

Study Group 'AI governance and its Evaluation'
Report on the Session #8

1. Introduction

The Japan Deep Learning Association establishes study groups as a forum for deepening knowledge and discussing domestic and international policy trends related to artificial intelligence (hereafter AI) and Deep Learning (hereafter DL). This study group, "AI Governance and its Evaluation," defines "governance" as a system of management and evaluation by various actors, and launched a study group in July 2020 to investigate what forms of governance are possible and conduct a year-long study to help build trustworthy AI systems.

In the 8th session (December 15, 2020), Prof. George Shishido, Graduate Schools for Law and Politics of the University of Tokyo, and Prof. Toshiya Watanabe, Institute for Future Initiatives (IFI) of University of Tokyo, presented topics under the theme of policies and social systems for AI governance.

This report is a reconstruction of the topical presentations and the discussions of the study group participants.

2. New governance models for AI and data

Prof. George Shishido presented a topic titled "New Governance Models for AI and Data".

Introduction of the "Ten Guiding Values for a Digital Society"

At the second meeting¹ of the Working Group on Digital Reform Legislation formed by the Ministerial Meeting on Digital Government, the government presented the "Ten Guiding Values for a Digital Society"² as a policy for the formation of a digital society. In the draft principles, the government is to provide new services from the user's perspective through close coordination between the public and private sectors, with the core principles of "No one left behind" and "Human-centered transformation", and includes policies related to data/AI governance (see Table 1). The draft also suggests that various social principles related to AI will become social principles at the same time, and society will expect and demand discussions and resolution of challenges related to AI governance.

¹ https://www.kantei.go.jp/jp/singi/it2/dgov/houan_wg/dai2/gijisidai.html

² https://www.kantei.go.jp/jp/singi/it2/dgov/houan_wg/dai2/siryou2.pdf

Table 1: Policies related to Data/AI Governance in the "Ten Guiding Values for a Digital Society"

Values	Policies related to Data/AI governance
1. Transparency and Openness	Embrace the use of AI while ensuring transparency and explainability
2. Fairness and Ethics	Prevent inappropriate or unfair misuses of digital technology, including applications of biased datasets
3. Security and Safety	<ul style="list-style-type: none"> • Utilize digital technologies to enable safer, more secure communities • Mitigate uncertainties surrounding digital technologies by ensuring the protection of personal information and preventing misuse
5. Resolution of Social Challenges	Spur growth by re-imagining regulatory frameworks, mitigating costs, and enabling effective collaboration between national and local governments and private organizations
6. Adaptability and Agility	Incorporate agile management frameworks to drive results while conserving money and resources
7. Inclusion and Diversity	Ensure the accessibility of digital technologies to everyone
9. Creation of New Value	Leverage the full potential of data stored within private and public sectors

Introduction of the “EU Action Plan on Human Rights and Democracy for 2020-2024”

In the EU, the issue of AI governance is being discussed as an issue that has serious implications for human rights and democratic processes. In this context, the European Commission and Josep Borrell, High Representative of the EU for Foreign Affairs and Security Policy and Vice-President of the Commission, adopted on March 25, 2020 a Joint Communication (policy document) and the EU Action Plan on Human Rights and Democracy for 2020-2024³, setting out priorities and way ahead on "human rights and democracy".

The policy document includes an action policy on new technologies (digital technologies), which identifies digital technologies as a human-centered issue that can make a significant contribution to the protection and promotion of human rights and democracy.

³ https://eeas.europa.eu/delegations/japan/76549/node/76549_ja (in Japanese)
https://ec.europa.eu/commission/presscorner/detail/en/IP_20_492 (original in English)

The policy also states that digital technologies, including AI, should be addressed with a focus on promoting human rights and democracy through capacity building and effective monitoring.

Introduction of "Conference toward AI Network Society - 2020 Report"

The Institute for Information and Communications Policy (IICP) of the Ministry of Internal Affairs and Communications (MIC) has been holding the Conference toward AI Network Society since October 2016 to study social, economic, ethical, and legal issues related to AI networking. In this context, the Conference released 2020 Report on July 21, 2020.⁴ This report summarizes the contents of hearings from experts, exchanges of opinions, and compiles the relevant information based on the issues necessary for the "safe, secure, and reliable implementation of AI in society". It will also serve as a reference tool to actively promote the social implementation of AI, and the importance of governance on AI is also mentioned (see Table 2).

