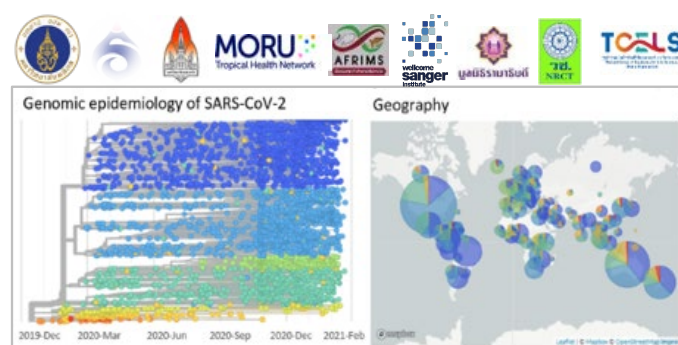
Analysis of SARS-CoV-2 virus strains. The CONI (COVID-19 Network Investigations) group utilized high performance computing (HPC) to analyze genetic data of the SARS-CoV-2 virus, the causative agent of COVID-19. This enables the identification of viral strains. The use of HPC facilitates rapid data analysis, allowing for swift tracking of the spread of the virus and informing response efforts to the epidemic situation.

Strategy 3

## Enhancing Personnel Capacity and Developing AI Education

1. Key Directions for AI Workforce Development

The Subcommittee of Human Resource Development in AI established by the National AI Committee of Thailand, has the mission to propose policies and develop plans for AI workforce development. The committee aims to ensure fair and effective development of AI personnel in Thailand and achieve set goals. The committee convened its first meeting on December 8, 2022, where key topics included:

The Subcommittee of Human Resource Development in AI held its first meeting of 2023 on July 17, 2023. The meeting agenda included the following key items:

(1) Presentation of AI workforce definitions, categorized into three levels:

- High-Level AI Workforce – AI Profession
- Intermediate-Level AI Workforce – AI Engineer
- Entry-Level AI Workforce – AI Beginner

the definition of AI workforce

01 **AI Profession**

02 **AI Engineer**

03 **AI Beginner**

2
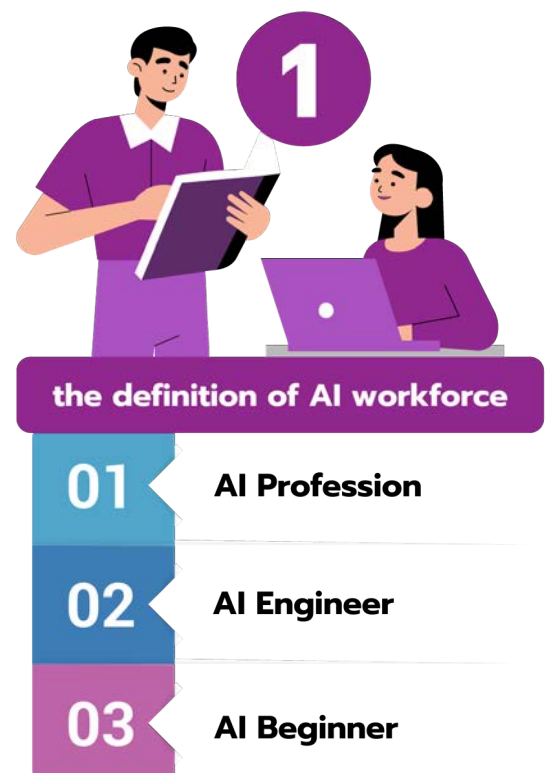
Presentation of the AI Workforce Development Project (draft)

01 AI Workforce Development Project by universities with AI Sandbox courses.

02 AI Workforce Development Project by other universities.

03 AI Workforce Development Project for the general public.

04 AI Workforce Development Project for government officer lager

05 Project to support for the creation of a National Credit Bank

(2) Presentation of the AI Workforce Development Project (draft), aligned with the overall AI development plan. This includes sub-projects such as:

- AI Workforce Development Project by universities with AI Sandbox courses.
- AI Workforce Development Project by other universities.
- AI Workforce Development Project for the general public.
- AI Workforce Development Project for government officer lagents

- Support for the creation of a National Credit Bank, facilitating credit transfer for individuals who have undergone various AI training programs.

