Policy Proposal for Promoting the Data Governance Strategy

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Digital Society Alliance (DSA)
Digital Policy Forum (DPFJ)
Digital Trust Forum(JDTF)

1. Positioning of this Strategy

In Japan, a consistent population decline has been ongoing for a long time. This decrease in population raises concerns about a decline in economic strength. To address this situation, it is necessary to fully leverage digital technologies to revitalize local communities and to improve productivity, create new businesses, and facilitate the automation of society.

The core of this involves the maximized use of data as a strategic intangible asset to solve social issues and create added value, making the establishment of data governance extremely important as a system to realize a Data-Driven Society through the expansion of the amount of distributed data (including inter-data linkage), improvement of quality, and enhancement of distribution speed. Data governance beyond the old business models is indispensable also from creation of new industry and economic security perspectives.

This proposal outlines specific measures to establish data governance that enables the compelling and diverse utilization of healthy data spaces. The government should prioritize its efforts towards this goal through the collaboration between public and private sectors and the appropriate distribution of roles between them.

2. Specific Measures

(1) Building a Data Integration Platform across Business Categories and Organizations

From the perspective of promoting data circulation, it is essential to build a data integration platform that encourages collaboration across different domains, beyond the conventional closed environments where parties involved in data exchange can mutually trust each other. Referring to initiatives like GAIA-X in Europe, the government should actively support establishing platform and standardization that fosters data integration within and between industries.

In this initiative, it is essential to establish a common foundation for cross-sectional data integration (ground floor) and then construct a data integration platform tailored to the characteristics of each

sector (second floor). This requires efforts to establish basic concepts and specific infrastructure development by allocating R&D budgets on a priority basis. (To be promoted in conjunction with the item (3) "Developing a Trust Service Environment")

Efforts should also be made to visualize the effects of such data integration frameworks. Specifically, by integrating health, medical, and caregiving data within a community, a "Community Monitoring Data Integration Platform" should be built to connect vulnerable elderly individuals with a professional support network. This framework could also be applied in a cloud-based "Community Monitoring Data Integration Project" that allows for mash-ups for disaster response and other administrative uses, promoting the proactive use of data to address local issues.

(2) Establishment of the "Data Circulation Promotion Law "

In Europe, Data Act institutionalizes the promotion of sharing IoT data at fair value, ensuring the fairness of data contracts between large enterprises and SMEs and facilitating smooth transitions between cloud services (eliminating vendor lock-in). Similarly, in Japan, while there are partial institutionalizations of data brokerage services (e.g. information banks and data trading markets) led by the private sector, it is necessary with a reference to the European Data Governance Act, to establish legal frameworks to ensuring data security for preventing data leaks and tampering.

Therefore, it is essential to enact a "Data Circulation Promotion Act" that establishes data governance for promoting data circulation, incorporating the contents above.

By developing legal frameworks for promoting data circulation, it is expected to realize fair competition in the data circulation market. However, it is also necessary to establish competition safeguards to prevent data monopolies by a few major platform providers with significant market power in data collection, storage, and utilization.

As a prerequisite of the discussion, a social consensus is needed to guarantee the reliability of digital data from the perspective of promoting data circulation. Currently, there is no unified definition of "digital trust" and "digital trust framework," leading to inconsistencies in various contexts and misunderstandings in dialogue. Therefore, a unified definition established by public and private sectors is necessary.

(3) Developing a Trust Service Environment

Originally, the internet has a high degree of anonymity; thus, as it becomes a social infrastructure, it is essential to have certain mechanisms, or trust services to ensure trustworthy data circulation. To realize trust services, a combination of "e-signature" for expressing the individual's intent, "e-seals" for proving the source or origin of data, "timestamps" to verify the existence and integrity of data, and "e-delivery" for certifying data delivery is required. Since there has been no study on the system for e-delivery, it is necessary to conduct reviews promptly within the government and establish the required system.

In particular, it is necessary to clarify the division of roles between the public and private sectors regarding trust services, which are fundamental to the data integration platform, and create an environment that enhances private sector investment willingness in competitive areas.