Table 2: The importance of governance on AI⁵

<p>Governance structure necessary for safe, secure, and reliable AI development, etc.</p>	<p>In addition to the formulation of the AI Principles, governance (structure) is considered necessary to ensure the operationalizing the AI Principles.</p> <p>As a mechanism for self-assessment and self-evaluation as part of the governance system, there have been some ingenious efforts such as the establishment of internal committees composed of various external personnel. Since there are various ways to ensure governance and to what extent it should be applied, the following efforts are possible in the future.</p> <ul style="list-style-type: none"> a. Collecting and publicizing examples of self-assessment and self-evaluation efforts, etc. b. Consideration of external audits c. Establishment of an open discussion forum to share governance implementation details and issues, etc.
<p>Importance of governance for AI-using businesses</p>	<p>There is a large expanse of laws, ethics, and stakeholders related to AI business, and if we proceed with the same intentions as in conventional business, there is a high possibility that risks will be realized. In</p>

⁴ https://www.soumu.go.jp/menu_news/s-news/01iicp01_02000091.html (in Japanese)
https://www.soumu.go.jp/main_sosiki/joho_tsusin/eng/pressrelease/2020/7/21_1.html (in English)

⁵ Some excerpts from "Conference toward AI Network Society - 2020 Report" (pp. 45, 69)

	<p>order to avoid such a situation, it will be necessary in the future to establish a governance system to discuss legal and ethical issues with stakeholders.</p> <p>In addition, in examining the governance system, it is expected that the way to deal with the situation will differ greatly as each company has different business and systems.</p>
--	---

Introduction of "GOVERNANCE INNOVATION: Redesigning Law and Architecture for Society 5.0"

The Ministry of Economy, Trade and Industry (METI) inaugurated a "Study Group on New Governance Models in Society 5.0" in August 2019 to examine the necessity and the state of new governance models to pursue both "promoting innovations" and "achieving social value" as Japanese society is facing dramatic changes brought about by big data, IoT, AI and other digital technologies. In this context, the study group released⁶ a report titled "GOVERNANCE INNOVATION: Redesigning Law and Architecture for Society 5.0"⁷ on July 13, 2020.

The report suggests that the conventional governance model based on laws and regulations has its limitations in Society 5.0, and that a new governance model for realizing Society 5.0 should be cross-industrial, multi-stakeholder governance model (see Figure 1) that emphasizes voluntary efforts by private companies to design architectures that integrate cyberspace and physical space, and the active involvement of communities and individuals with diversified values.

The report also points out that in the Society 5.0 society, where changes in technology and business models are rapid, "rule-based regulations"⁸ will become obsolete very quickly. As a solution, it is desirable to shift to "goal-based regulation"⁹ that focuses on the outcome of achieving legal objectives, and to adapt flexibly to changes in technology and business models to prevent regulatory obsolescence. Furthermore, it is mentioned that it is necessary to continuously evaluate the effects and impacts of laws, regulations, guidelines, and standards, and to provide opportunities for review.

Figure 1: Overview of the new governance system¹⁰

⁶ <https://www.meti.go.jp/press/2020/07/20200713001/20200713001.html> (in Japanese)

https://www.meti.go.jp/english/press/2020/0713_001.html (in English)