In addition, the Digital Economy Promotion Agency (DEPA) has been developing ICT skills in the ASEAN region since 2021. The skills are divided into nine sub-groups, covering the following fields: mathematics and statistics, business intelligence, data analysis, data engineering, machine learning, software engineering, technical expertise, AI research, and AI governance.

3 ICT skills in the ASEAN region

01 Mathematics and statistics

02 Business intelligence

03 Data analysis

04 Data engineering

05 Machine learning

06 Software engineering

07 Technical expertise

08 AI research

09 AI governance

2. AI Engineering Institute (AIEI):
Developing AI Workforce at the Tertiary Level

The AI Sandbox curriculum is a new approach to developing AI personnel in universities. The AI Engineering Institute (AIEI) has received approval from the Ministry of Digital Economy and Society (DE) on September 12, 2022, to become Thailand's first collaborative AI curriculum.

The objectives include promoting resource exchange between tertiary education, research institutions, and industries, both nationally and internationally. The aim is to develop experts in AI and computer science to enhance Thailand's competitiveness. The curriculum stands out by allowing students to complete a bachelor's degree in three years and providing opportunities for real-world projects with private companies from the first year.

AI Engineering Institute (AIEI) established on 10 May 2022 under the cooperation of 6 leading universities in the country, led by CMKL University in collaboration with King Mongkut's Institute of Technology Ladkrabang, Mahidol University, Chiang Mai University, Prince of Songkla University and Khon Kaen University and has created the AI Sandbox course in cooperation with partner agencies and industrial sectors

in related industries, such as the Capital Management and Management Unit for Increasing National Competitiveness(BMCO), Huawei Technology (Thailand) Company, NVIDIA, Microsoft Thailand Company, Kasikorn Business Tecnology Group Company, T.C.C. Technology Company Limited, Ek-Chai Distribution System Company Limited, True Digital Park Company and Advanced Info Service Company Limited

As of 2022 - 2023, the AI Sandbox curriculum comprises a total of 15 courses at the undergraduate, master's, and doctoral levels. The program initially admitted 111 students in the 2022-2023 academic year, with plans to admit approximately 200 students in the 2024 academic year.

3. Super AI Engineer
Accelerated AI Workforce Development

Super AI Engineer project led by the AI Association of Thailand (AIAT) in collaboration with numerous partners, is a widespread AI workforce development initiative for the general public. The project targets individuals with basic AI knowledge and those starting from scratch. The main goal is to develop mid-level (AI Engineer) and entry-level (AI Beginner) AI skills in Thailand. The project includes a variety of training activities, both in traditional and online formats, emphasizing hands-on practical training. The training duration is within one year. Participants gain knowledge ranging from basic to advanced AI concepts, allowing them to apply their skills to solve real-world problems through academic and business-oriented research. The project is divided into three phases:

2 Application-level AI training

- Image processing
- Signal processing
- Naural language processing/understanding
- Big Data Analytics
- Internet of Things and robotics

3 Participants engage in real AI-related work

- Presenting the results of individual AI internships
- Final Pitching results

1 Fundamental and theoretical AI training

- Fundamental Level course
- Intermediate Level course

Level 1: Fundamental and theoretical AI training through self-learning and online systems.

Consisting of 2 courses as follows:

- Fundamental Level course for the general public
- Intermediate Level course for program applicants Including examinations to measure basic and intermediate levels of theoretical knowledge through an online evaluation system.
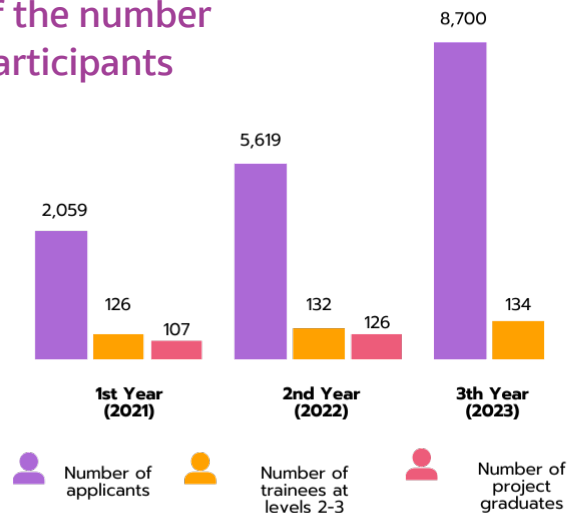
Level 2: Application-level AI training, focusing on workshops and hackathons, emphasizing planning, design, analysis, system creation, and soft skills. The application areas are as follow

- Image processing
- Signal processing
- Naural language processing/understanding
- Big Data Analytics
- Internet of Things and robotics

Level 3: Participants engage in real AI-related work in actual business settings for a minimum of two months.

