

[English Translation]

The AI White Paper
Japan's National Strategy in the New Era of AI

April 2023

LDP Headquarters for the Promotion of Digital Society
Project Team on the Evolution and Implementation of AIs

1. The need to formulate a new national AI strategy for a new era of AI

(1) The impact of social implementation of Large-scale Language Models (LLM) by ChatGPT

A new era of artificial intelligence has begun.

ChatGPT, which was launched in November 2022 by OpenAI, Inc. in the U.S., has had a major impact across the world. Chat services using artificial intelligence (AI) based on this Large Language Model (LLM) can now be used by anyone for free or at a low cost via smartphones and other devices. Suddenly, people who have no experience with programming languages can instantly benefit from advanced AI, as naturally (or nearly) as if they were talking to another person.

Members of our project team (PT) commented on the immense societal impact the social implementation of large-scale language models will have:

"It's likely to affect nearly every white-collar job."¹

"We are in an era of unlimited content creation through the use of machines."²

"An invention equivalent to the internal combustion engine, the semiconductor, and the Internet is happening before our eyes at an explosive rate."³

The evolution of AI and its implementation in society, as typified by large-scale language models and other "foundation models⁴," could be a catalyst for new

¹ Yutaka Matsuo, Professor, University of Tokyo (2nd PT, February 17, 2023)

² Kazuto Ataka, Professor, Keio University SFC (2nd PT, February 17, 2023)

³ Hiroaki Kitano, Director, Sony Computer Science Laboratories (5th PT, March 14, 2023)

⁴ The term "foundational model" refers to a machine learning model, such as

economic growth.

Already the number of situations in which AI is used in our daily lives and businesses is exploding. New ways of using AI are being "discovered" one after another, ranging from correcting and summarizing texts to suggesting ideas, writing scientific papers, programming, and generating images. Multimodal functions that can combine or associate multiple data types, such as images and sound, as well as text, are also emerging, further expanding their applications. In addition, since the release of APIs, which are third-party development tools linked to the underlying model, a large number of domestic and foreign companies have announced new products that incorporate large-scale language models into their services and products, and we can expect to see a large number of new start-ups in this field in the future.

The evolution of AI is expected to lead to rapid improvements in productivity, dramatic changes in the way people work, lower language barriers, and other fundamental changes in the assumptions on which various socioeconomic systems are designed.

The global changes that have taken place over the past few months indicate the arrival of an unexpected era, which can truly be called the "New AI Era." How should our country's economy and society respond to these changes? A new national strategy is required.

(2) Europe and the U.S. moving forward with rules for social acceptance

Powerful AIs can bring greater social risks.

In addition to the problems of errors and biases caused by data and other factors, AIs using large-scale language models have the risk of mixing in "plausible lies" in which incorrect information is communicated in a format that is difficult to detect. The risk of abuse, such as the proliferation of sophisticated fake

GPT or Bert, that can be pre-trained on a large set of general data and then fine-tuned through retraining to adapt to a wide range of tasks.

information whose authenticity is difficult to discern, is also feared to increase due to technological advances in image generation, speech synthesis, etc. Concerns about AI-based privacy violations, cyber attacks, and military use are also becoming more serious.

These risks are growing daily as AI evolves and spreads, and in parallel with the promotion of AI development, regulatory discussions for social acceptance are accelerating in Western countries.

In the EU, for example, legislation has been drafted since around 2019 based on the basic principle of classifying AI risks into four categories (including human rights, health and safety) and adjusting the type of regulations according to the degree of risk. Since around the same time in the U.S., bipartisan discussions on legislation have been conducted with AI human rights violations and national security risks in mind. In the process, the U.S. and EU began to work together and cooperate to create a legal system that is based on the same values and is easy to interoperate with each other. In China, several specific laws and administrative regulations, such as the Network Safety Law and the Data Safety Law, are already in force and attempt to impose strict discipline on AI.

In Japan, however, the basic idea that it is important to have a non-regulatory and non-binding framework for AIs was presented in 2019. Since then, discussions have been held in the direction that, to avoid stifling innovation, laws and regulations should not be imposed on the development and use of AI, and policy tools should be formulated jointly by the public and private sectors through soft law. However, with the development of GPT and other basic models progressing, and the social implementation of AI advancing at an unexpected speed, the assumptions underlying the policy discussions to date now face a major challenge.