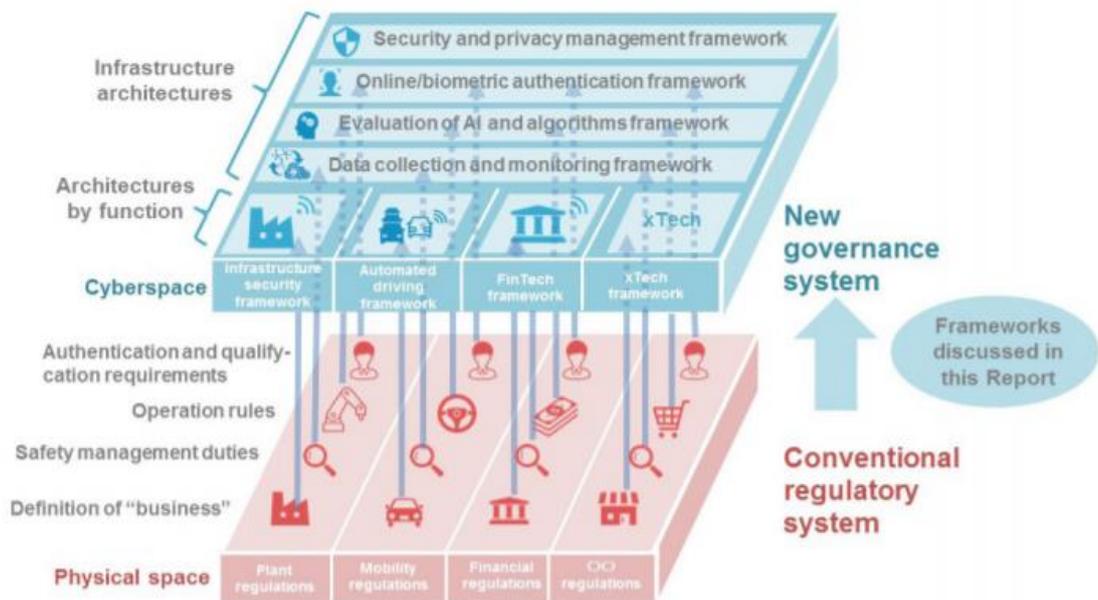
⁷ <https://www.meti.go.jp/press/2020/07/20200713001/20200713001-1.pdf> (in Japanese)

<https://www.meti.go.jp/press/2020/07/20200713001/20200713001-2.pdf> (in English)

⁸ Regulation in which the law describes specific acts and obligations in a pre-regulatory manner.

⁹ Regulations that describe the goals that the law should protect and are open to specific ways of implementing them.

¹⁰ Excerpts from the report "GOVERNANCE INNOVATION: Redesigning Law and Architecture for Society



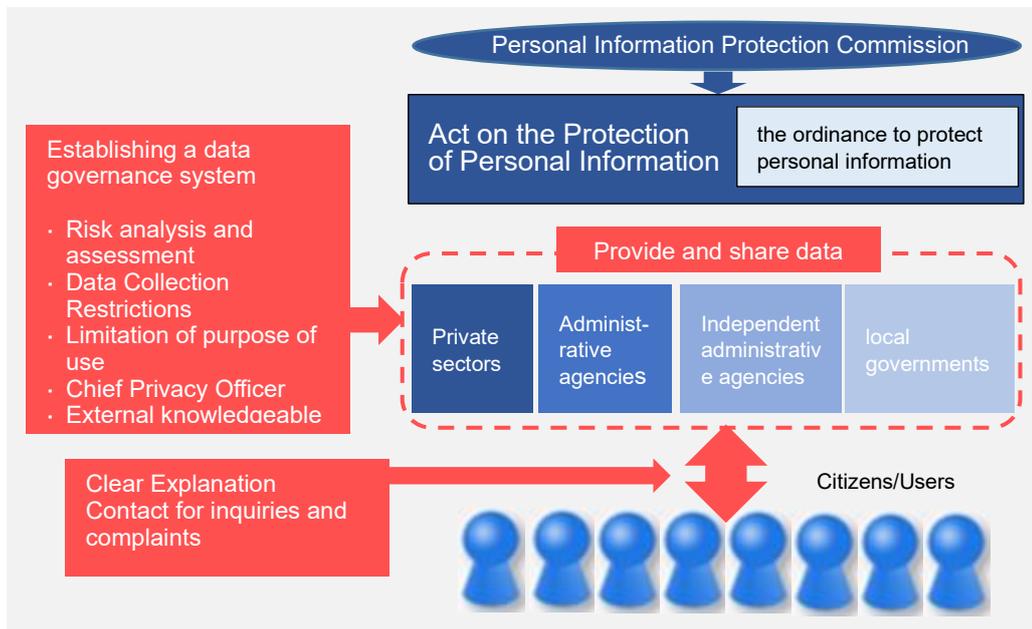
Establishing a Data Governance System to pursue both Data Utilization and Privacy Protection

In order for the digital society to move in a healthy direction, it is important to promote data utilization while properly protecting privacy.