The above trust services raise concerns about the impairment of healthy competition in the market due to the abuse of market dominance by a small number of large platforms. Therefore, it is necessary to comprehensively reconstruct the legal system regarding trust services, including the Electronic Signature Law, into a new "Trust Services Law" while also considering establishing a framework for ensuring competition to prevent the abuse above of market dominance. (To be promoted in conjunction with the item (2) "Establishment of the 'Data Circulation Promotion Law ' ")

Establishing the "Trust Services Law" is necessary to ensure that institutional operations are conducted based on a legal foundation of the same level when conducting mutual certification between Japan and Europe. (To be promoted in conjunction with item (6) "Establishment of International Data Flow Framework")

In Europe, trust services are organized by the eIDAS Regulation (July 2016) and each Member State is required to provide digital ID wallets under the Digital ID Framework Regulation (revised eIDAS Regulation, effective April 2024). In light of these developments, it is necessary to establish a system of digital certificates (for example, VCs: Verifiable Credentials) that individuals can actively control personal information, and in the examination of the aforementioned "Trust Services Law," a system for providing digital ID wallets should be introduced, particularly aiming for the rapid realization of public personal authentication services on smartphones and collaboration between the public and private sectors for authentication services.

(4) Promotion of R&D for Data Collaboration

From the perspective of early industrialization of data security, it is necessary to prioritize the development of technologies that ensure data authenticity, data protection technologies utilizing blockchain, and areas related to data anonymization and secure computation.

In particular, ensuring data authenticity and countering data poisoning attacks and dissemination of disinformation in AI development are issues directly linked to Japan's national security, necessitating proactive promotion of the relevant R&D and system implementation as economic security projects.

To encourage the emergence of flexible, decentralized business models that do not centrally manage data, government support is required for the exploration and horizontal expansion of data distribution and federated business models, including Web3, aimed at solving local challenges and revitalizing communities. Additionally, there is a need to accelerate considerations for the introduction of digital currencies, including the promotion of local currencies, in conjunction with the promotion of decentralized business models.

(5) Promotion of Secure Government Cloud Usage

It is necessary to promote actively the diversification of government cloud services aiming to reduce administrative costs and facilitate data collaboration. Especially from the standpoint of enhancing data security, it is essential to introduce a "Sovereign Cloud," led by domestic providers with dedicated zones for handling sensitive information such as personal data, as a new option for government cloud services, while also enabling integration with existing government clouds (hybrid cloud) as necessary, thereby promoting the adoption of a secure government cloud based on data sovereignty.

Concurrently, in pushing for a flexible government cloud, there is a need to reduce the burden on local governments and improve convenience through the provision of SaaS-type applications for public services.

(6) Development of International Data Flow Framework

It is appropriate to promote the expansion of the "International DFFT (Data Free Flow with Trust) Agreement" among interested countries, which includes the prohibition of data localization and government censorship of algorithms, aiming for the active expansion of a global "free data circulation zone."

In doing so, while referencing past efforts in mutual recognition between Japan and Europe concerning personal data protection legislation, it is essential to achieve mutual recognition of trust services between Japan and Europe, and Japan is expected to play a leading role in strengthening collaboration with ASEAN and APEC for the realization of global trust services.

As AI is implemented in networks and interconnections between AIs are expected to advance through networks in the future, while keeping in mind that AI itself is an extremely effective means of facilitating data circulation, Japan is called to actively contribute to establishing international rules regarding the management of learning data and generated products related to AI.

(7) Promotion of International Data Utilization Projects

While Japan's aging population is expected to peak around 2050 at about 40% and stabilize, some other countries in Asia are projected to experience even greater advancements in aging. Japan is required to promote the "Projects Aimed at International Deployment of Solutions for Social Issues" while creatively generating and deploying solutions utilizing data for addressing challenges, acting as a pioneer in the field of aging and other issues. In this regard, the solutions for social problems should be provided through the cloud services, achieving reduced operational costs, improved resilience during disasters, and striving for the dissemination of sustainable problem-solving models.

(8) Promotion of International Standardization

In advancing data collaboration, it is important to actively engage in international standardization activities. In recent years, various countries have strategically taken leadership roles in proposing new initiatives in international standardization to foster market creation and enhance industrial competitiveness.

Already, in the field of data collaboration, active cooperation has been established between industry-related organizations in Europe and Japan. Based on these activities, it is required to support public-private initiatives to secure leading positions in international standardization organizations such as ISO, IEEE, IETF, and W3C, and promote the creation of new businesses through data collaboration.

3. Action for proceeding with the strategy

It is appropriate that the government will establish specialized office for this strategy and a public-private council will be established to promote data governance. Based on a strategic action plan (roadmap) that clarifies the responsible ministries and the examination schedule, steady implementation should be pursued. Additionally, it is required to regularly verify the progress and make necessary revisions as appropriate.

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