With the increasing utilization of AI across borders, the big divergence between international discussions on regulations and our policy may likely lead to isolation of the Japanese AI markets. We have come to a period where we need to reconsider the regulatory gap between their countries and us.

(3) New National Strategy for AI in the New AI Era

Many have long voiced concern over Japan lagging behind in AI development and utilization. Japan continues to lag behind the U.S., China, and Europe in the number of international AI-related research papers and in the ratio of AI adoption in companies.

In addition, the International Institute for Management Development (IMD) of Switzerland released its global digital competitiveness ranking last September, ranking Japan 29th out of 63 countries surveyed. Japan ranked last in such areas as "data utilization," and in many other indicators related to industry, Japan remained in a low position. Experts are concerned that Japan may not be making investments commensurate with its national capacity.

Meanwhile, large-scale investments in AI are accelerating around the world. In particular, the scale of computational resources and data used in AI, such as large language models like GPT, has a greater impact on performance than AI models based on conventional development methods. It is highly likely that those with huge investment resources such as funds, data, and human capital will become more and more powerful. Governments are moving quickly amid an increasingly competitive environment. In January this year, the U.S. announced a policy of investing US\$2.6 billion (approx. 340 billion yen) in the development of a platform that will provide AI computing resources and data. In March this year, the U.K. announced that it would invest 900 million pounds (approx. 145 billion yen) in the development and maintenance of next-generation supercomputers, with a view to developing a British version of a large-scale language model. The Indian government also announced the establishment of three AI research centers and the construction of the world's largest data set.

In Japan, the government's Council for the Promotion of Comprehensive Innovation Strategy formulated the "AI Strategy 2019" in 2019, and packaged a wide range of policies, including human resource development, research and

development, social implementation in each field, and venture support, into a national strategy to realize an "AI-ready society." Since then, the overall picture and process management of AI-related policy initiatives have been updated annually until "AI Strategy 2022," which has been the driving force for promoting and monitoring policy. However, there are currently no plans to develop a new "AI Strategy 2023," and this year the government intends to present the progress of its AI-related policy efforts in one of the chapters of the "Integrated Innovation Strategy" to be compiled by the Cabinet Office.

It is not easy to accurately predict the future of advanced technologies, which evolve continuously. Nevertheless, unless the government clarifies its objectives, goals, and commitments appropriate to the new technological environment and invests national resources flexibly and strategically with the understanding and cooperation of various stakeholders, it will be left behind at a crucial turning point. The potential of these increasingly sophisticated AI technologies must be linked to Japan's growth and solutions to social issues.

Based on the above, we make the following recommendations.

- In light of the rapid progress in the evolution and social implementation of large-scale language models and other foundationl model AIs, a new national strategy appropriate for the New AI Era should be formulated based on the various recommendations in this white paper, and new policies should be developed and past efforts reviewed as soon as possible.
- The new national strategy must plan for content and scale that will give Japan an international competitive advantage. A leadership function regarding AI policy should be established and its structure expanded within the government, while actively incorporating the knowledge of domestic and foreign experts and private businesses. The government should immediately and comprehensively study measures from a wide range of perspectives, including

research and development, economic structure, social infrastructure, human resource development, and national security assurance.

(4) Background of this proposal

This proposal was prepared by the "Project Team on the Evolution and Implementation of AI" (Chairperson: Masaaki Taira), which was established on February 3 of this year under the Liberal Democratic Party's Digital Society Promotion Headquarters. In preparing this document, a total of seven hearings were held with leading experts in the field of AI (Exhibit 1) to gather information for the appropriate design of measures required in the new era of AI. In addition, a working group (Exhibit 2) consisting of outside experts, such as lawyers with a high level of expertise in the field of AI, provided significant assistance in organizing and writing the recommendations.

2. Develop and strengthen Japan's AI development capacity

(1) Building and strengthening AI model development capabilities, including foundation models

As the social influence of AI is rapidly increasing, Japan needs to redefine its policy goals and approaches for research and development of AI models, including foundation models.