Currently, there are various laws and regulations regarding the handling of personal data, including the Act on the Protection of Personal Information (APPI) for private sectors, but each of them has different definitions and restrictions, which is said to hinder the provision and utilization of personal data. Therefore, it is essential to expand the scope of monitoring and supervision of the Personal Information Protection Commission (PPC), which operates under the Act on the Protection of Personal Information, to include administrative agencies and local governments. It is also indispensable to establish a data governance system based on the Act on the Protection of Personal Information (see Figure 2) as a mechanism to promote secure data sharing between the private sector and the government, and between the state and local governments.

The government is discussing to expand the scope of the Act on the Protection of Personal Information to include administrative agencies, independent administrative agencies, and local governments, and to give the Personal Information Protection Commission the authority to monitor and supervise them at this moment.

Figure 2: Data Governance System based on the Act on the Protection of Personal Information¹¹



Introduction of the "Corporate Privacy Governance Guidebook for the Digital Transformation Era ver. 1.0"

METI and MIC inaugurated a "Study Group on Companies' Privacy Governance" in August 2019 and held discussions based on the shared recognition of: roles which companies should play in the era of Society 5.0, views on privacy, and the importance of companies' privacy governance. In this context, the Study Group released¹² a "Guidebook on Corporate Governance for Privacy in Digital Transformation (DX) ver.1.0"¹³ on August 28, 2020, a well-organized compilation of actions which companies should take to establish privacy governance.

The guidebook mentions that one of the requirements that corporate managements should address is that they should not simply view privacy protection and data utilization as a dichotomy, but rather from the perspective of maximizing the benefits of data utilization while taking privacy into consideration (see Table 3).

The Guidebook also identifies best practices from the private sector and suggests important matters to consider when establishing privacy governance (see Table 3).

¹¹ <https://www.nhk.or.jp/kaisetsu-blog/400/432938.html>

¹² <https://www.meti.go.jp/press/2020/08/20200828012/20200828012.html> (in Japanese)
https://www.meti.go.jp/english/press/2020/0828_006.html (in English)

¹³ <https://www.meti.go.jp/press/2020/08/20200828012/20200828012-1.pdf> (in Japanese only)

Table 3: Key points for establishing privacy governance¹⁴

Requirements to which the top management should be committed	<p><u>Requirement 1: Documentation of commitments to efforts for privacy governance</u></p> <p>As a key challenge in corporate strategies, top management should clearly document their basic approaches or commitments to efforts for privacy and convey them to stakeholders inside and outside the company. Top-level management are required to ensure accountability for their actions in accordance with the approaches or commitments clearly documented.</p>
	<p><u>Requirement 2: Appointment of personnel responsible for privacy</u></p> <p>Top management should appoint an officer responsible for addressing privacy issues across the organization and grant the officer both power and responsibility.</p>
	<p><u>Requirement 3: Input of resources to efforts for privacy</u></p> <p>Top management should successively input necessary and sufficient business resources (human resources, goods, and money) and engage in the establishment of a system for privacy as well as the deployment, fostering, and securing of human resources.</p>
Important matters of Privacy Governance	<p>1. Establishing a system for privacy (internal controls, establishing an organization for privacy protection, and collaboration with outside experts)</p>
	<p>2. Formulating operation rules and raising internal awareness thereof (formulating rules for thoroughly operating such system and raising internal awareness of the rules)</p>
	<p>3. Fostering a culture involving privacy inside the company (foster a corporate culture to encourage individual employees to be aware of privacy)</p>
	<p>4. Communication with Consumers (dissemination of the organization's efforts, attracting public attention to them and continuous communication with consumers)</p>
	<p>5. Communication with Other Stakeholders (communication with business partners, group companies, etc., investors, shareholders, administrative organizations, industrial associations, employees and others)</p>

¹⁴ <https://www.meti.go.jp/press/2020/08/20200828012/20200828012-2.pdf> (in Japanese)
https://www.meti.go.jp/english/press/2020/pdf/0828_006a.pdf (summary in English)

3. Corporate Reality and Policy Trends on Data and AI Governance

Next, Prof. Toshiya Watanabe presented a topic titled "Corporate reality and policy trends on Data and AI Governance".

Data strategy measures for 2021

The government has been studying the handling of data as intellectual property for the past six or seven years. The background of the study is that due to changes in the economic structure, data has a much greater impact on the economic value and competitive advantage of companies than traditional IP, which has been the subject of intellectual property rights¹⁵, also known as property rights with a property rights structure.