Afterward, they present individual AI projects to showcase their knowledge and insights in a final pitching session, where a committee evaluates and awards certificates, prizes, and medals.

Summary of the number of project participants

8,700

5,619

2,059

126
107

132
126

134

1st Year (2021) **2nd Year (2022)** **3th Year (2023)**

Number of applicants

Number of trainees at levels 2-3

Number of project graduates

Note: 3th Year of the project is currently in progress

summarize

Number of applicants
16,378

Number of trainees at levels 2-3
392

Number of project graduates
233
(only 1st - 2nd year)

The goal is to produce 30,000 AI professionals by the year 2027.

ICT skills in the ASEAN

Presentation (draft) of the AI Workforce Development Project

AIEI – Developing AI Workforce at the Tertiary Level

Presentation of AI workforce definitions

Super AI Engineer

Strategy 4

Development of Technology and Innovation to Support AI Technology

1. Medical AI Data Sharing

The country's first Medical AI Data Sharing Consortium and Platform to promote AI research in the medical field. National Electronics and Computer Technology Center (NECTEC), in collaboration with partner agencies, e.g. Department of Medical Services and Faculty of Medicine of Ramathibodi Hospital, Mahidol University, aims to establish the country's first open medical data management network and platform.

The goal is to promote AI research in the medical field through the Medical AI Data Sharing Consortium and Platform. Over the next three years, NECTEC plans to develop a medical data management platform, a foundational structure crucial for the country's role in advancing research and development. This platform is expected to contribute to research in medical AI intelligence and public health.

Medical AI Data Sharing Platform
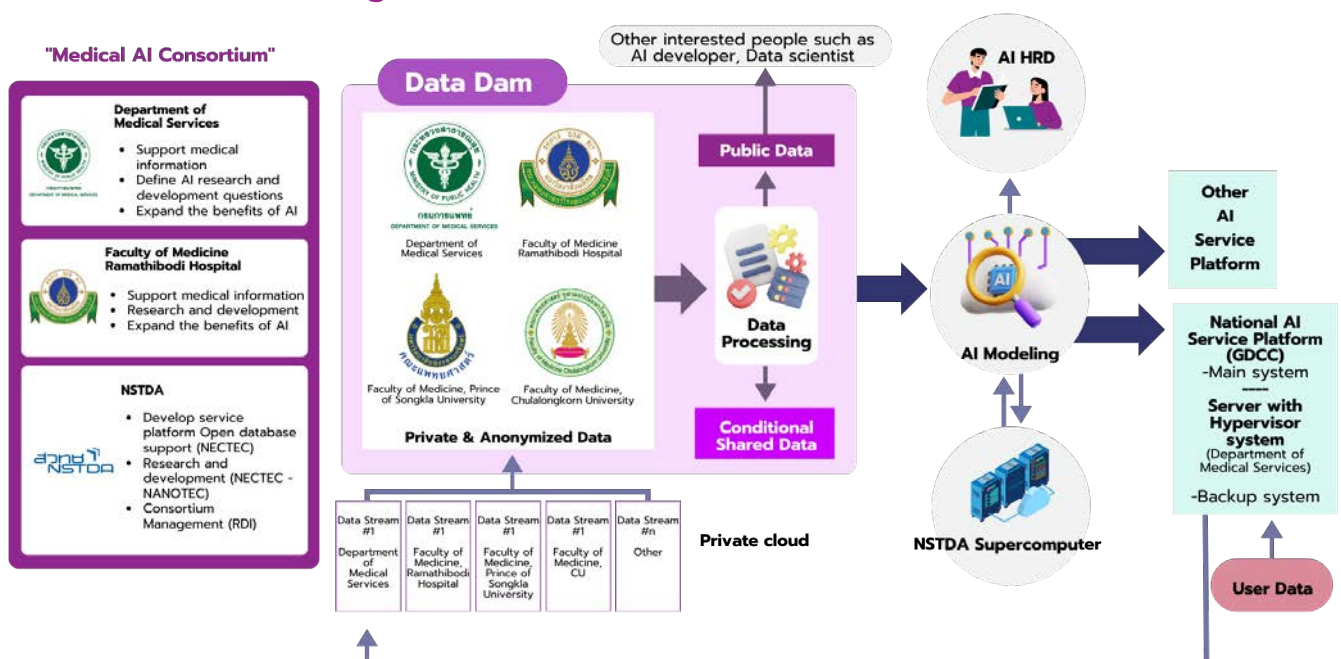
The development project for the "Medical AI Data Sharing" platform has received funding support from agencies focusing on human resource development and institutional development in research and innovation (BPIC). Key deliverables in the first year (March 2023) include:

Establishment of the Medical AI Consortium to facilitate systematic access and utilization of medical data for innovation and workforce development in AI for Thailand's rapid advancement.

The platform includes standardized medical data such as Chest X-ray images, retinal images, and mammograms, totaling over 1,000,000 images.

Tools for managing medical data have been tested within the consortium member network to prepare for expansion in the subsequent years.

Beyond the initial three collaborating agencies, additional cooperative networks are expected to join, including Electronic Government Agency (EGA) advising on AI ethics and Faculty of Medicine at Chulalongkorn University. This collaborative effort aims to strengthen the Medical AI Consortium in its second year.

Department of Medical Services
- Chest X-ray (509,795)
- eye photography (11,569)
- Mammogram (3,415)

Faculty of Medicine Ramathibodi Hospital
- MRI prostate cancer (500,000)
- CT,CTA,MRI Stroke (35,500)
- CT,MRI Head and neck cancer (20,000)
- BMD,VFA osteoporosis (10,000)
- Chest X-ray (4,700)
- Mammogram (4,000)

Faculty of Medicine, Prince of Songkla University
- Mammogram (20,000)

Faculty of Medicine, Chulalongkorn University
- Ultrasound (5,000)

*The number is subject to change.

2. Thai Povety People Analytics

Thai People Map and Analytics Platform (TPMAP) a big data system initiated in 2018, serves as a government tool to enhance the quality of life for citizens, focusing on addressing poverty and developing targeted groups. Developed collaboratively by the National Economic and Social Development Council (NESDC) and NECTEC, TPMAP has been used throughout the country as the main information platform for the operations of the Center for the Eradication of Poverty and Sustainable Development of People of All Ages in accordance with the Sufficiency Economy Philosophy, which has been established both at the national level Province and district level or equivalent with the provincial governor and district chief is the driving chairman in order This establishment is in accordance with the Prime Minister's Office Order No. 347/2020 dated October 30, 2020.
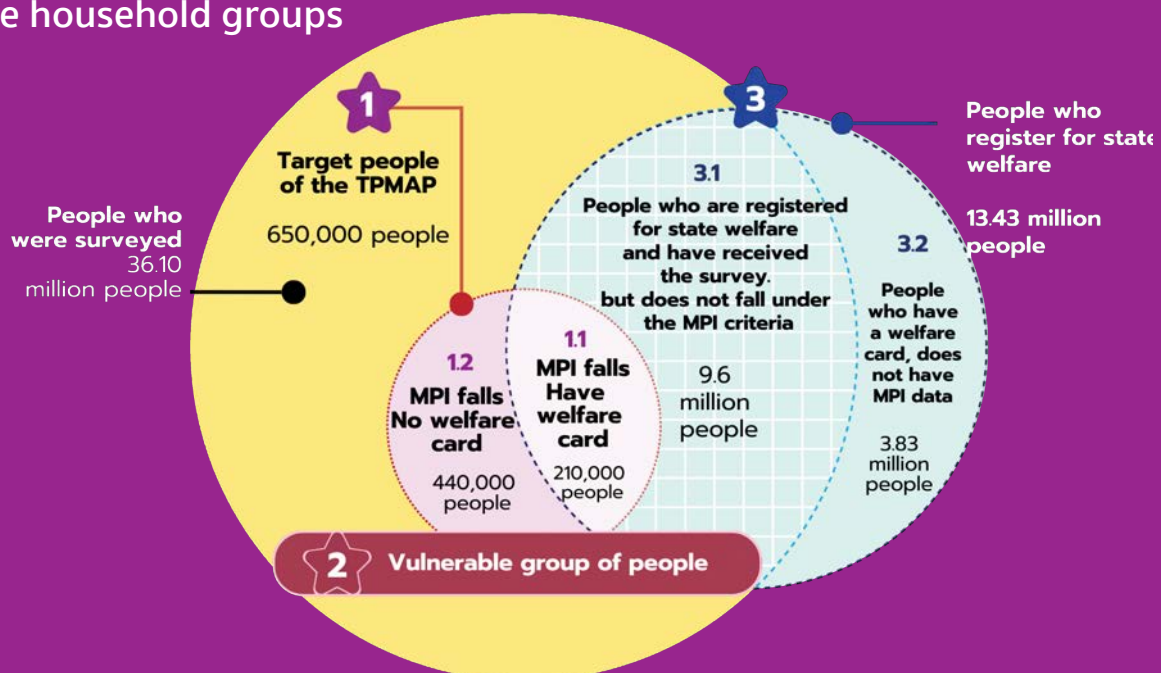
Poverty Alleviation Targets in 2023