First of all, Japan should accelerate various applied research and development using foundation AI models in Japan, either by building on the foundation AI models from overseas that are ahead of Japan, or by forming partnerships. In the process of actively developing and deploying products and services, domestic businesses and researchers can be expected to accumulate knowledge efficiently and quickly on advanced technologies. New use cases and applications could be developed by taking advantage of Japan's strengths, and these could then be deployed overseas. If Japanese companies and researchers can get involved in related communities of AI model development overseas, rather than remaining mere users, it will also contribute to human resource development.

On the other hand, many experts interviewed both inside and outside the PT are in agreement that it will not be easy to develop, at least in the short term, a competitive and unique foundation model solely with domestic resources, given the current situation in which research and development of foundation models by overseas entities are far ahead of the Japanese competition. However, in light of the fact that the applications and social influence of AI using foundation models are likely to keep growing, it is extremely important to continue to build and strengthen Japan's basic technology development capabilities for foundation models, in addition to applied research. From the viewpoint of fostering young researchers and engineers, it is also necessary to continue to invest in and support basic research on a wide range of foundation AI models.

In addition, Japan has technological advantages in research and development of AI models other than the foundation model in many fields. For example, Japanese companies have competitive technologies in the field of image recognition, such as facial recognition and object identification. In these fields, it is important to continue to create an environment in which Japan can take the initiative in international development, and there is an urgent need to develop AI human resources who can play an active role on the international stage.

Based on the above, we make the following recommendations.

- Accelerate applied research and development by accumulating domestic knowledge on foundation models through active use of overseas platforms.
- In parallel, continue to invest in and support the building and strengthening of basic technology development capabilities, including foundation models, in Japan.
- With regard to digital human resource development, measures for human resource development based on the AI Strategy 2022 should be steadily promoted, and further enhancement of human resource-related measures should be considered to develop internationally competitive human resources, focusing not only on the development phase in the era of foundation models, but also on the utilization phase.
- Establish an "AI hub" that collects information on AI and serves as a point of contact between companies facing challenges and with excellent technical backgrounds and research personnel, and support the formation of a community.

(2) Accumulation and coordination of data resources

In order for AI to demonstrate superior performance, it needs to learn from a

sufficient quantity and quality of data. However, as the above-mentioned IMD ranking shows, in Japan, data resources such as government statistical data have not been accumulated, and the utilization of data is completely insufficient. Even in areas where Japan has inherent international strengths, such as high-quality medical data accumulated under the universal health insurance system, the data cannot be fully utilized because of the lack of coordination due to the lack of unified formats among different systems.

An important issue that has emerged in recent years in relation to foundational model AI is cultural and regional disparities (biases) due to biases in the data used for training. For example, there have been reports that users of an overseas image generation AI service have been unable to generate an accurate or useful picture of Japan due to insufficiently trained data on Japan, such as Japanese visual materials and cultural backgrounds. If AI performance becomes inferior in processing related to Japan internationally, this could have a direct impact on Japan's economic competitiveness. This situation needs to be corrected as soon as possible.

Based on the above, we make the following recommendations.

- In the next review of the "Comprehensive Data Strategy" scheduled for this year, government should work to create an environment that promotes the use of public and private sector data through AI. In doing so, further promote the development of a standard data model and clarify the attributes and structure of the data.
- Promote archiving public data held by the government and local governments so that the data can be utilized in the foundation model. Organize the rules and format for providing the data to third parties.
- In order to address the issue of data bias, government should work to increase the ratio of Japan-related training data by actively providing appropriate Japanese-language data for both domestic and foreign

foundation models. In addition, the government should take the initiative in promoting the creation and utilization of a Japanese corpus (a structured database of Japanese sentences for bilingual translation).

- Government should work to promote the development and practical use of source code generation AIs, enhancing and utilizing training data with the goal of improving the efficiency of software development operations and addressing the shortage of digital human resources.