Currently, consideration of data as intellectual property is being conducted by the Intellectual Property Strategy Headquarters' Conceptual Committee. A similar study is also being conducted by the Data Strategy Task Force, which was established in the IT Strategy Planning Office of the Cabinet Secretariat¹⁶ as part of the Growth Strategy, focusing on data handling rules to improve the data utilization environment.

✓ **Policy trends on non-personal data**

On February 19, 2020, the European Commission announced in its data policy paper "European Strategy for Data"¹⁷ that it intends to propose a regulatory framework for the governance, access and reuse of non-personal industrial data (hereafter referred to as non-personal data), including incentives for data sharing and practical, fair and clear rules for access and use of data between companies, public administrations and the public and private sectors. In response to the policy paper, there has been an emerging view within the ruling parties in Japan that a hard law compatible with non-personal data is needed, as well as the Act on the Protection of Personal Information compatible with the General Data Protection Regulation (GDPR) that deals with personal data.

Empirical Research on the Protection of Technology Know-how and Data Utilization

The Research Institute of Economy, Trade and Industry (RIETI) has conducted a variety of empirical analyses and research to date, including quantitative evaluation on

¹⁵ Intellectual Property Rights can be broadly classified into "rights to intellectual creations" aimed at promoting creativity, such as patent rights and copyrights, and "rights to commercial symbols" aimed at maintaining the trust of users, such as trademark rights and trade names.

<https://www.jpo.go.jp/system/patent/gaiyo/seidogaiyo/chizai02.html> (in Japanese)

<https://www.jpo.go.jp/e/system/patent/gaiyo/seidogaiyo/index.html> (in English)

¹⁶ the Information Technology Strategy Planning Office of the Cabinet Secretariat

¹⁷ https://ec.europa.eu/info/sites/info/files/communication-european-strategy-data-19feb2020_en.pdf

technology know-how and impact of its leakage in the Japanese manufacturing industry, and study on the management and utilization of data generated from industry. The result of the analysis revealed that,

- ✓ In the businesses where data utilization is most advanced, the leakage of technology information (manufacturing methods, technology know-how, etc.) was the most frequently cited negative aspect of data utilization in the responses.
- ✓ The results of statistical analysis based on the questionnaire survey show that the capability of analysis and management of big data and the extent of proficiency of coordination of data contracts with other companies are statistically significant to the performance of digital IP.

Trends in Shared Data with Limited Access

Through a study by the "Study Group on Formulating strategies on intellectual property in the Fourth Industrial Revolution" from 2016, "shared data with limited access" was added to the scope of legal protection in the revised Unfair Competition Prevention Act that came into effect on July 1, 2019.

The term "shared data with limited access" refers to data that can be used under certain conditions¹⁸ when provided to a specific third party (the other party to a data provision contract) on the assumption that the data will be shared with others, and that the data has been treated with a password or other means of maintaining confidentiality. Under the revised Unfair Competition Prevention Act, in the unlikely event that data shared on a limited basis is improperly obtained or used and its rights are infringed, the owner of the data can file a claim for injunction against distribution or compensation for damages. As a result of a survey on the number of data actually received as shared data with limited access for data acquisition projects that entered into partnership agreements in the most recent year (FY 2019) since the enforcement of the revised Unfair Competition Prevention Act, it was found that the shared data with limited access system was being used more than the surveyor expected.

In addition, through the activities of the Intellectual Property and Contract Progress WG under the AI Data Consortium, a draft of data provision contract based on the following points is being developed and is scheduled to be published within FY2020.

- ✓ The system should be such that the contract can be completed by selecting the simplest possible option to suit the wizard method.
- ✓ Be aware of data history management, and include a section on data quality,

¹⁸ For example, location data for cell phones, map data for driving cars, and sales data for each product collected by POS systems fall under the category of " shared data with limited access".

which is important in determining the value of data.

- ✓ Original data and annotated data should be covered.
- ✓ Enabling protection under the “shared data with limited access” section of the revised Unfair Competition Prevention Act.
- ✓ The draft contract should be in line with the METI's "Contract Guidelines on Utilization of AI and Data"¹⁹.

Through the WG's activities, it was found that both "data reliability" and "data provider reliability" need to be included in the contract for the provision of valuable data for AI use.