1 People with urgent goals (falling from MPI)

Have welfare card
No welfare card

655,365
people

2 Fragile household groups

A person who wants to be dependent on others.

11,023,225
household

33,384,526
people

3 Group of people that need to be further explored

Groups with welfare cards and **not falling from MPI**

Groups with welfare cards but **no MPI data**

13,220,965
people

4 Group of people who were left out of the TPMAP

Continue to explore and add information to the system.

At the first meeting of the Center for the Eradication of Poverty and Sustainable Development of People of All Ages in accordance with the Sufficiency Economy Philosophy in 2023, held on February 3, four target groups were identified for poverty alleviation. These target groups were identified in order to ensure that poverty alleviation efforts are more comprehensive and inclusive. The four target groups are 1) Urgent target group 2) Fragile household groups 3) Group of people that need to be further exploredand 4) Group of people who are missing from the TPMAP system.

As of the present, NESDC and NECTEC have jointly planned to integrate AI technology into TPMAP for assessing problem conditions, identifying causes, addressing gaps in problem resolution, and diverse development initiatives on the TPMAP system. The integration is expected to be completed and ready for use by December 2023.

Fragile household groups

1 Target people of the TPMAP
650,000 people

People who were surveyed
36.10 million people

1.1 MPI falls Have welfare card
210,000 people

1.2 MPI falls No welfare card
440,000 people

2 Vulnerable group of people

3

3.1 People who are registered for state welfare and have received the survey. but does not fall under the MPI criteria
9.6 million people

3.2 People who have a welfare card, does not have MPI data
3.83 million people

People who register for state welfare
13.43 million people

Divide the target group according to household characteristics and various rights.

Note 1: Welfare beneficiary data for the Urgent Priority Group is as of 2025.
Note 2: Vulnerable Household data is sourced from the integrated database of Provincial Administrative Organization, the Ministry of Agriculture's Farmer One welfare card and the Provincial Administrative Organization,

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Partners

Collaborative organization driving
Thailand national AI strategy and action plan
2022 - 2027

Ministry:

Government agencies:

Educational institution:

Association/Confederation/Foundation:

09
Activities

On February 10, 2022

Office of National Digital Economy and Society Commission (ONDE) held a meeting to gather input from qualified individuals, government agencies, private sectors, associations, and educational institutions. The purpose of the meeting was to obtain suggestions for developing an online learning curriculum related to AI technology that aligns with the ethical guidelines outlined in the Thailand AI Ethics Guideline. This curriculum is intended for personnel training of relevant organizations and the general public in the future.

On March 1, 2022

NECTEC NSTDA, on behalf of the Assistant Secretary-General, participated in the meeting of the Network of Experts' working group on National AI Policies within the Working Party on AI under the OECD (The Organisation for Economic Co-operation and Development). The report was presented at the meeting included a study and analysis of OECD's AI policy data, linking it with the implementation plan for AI. Additionally, progress reports on the action plan were discussed during the OECD meeting.

On May 24-25, 2022

The working group responsible for developing the AI action plan, representing ministries including MDES and MHESI, participated as representatives of Thailand in the 2022 first-quarter meeting (conducted online) of the "Working Party on AI Governance (AIGO)." This working party operates under The Committee on Digital Economy Policy (CDEP) of The Organisation for Economic Co-operation and Development (OECD). The meeting involved the participation of more than 93 representatives from various countries worldwide, marking a significant step in advancing the country's AI readiness index. During the meeting, information and collaborative discussions on key AI-related topics were presented.