(3) Enhancement and utilization of computational resources

Foundation models such as large-scale language models are the source for creating high-performance AI products and services, but their construction requires enormous computing power. The demand for high-performance semiconductors is also expected to increase as the use of such models expands. In particular, according to recent research, the performance of the underlying model is known to dramatically improve when it is equipped with huge computing power of 10^{22} to 10^{24} in terms of training floating point operations per second (FLOPS). However, the number of entities that can provide computational resources of this scale is extremely limited. In addition, although it varies depending on the scale, it is not uncommon for a single training session to take several months or longer, and the construction of a superior infrastructure model requires an iterative learning cycle through repeated trial and error.

Considering the characteristics of such foundation models, it is not easy for companies and research institutes in Japan to secure the necessary computational resources and costs on their own, especially since they are so large. On the other hand, there is a strong need for these organizations to access huge computational resources on a trial basis for a certain period of time to explore the possibility of utilizing the foundation model in AI research and the development of new products and services. It is critical for the government to support the development and expansion of domestic computational resources as

part of the social infrastructure to support future innovation and economic growth, utilizing the resources of national research institutes and other organizations.

Based on the above, we make the following recommendations.

- Referencing the "AI bridging cloud" initiative of the National Institute of Advanced Industrial Science and Technology (AIST), government should promote the domestic infrastructure and expansion of the vast computing resources required to build and utilize the foundation models, and support the development of a new framework that can be shared and utilized by all related public and private entities.
- Strengthen the development of the semiconductor industry with the goal of securing stable computing resources related to AI, taking into account the possibility of further utilization of edge computing and other factors. In particular, support should be strengthened for design capabilities and R&D for high-performance semiconductors, etc., for which demand is expected to increase rapidly.

3. Promotion of active AI utilization in public service

(1) Active use of AI by the government

In Europe, the United States, and other countries, governments themselves are major sources of data, and various types of AI, such as machine learning and automated inference, are being introduced in government agencies. The use cases are wide-ranging, and given how the introduction of AI in Japan's administrative agencies is still in its infancy, there are many suggestions that can be used as a reference (see Exhibit 3).

The thorough utilization of AI in the field of public administration could bring immeasurable social benefits in terms of improving the quality and efficiency of administrative services, enabling the provision of more individually optimized administrative services and more precise measurement of policy effectiveness, thereby expanding the potential for full-scale evidence-based policy making. In addition, as Japan faces a shortage of workers due to a shrinking population and a severe fiscal situation, there is an ever-increasing need to use AI to eliminate waste and make human work as efficient as possible.

The government's initiative in taking on the challenge of utilizing a wide range of AI applications will also encourage local governments and private companies to take risks and engage in new AI projects. In particular, there are many situations where AI can be utilized in internal administrative work and services for the public. It is expected that the government, as a launch customer for new AI applications based on foundation models, will foster momentum beyond the boundaries of the public and private sectors and demonstrate its presence as a player in the new AI ecosystem.

Based on the above, we make the following recommendations.

○ Investigate advanced AI applications in government organizations in other countries and guidelines for such applications, in order to inform the planning and implementation of AI introduction in Japan.

○ Immediately initiate multiple pilot projects with visible results in a short period of time as specific examples of utilizing AI for basic administrative services.

(Examples)

- Drafting of parliamentary answers, assistance in legislative affairs, support for analysis of government statistics, and preparation of meeting minutes, etc., while ensuring consistency with documents and other materials accumulated to date.

- Checking for incompleteness of application documents and responding to inquiries from the public regarding regulations and systems.

○ Hold a hackathon and business contest to discover projects for the use of AI in government.

○ Develop guidelines to further accelerate the thorough utilization of various types of AI, including foundational models, in government.

○ Establish a specialized team (AI introduction support team) within the government to accumulate, analyze, and share use cases utilizing AI, and to support AI introduction, etc. in relevant organizations.

(2) Support for promotion of "AI Smart Cities" utilizing National Strategic Special Zones

The benefits of evolving AI can make a significant contribution to improving the quality of life of citizens and the efficiency of urban activities in local governments. Serious exploration of the possibilities of AI implementation through collaboration among government, private businesses, and citizens, not only in municipal administrative services but also in all aspects of civic life, including transportation, medical and nursing care, agriculture, power generation, and finance, can be

highly effective in local cities, which are facing financial difficulties and declining populations. In addition, the use of the special zone system, which allows policy benefits through various deregulations, should be encouraged as a promising option in promoting such AI smart city concepts.