- ✓ Data Reliability
 - The data quality should be indicated.
 - History management must be in place.
 - Data must be tamper-proof.
 - Original data and annotated data must be included.Etc.
- ✓ Data Provider Reliability
 - Credibility of the data provider (e.g., existence of a data governance system)
 - Data reliability should be specified as something that the data providers must comply with.Etc.

4. Discussion points in the question and answer session

In the 8th session, AI and Policy and Social systems was discussed and the following questions and answers were raised based on the topics discussed.

Challenges in Implementing Data and AI Governance in Japan

- ✓ In Japan, the pattern of new initiatives spreading throughout the private sector has generally been limited to the following in the past history, so active encouragement from the government and other third parties will be necessary.
 - Patterns led by large, industry-leading companies
 - A pattern in which an incident that affects society occurs and society as a whole is forced to respond to the problem.
 - Patterns of applying initiatives to own organization based on examples and best practices of other companies
- ✓ In traditional industries and vertically-integrated companies, each business unit

¹⁹ <https://www.meti.go.jp/press/2019/12/20191209001/20191209001.html> (in Japanese)
https://www.meti.go.jp/english/press/2019/1209_005.html (in English)

often has ownership of its own data, which is not a desirable governance structure for promoting company-wide data utilization.

- ✓ As for start-ups and venture companies, it would be desirable to have the government sponsor a process to solicit opinions from various companies and return the consensus to the industry.
- ✓ Currently, various guidelines have been issued, but the relationship and positioning between them is unclear, so an overall design and systematization of guidelines is essential.
- ✓ The initiative of the management of each company is essential to speed up the implementation of data and AI governance.
- ✓ If the contents of data and AI governance issues (AI reliability, etc.) are first included as procurement conditions for AI services at the state and local government level, companies will need to take action to meet the conditions as well, which could be an effective means of penetrating data and AI governance.
- ✓ The reality is that data utilization has not progressed significantly in the last four years, but rather the awareness and base of management regarding data utilization has expanded compared to four years ago. In some industries, the performance of data utilization has declined as a result of business investment, suggesting that there may be a problem with the business structure.

Key points for ensuring the reliability of real-time monitoring in governance

- ✓ It is necessary to create a base for monitoring, such as by revising the Act on Promotion of Information Processing to strengthen the authority and role of IPA²⁰. However, a mechanism that does not allow the monitoring to become fixed (a skeleton) will be necessary to ensure reliability and transparency. The key points for ensuring reliability are as follows.
 - The monitoring system should be developed after discussions among experts such as CDOs²¹, CPOs²², and regulators from various companies.
 - Monitoring should be done on a rotational basis among the various fields and companies involved in monitoring.

Are there start-up policies in other countries that Japan can benchmark?

- ✓ Since the economic environment and market size differ between other countries and Japan, it is not easy to simply incorporate the startup policies of other countries as benchmarks. The Japanese government needs to break away from

²⁰ Information-technology Promotion Agency, Japan

²¹ Chief Data Officer

²² Chief Privacy Officer

its usual practice of following the startup policies of other countries in a simplistic way.

How to approach the judiciary for AI governance implementation

- ✓ In Japan, rather than a direct approach from the legislative or administrative bodies, an indirect approach in line with the demands of the people and society is often more successful in mobilizing the judiciary. For this reason, it would be effective to conduct mock trials using risk scenarios for the use of AI services, etc., with the participation of experts and potential parties from the private sector and private organizations to identify issues and challenges that will be highlighted in the forthcoming trials, and provide the contents to the judiciary for consideration.

How to proceed with various study groups on governance models in the future

- ✓ Based on the reports released by the various study groups, it is desirable to work on incorporating them into concrete action plans and to create model cases. At the same time, it is desirable to experimentally try out the study plan for regulatory reform based on the reports in local governments such as government-designated cities.

We will continue to discuss AI governance in Japan and abroad through this study group.

Written by Keitaro Saito
Translated by Michiko Shimizu

<Outline of the 8th Session of the Study Group>

Date & Time: Thursday, December 15, 2020, 17:30-19:30 (Zoom)

Agenda:

- Topical presentations:
 - "New Governance Models for AI and Data" provided by Prof. George Shishido (Graduate Schools for Law and Politics of University of Tokyo)
 - "Corporate reality and policy trends on Data and AI Governance" provided by Prof. Toshiya Watanabe (Institute for Future Initiatives (IFI) of University of Tokyo)
- Question and answer session / discussion