On September 16, 2022

ONDE, in collaboration with Thammasat University, presented awards to individuals and organizations that have demonstrated outstanding application of ethical guidelines and artificial intelligence principles. The recognition was given to serve as a model for transforming ethical practices in AI into exemplary actions, promoting the ethical application of AI in various fields.

On September 22, 2022

Thammasat University, in collaboration with MDES, held the opening ceremony for the "Thammasat AI Center" This center was established as a central hub for training, research, and development in AI , aiming to provide knowledge and skills to the new generation and those interested in AI technology.

On November 8, 2022

ETDA in collaboration with NECTEC NSTDA, Department of Medical Services, and Department of Health Service Support, launched the "AI Governance Clinic by ETDA (AIGC)." This center aims to elevate the standards of AI Governance in Thailand, promoting the responsible use of AI. The focus is on accelerating the development of frameworks, providing recommendations, and disseminating knowledge related to the ethical use of AI in the medical field.

On December 8, 2022

The National AI Committee, responsible fordriving Thailand national AI strategy and action plan, held its first meeting of 2022, discussed advancing the country's development plan through AI technology, aiming to enhance the quality of life for the people of Thailand. The focus included leveraging AI for societal and economic growth, as well as fostering technological advancements.

On January 29, 2022

AIAT with the support of Program Management Unit for Human Resources & Institutional Development, Research and Innovation (PMU-B), Office of the National Research Council of Thailand (NRCT), in collaboration with various state and private universities, organized the event "Super AI Engineer Season 3 Level 2." This initiative aimed to enhance advanced AI skills through practical training, competitions, and real-world exercises for participants. The program sought to identify individuals who could potentially become innovators, engineers, researchers, or entrepreneurs in the field of AI in the future.

On February 9, 2023

AI Governance Clinic: AIGC by ETDA invites standards experts and the application of AI technology, discussing in-depth issues regarding ISO standards in AI Governance, both from a foreign and Thai perspective. Towards enhancing the safe and reliable application of AI.

On February 21-22, 2023

AI Asia Expo - Thailand 2023 took place, serving as a regional AI exhibition in the ASEAN region. The event brought together leaders of organizations, forefront innovators, startups, and individuals driving the development of AI technology. Participants exchanged experiences and insights to collectively advance policies, discuss the role of AI in the region, explore the growth of the AI industry, and address challenges. The focus was on collaborative efforts to develop an AI roadmap for the ASEAN region. The event was organized by MHESI and the Singapore Industrial Automation Association (SIAA).
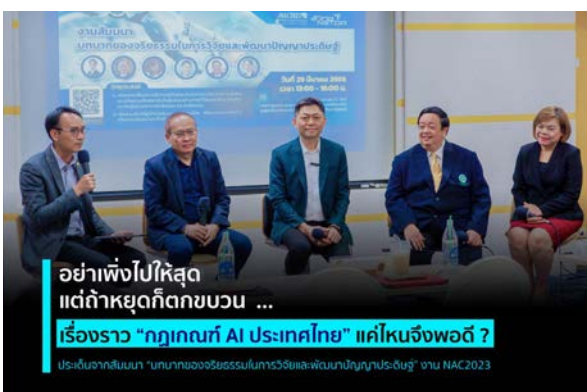
On March 29, 2023

Seminar "The role of ethics in research and development AI" exchange knowledge Experience from AI experts on the importance of of AI ethics Including guidelines for conducting AI research and development in a responsible and ethical manner, which will help us to coexist with AI knowingly.

On April 11, 2023

ETDA together with the Thammasat University research team opened a Public Hearing forum on principles or issues of study. For drafting laws regarding the application of AI with good governance To create understanding and express opinions about legal proposals. in promoting The application of AI covers 1) AI Sandbox 2) Data Sharing 3) AI Algorithm Standard 4) Contract Standard 5) AI Impact Assessment and other measures used in drafting laws regarding the fair application of AI Governance.

April - June 2023

"Training in AI skills and applying the AI for Thai platform in 2023 in 4 regions across the country"

NECTEC NSTDA joins government and private sector partners with support from the NBTC Fund, organized a forum to transfer knowledge and develop personnel to have understanding and have skills in using AI as well as promoting the application of AI for Thai. There were more than 300 people participating in all 4 regions.