The current super city-type national strategic special zones are required to provide advanced services in "approximately five or more fields." However, AI smart cities in the new era are expected to specialize in one or two fields, and it is desirable to be able to actively support proposals that demonstrate significant social benefits through the use of AI, even in a small number of fields. In addition, the requirement that regulations to be reformed be listed in advance of the application for a special zone should be made more flexible in light of the constantly evolving nature of AI services.

Based on the above, we make the following recommendations.

- The government should provide strong support for AI-based smart city initiatives by local governments. In addition, from the perspective of making the current system and operation of super city-type national strategic special zones and digital rural special zones more suitable for AI utilization, check whether there are any points that need to be improved, and if so, improve them as soon as possible.

4. Policies to encourage and support the use of AIs in the private sector

Recent studies have shown that the degree of impact from the widespread use of AI in large-scale language models will vary greatly by occupation: in occupations with a high degree of overlap between AI and skills, while work will become more efficient, there is likely to be a certain amount of labor migration. The time has come for all businesses to seriously rethink the impact of the new era of AI on their business.

However, as mentioned above, the use of AI in the private sector in Japan lags far behind that of other countries. In particular, many small and medium-sized enterprises (SMEs) have yet to fully adopt AI compared with their counterparts in other countries due to cost and lack of human resources. As foreign businesses work to transform their operations to adapt to the new AI environment, leaving this situation unchecked could be a major constraint on Japan's economic competitiveness.

On the other hand, the arrival of the new era of AI, which is expected to bring about significant changes in a wide range of areas from economic structure to social structure, is an excellent opportunity to develop new products and services, a chance to improve business profitability by utilizing AI, and to see the emergence of many next-generation businesses that were previously unthinkable. It is important to inspire young human resources with flexible thinking through a change in management awareness, and to draw out their abilities and potential through reskilling, which will lead to industrial development and enhanced competitiveness.

To this end, the government should alleviate management's concerns about the use of AI and promote the development of a safe and secure environment for its use. Discussions on AI governance in companies and optimization of data use and management should be deepened to encourage and support companies' efforts to make use of AI.

Based on the above, we make the following recommendations.

- Immediately conduct a study on the impact of foundation model AI on various domestic industries.
- Encourage the creation of various start-ups and new businesses that utilize AI. Promote and support accelerated migration of IT systems to the cloud, which is a prerequisite for small and medium-sized enterprises (SMEs) in particular to reap the benefits of AI utilization, such as improved productivity.
- Private businesses and public institutions above a certain size should establish a Chief Digital Officer (CDO) who is responsible for AI utilization and data handling.
- Deepen discussions on how AI governance should be implemented not only to manage risks for private operators, but also to encourage ingenuity and innovation; and if necessary, establish guidelines.
- To support companies' efforts to utilize and treat AI human resources, including reskilling, in order to develop human resources compatible with the new era of AI.

5. New approaches to AI regulation

(1) Consideration of regulations for serious risk areas

As previously mentioned, both the EU and the US have been considering specific regulations for several serious risk areas, such as human rights violations and national security, since around 2019. With the evolution of AI foundational models such as large language models (LLMs) having a significant societal impact, it is expected that the risk of social harm through misuse will increase even more, and the discussions about regulation are expected to accelerate further. When roughly classifying the risk areas where legal discussions are progressing overseas, the following three types are mainly cited:

- "Risks that violate human rights, health, and safety"

Risks of AI being used for crime, risks of exploiting vulnerabilities such as children and disabled persons, risks of AI being used for citizen surveillance like authoritarian states, risks of privacy violations, and so on.

- "National Security Risks of AI"

Risks of military use of AI, risks of cyber attacks, risks of data and technology leakage overseas, risks of disinformation threatening national security through information manipulation, risks of the influx of AI products with espionage capabilities into domestic markets, and so on.

- "Risks of undue intervention in the democratic process"

Risks of foreign forces using AI technology to interfere with elections, risks of inciting public opinion in the wrong direction by spreading false information

about topics such as historical recognition and culture, risks of distorting people's behavior through deep fakes disguised as politicians or government officials, risks of AI-generated mass comments on bills, and so on.

On the other hand, in Japan, since the Council for Promoting the Integrated Innovation in 2019 established the "Principles for a Human-Centered AI Society," governance construction focusing on soft law such as guidelines has been advanced. There has been no consideration of hard law regulations focusing on AI in general, and the situation has continued wherein individual responses are decided according to regulations for each field such as medical care and transportation.

However, considering that AI products and services to be introduced in the future will increasingly be utilized across borders, that the current foundation models primarily come from European and American platforms, and that national security risks such as military use of AI are increasing, the risk of Japan choosing an entirely different regulatory framework from Europe and the US will likely outweigh the benefits in the near future.

Based on the above, we recommend the following.

- Analyze the status of AI regulations in the EU, the U.S., China, and other countries, and conduct specific studies on areas where measures, including laws and regulations, are considered necessary in the new era of AI, such as (1) serious human rights violations, (2) national security, and (3) unjustified intervention in democratic processes.
- To actively and strategically participate in international rule-making discussions on the use of AI in cooperation with other countries, taking advantage of various opportunities for international consultations, including this year's G7 Summit, which Japan will chair.

(2) Agile regulatory adaptation to the new era of AI

In Japan, there have been "analog regulations" that require written, visual, stationed, and on-site participation as factors that inhibit the use of digital technologies including AI. The Digital Agency is currently working on a comprehensive review of these analog regulations, and is in the process of revising all the laws and regulations at once. The review of these analog regulations is expected to lead to the creation of new growth industries through a virtuous cycle of further development of AI technology through AI-based image recognition and diagnosis, big data analysis, etc., which in turn will lead to further regulatory review.

In addition, the so-called "gray zone elimination system" and the regulatory sandbox system have been introduced as current deregulation procedures, and have been utilized to a certain extent. However, especially when developing new businesses that use AI, there are often conflicts with vested interests, and various barriers, such as political friction, stand in the way of seeking deregulation. Unless Japan's various barriers of current regulations are removed, Japan's competitiveness will ultimately only decline as new services are created one after another in other countries. The speed and usability of these current deregulation procedures must be further improved to keep pace with the rapid rate of progress in AI technology.

While updating laws and regulations is extremely important, there is a limit to how much can be fully addressed by hard law alone in a field like AI, given its rapid pace of progress. Therefore, methods such as the formulation of guidelines and standards should be combined to ensure timely and flexible updates in response to technological evolution and expansion of applications. In addition, discussions on the interpretation of intellectual property laws, particularly with regard to generative AI, are also attracting attention. Although this is a different issue from government regulatory requirements, it is worth considering the active use of guidelines, etc., to promote the progress of AI technology while preventing

its abusive use, and further develop the content industry, which is one of Japan's strengths.

Based on the above, we make the following recommendations.

- Establish a mechanism to further promote the review of analog regulations based on digital principles by horizontally disseminating information obtained through technical verification of the potential use of AI to various ministries and the private sector.
- Improve the speed and usability of current deregulation procedures, such as the Regulatory Reform Conference, sandboxes, and gray zone elimination system, to create and develop an environment in which businesses can take on new business challenges without being constrained by existing regulations.
- Regarding the discussions over the interpretation of intellectual property laws in relation to generative AI, consider establishing guidelines, etc., to promote the progress of AI technology while preventing its abusive use, and further develop the content industry, which is one of Japan's strengths.

(3) Organize guidelines for AI utilization in education

In the past, the widespread use of the Internet, search services, etc. had an impact on school education, but the impact of foundation model AIs such as ChatGPT will have an even greater impact. The Internet and other services have given students easy access to a vast amount and variety of information, and have diversified the methods of learning. AI with large-scale language models will have a more advanced function in this respect, and this will have the positive effect of further diversifying learning methods. On the other hand, however, the ease with which students can use AI to complete tasks such as writing essays in a flash may undermine their motivation to learn.