On April 19, 2023

KBTG Meet up "The Age of AI: Augmented Intelligence" KBTG brings together leading speakers in the AI industry in Thailand to exchange views on the era in which AI will become a part of life and Build intelligence and enhance each other's abilities. and stories about the ethics of using AI to provide users and developers with correct knowledge and understanding for safe use of AI and maximum benefit.

On April 20, 2023

NXPO together with NECTEC NSTDA organized an online workshop on the topic "Poverty Alleviation" under the operation of the AI for Social Good network, with international partners participating, including The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) The Association of Pacific Rim Universities (APRU) Ia: Australian National University

On April 24, 2023

AIAT and AIEAT, in collaboration with NECTEC NSTDA and partner organizations, organized a seminar "Challenges, Possibilities, and Opportunities of ChatGPT in Thai" to promote the OpenThaiGPT project. The development team worked together to enhance a Thai-language Chatbot system, aiming to achieve capabilities comparable to ChatGPT. The result is an open-source software freely available for everyone.

On July 6, 2023

The US-ASEAN Business Council (USABC) organized "The Digital Policy Consultative Forum (DPCF) on AI" to have an in-depth discussion on the issues of developing national AI strategies and plans to promote the growth of the AI ecosystem for digital economic growth in the ASEAN region. There were representatives from the public and private sectors from various countries including Thailand, Singapore, the Philippines, and the United States attending the meeting.

July 10-11, 2023

Representatives from NXPO and NECTEC NSTDA participated in the "AI for Social Goods: Strengthening Capabilities and Government Frameworks in Asia and the Pacific Summit." This summit is part of the AI for Social Good initiative, conducted in collaboration with the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), the Association of Pacific Rim Universities (APRU), and regional partners in Asia-Pacific. The aim of the initiative is to support policy makers in developing deep-learning capabilities and regulatory frameworks to effectively harness the benefits of AI for maximum societal impact.

On July 12, 2023

EDTA and NSTDA jointly announced the results of a study on readiness for the ethical application of AI in digital services. The event also provided a platform for public scrutiny, inviting stakeholders from all sectors to express their opinions on various issues. The aim is to promote the responsible use of AI technology in industries and businesses that align with the context of Thailand. The discussion focused on the "Success of AI Application and the Development of AI Ethics in the Context of Thailand."

On July 17, 2023

The meeting of the Committee for Driving AI Workforce Development, 1/2023, was also accessible through the Webex online platform. The primary agenda was to initiate discussions on the development of the AI workforce. The committee aimed to provide ongoing support for AI workforce development projects.
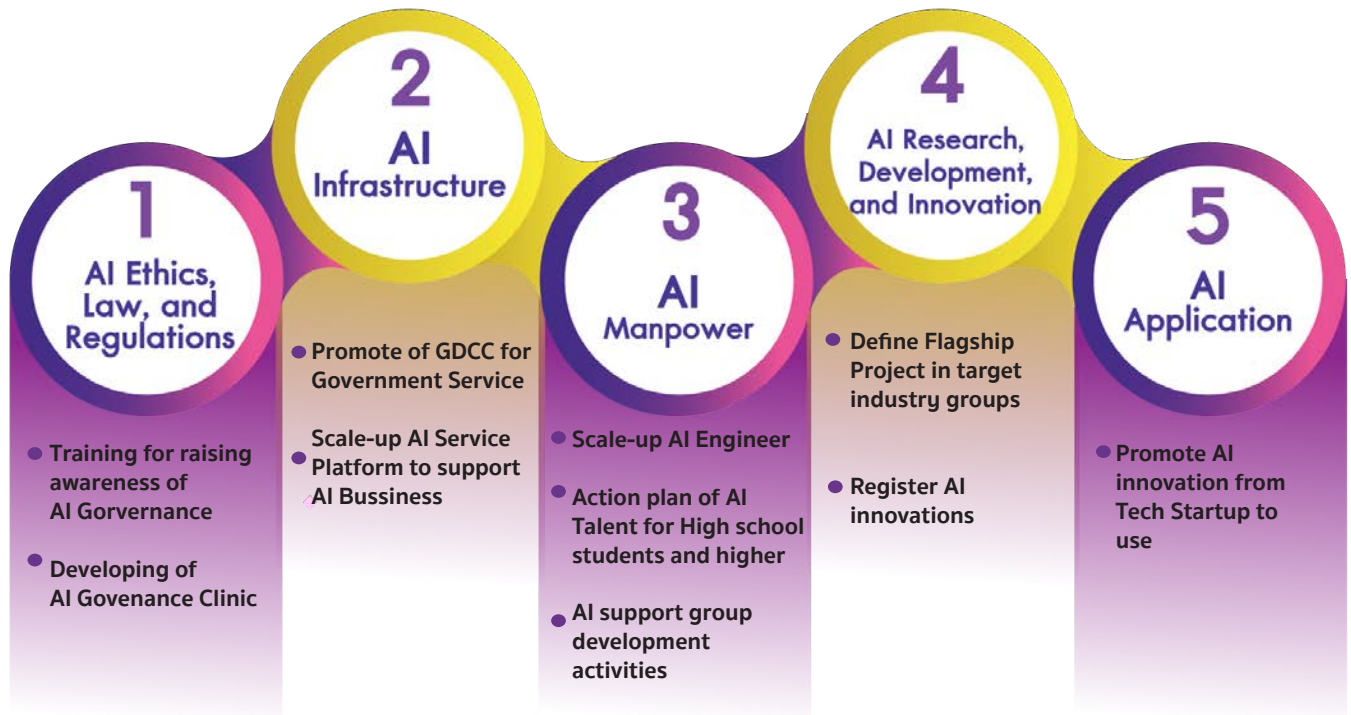
10