In other countries, there have been various moves to ban the use of large-scale language models in elementary schools, but Japan's educational administration has yet to establish a set policy for the handling of such AI. It is also anticipated that curricula content will need to be adapted to take into account the progress of AI.

Based on the above, we make the following recommendations.

- Specifically position the improvement of AI literacy in the public education curriculum in anticipation of the AI native era, when active use of AI in daily socioeconomic activities will be the norm.
- With the above in mind, guidelines for the handling of AI, including whether or not students can use large-scale language models in public education, should be formulated as soon as possible.

End

Exhibit 1

AI Project Team Schedule

Date	Theme	Lecturer
Feb 3	AI Policies in Japan and other nations	<ul style="list-style-type: none"> • Cabinet Office • Digital Agency • Hiroyuki Sanbe (Attorney, Atsumi & Sakai)
Feb 17	Japans strategy in a new AI era	<ul style="list-style-type: none"> • Yutaka Matsuo (Professor, Tokyo University) • Kazuto Ataka (Professor, Keio University)
Feb 22	Regulation in a new AI era	<ul style="list-style-type: none"> • AI Contract Review Technology Association • Digital Agency
Mar 3	The evolution of AI and its challenges	• Joichi Ito (Director, Chiba Institute of Technology, Center for Radical Transformation)
	AI risk and governance	• Kojin Oshiba (Co-Founder, Robust Intelligence)
Mar 14	Data and computing resource in a new AI era	<ul style="list-style-type: none"> • Hiroaki Kitano (Presiden and CEO, Sony Computer Science Laboratories, Inc.) • Tohru Nishikawa (CEO, Preferred Networks)
Mar 17	ChatGPT and Microsoft	• Japan Microsoft
	Personal AI	• Koichi Hashida (Professor, Tokyo University)
Mar 23	Global trends in a new AI era	• Ren Ito (COO, Stability AI)

AI Project Team Working Group Members

Name	Organization
Takuya Kudo	McKinsey & Company
Hiroyuki Sanbe	Attorney, Atsumi & Sakai
Jun Okada	Attorney, Mori Hamada & Matsumoto
Keiji Tonomura	Attorney, Nagashima Ohno & Tsunematsu
Masaharu Koyano	Attorney, WG secretariat

AI Applications in Foreign Governments

(United States)

- Immigration: The U.S. Department of Homeland Security is experimenting with the use of artificial intelligence in immigration screening. Specifically, by combining existing immigration screening data with artificial intelligence, the Department of Homeland Security aims to achieve more accurate and speedy screening.
- Traffic Control: The City of Chicago is attempting to improve traffic control by utilizing artificial intelligence. Specifically, the goal is to analyze traffic data and optimize the timing of traffic signals to reduce congestion and the occurrence of traffic accidents.
- Medical Diagnosis: The U.S. National Institutes of Health is researching the use of artificial intelligence to improve medical diagnosis. Specifically, the goal is to analyze image data from MRIs, CT scans, and other imaging modalities to assist in the early detection and accurate diagnosis of diseases such as cancer and heart disease.

(Estonia)

- e-Residency: Through its e-Residency program, Estonia is providing people around the world with the same digital identity as its citizens. It uses an artificial intelligence-based facial recognition system to verify e-Residency applicants' ID cards and passports.
- AI Assistant: Estonian government agencies have introduced an artificial intelligence-powered online assistant to help citizens access public services online without having to go to a government office. This AI assistant allows people to easily ask questions and receive necessary information from the government.

- Testing self-driving cars: Estonia is testing self-driving cars and developing self-driving systems that utilize artificial intelligence. The goal is to reduce the risk of traffic accidents, improve energy efficiency, and ease traffic congestion.

(Denmark)

- Intelligent control platform (corporate tax reporting): The Danish government is developing a system that allows companies to submit tax data in XBRL (eXtensible Business Reporting Language, an internationally standardized computer language that enables the efficient creation, distribution, and use of financial information). The government is operating a system that automatically evaluates false or suspected fraudulent tax returns based on machine learning of tax return data in XBRL (eXtensible Business Reporting Language).

(Spain)

- Revenue Prediction System: Spain uses AI to automatically infer how much tax small businesses and sole proprietors will pay on their sales and how much revenue they will receive.