**Next Phase of
Thailand national AI
strategy and action plan**

Next Phase of
Thailand national AI strategy and action plan

Action plan for promoting and developing AI in the next phase of Thailand national AI strategy and action plan for 2024 onwards, summarized according to each strategy as follows:

1 AI Ethics, Law, and Regulations
- Training for raising awareness of AI Gorvernance
- Developing of AI Govenance Clinic

2 AI Infrastructure
- Promote of GDCC for Government Service
- Scale-up AI Service Platform to support AI Bussiness

3 AI Manpower
- Scale-up AI Engineer
- Action plan of AI Talent for High school students and higher
- AI support group development activities

4 AI Research, Development, and Innovation
- Define Flagship Project in target industry groups
- Register AI innovations

5 AI Application
- Promote AI innovation from Tech Startup to use

Strategy	Activities/ Projects
Strategy 1 AI Ethics and Governance	• Initiate activities to raise awareness of AI ethics and governance, especially among AI users and the public. • Elevate the role of the AI Governance Center (AIGC) to provide consultation on both fundamental AI knowledge, general AI-related inquiries, and technical expertise, such as standards for AI usage and organizational AI ethics development.
Strategy 2 Infrastructure and Data for AI	• Promote the expansion of the AI Service Platform to support businesses in delivering AI services conveniently. • Extend beyond the government's AI services by integrating them into the Government Data Center in the Cloud (GDCC).

Strategy	Activities/ Projects
Strategy 3 **Human Resource Development in AI**	• Present plans for developing AI personnel at intermediate and advanced levels (AI Talent). • Propose projects to the National AI Committee for additional AI workforce development beyond the activities carried out by the AIAT. This includes addressing the shortage of AI engineers and developing supporting staff with knowledge in data management, data analysis for support, and increased usage of widely available AI tools.
Strategy 4 **Research and Development of AI in Target Industries**	Encourage research and development activities to generate AI innovations with significant impacts on key industries, including agriculture, healthcare/medicine, and the public sector. Focus on flagship research and development, such as: • Collecting tourism-related data and developing a Tourist Map • Creating AI systems for Fraud Detection/Fraud Behavior Modeling in financial transactions • Developing AI systems for image analysis (Industry Visual Inspection) • Establishing a Public Safety Platform by integrating data from various sources such as CCTV, sensors, and developing systems for hazard and anomaly detection • Developing Thai Large Language Models (Thai LLM) for different government sectors to be used in recommendation systems for decision-making in the context of Thai language services
Strategy 5 **Promotion and Support of AI Utilization**	• Collaborate to drive Tech Startups to foster innovation and create AI service-oriented jobs in Thailand. • Collaborate with government agencies and various private sector associations to consolidate efforts in support.

AI
THAILAND

เชื่อมระบบนิเวศปัญญาประดิษฐ์
ยกระดับคุณภาพชีวิตคนไทย
Integrate AI ecosystem for Thai better living