

Towards the Construction of Industrial Data Spaces

- Outline -
(Tentative Translation)

15 October 2024
Keidanren

I. Introduction: Current Status and Challenges

(I) Trends regarding Industrial Data Spaces in the EU

- Increasing need for companies to disclose information related to CO₂ emissions and raw materials, and growing consumers' concerns over product quality.

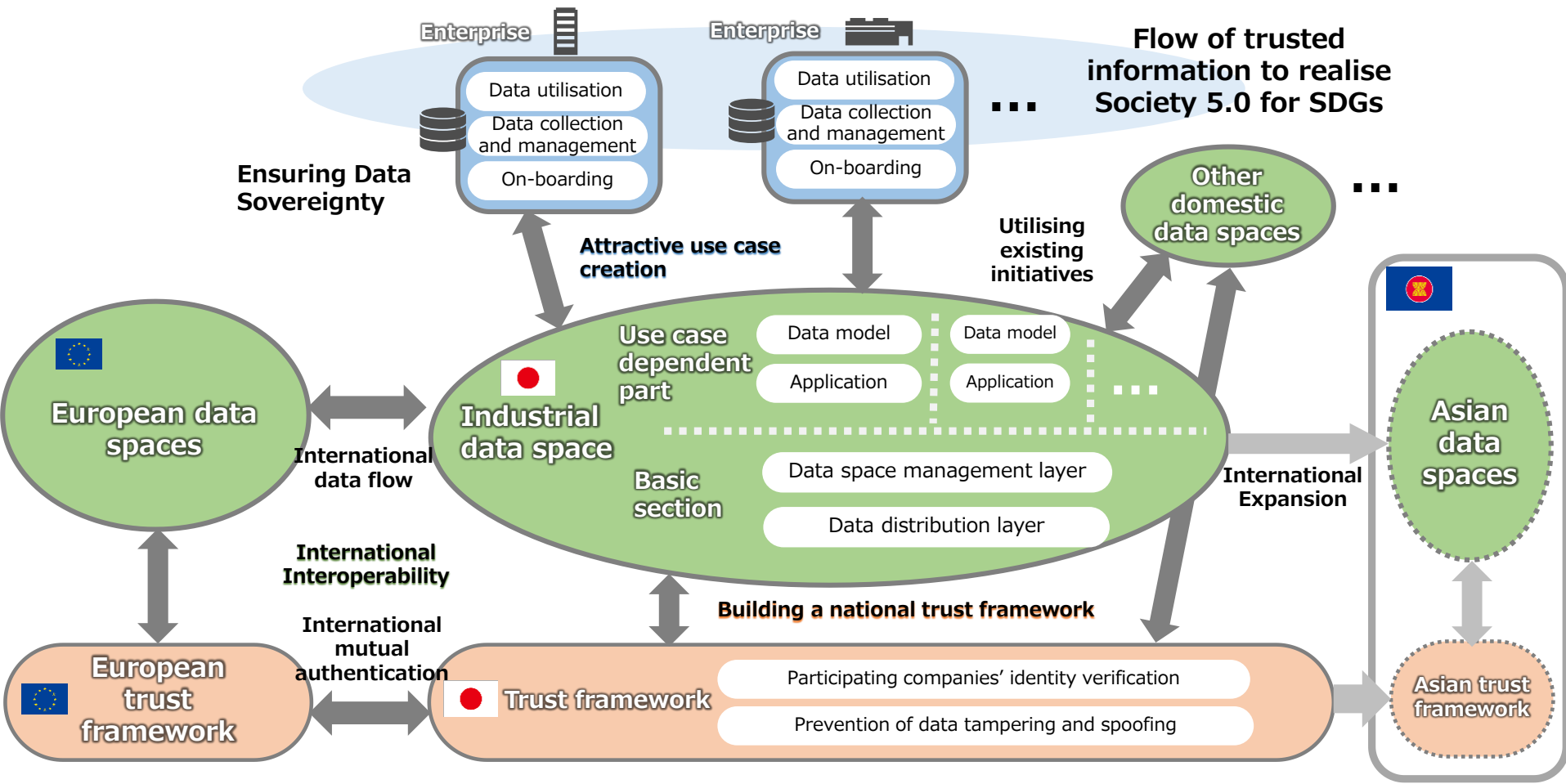


- Steady progress in the social implementation of “data spaces”*. “Industrial data spaces” such as “Manufacturing-X” which aims to enhance the efficiency of the entire manufacturing sector and “Catena-X” for the automotive industry have also been launched.
- They are built on the premise of ‘data sovereignty’ which allows data providers to determine the scope and use of data disclosure, and on a ‘trust framework’ that certifies the identity and data authenticity of the communication partners.

* A standardised mechanism for linking large volumes and varieties of trustworthy data among different countries, industries and organisations.

I. Introduction: Current Status and Challenges


Figure: Image of Industrial Data Spaces to be Built



Source: Robot Revolution & Industrial IoT Initiative (RRI)

I. Introduction: Current Status and Challenges

(2) Challenges in Constructing Industrial Data Spaces

- Japan has also made some progress in building data linkage platforms and expanding their use cases through public-private partnerships, including initiatives such as the "Ouranos Ecosystem".
 - However, the establishment of a public trust framework is still under consideration, and no industrial data space with interoperability with the EU's data spaces has yet been developed.
Japanese companies are unable to verify their authenticity within Japan and are forced to rely on the trust framework of overseas data spaces.
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- It could hinder cross-border data linkage and utilisation, and seriously impact the competitiveness of Japan's industries.

There is an urgent need for the government to strategically develop a trust framework and establish internationally interoperable industrial data spaces.

2. The Significance of Constructing Industrial Data Spaces

(1) Strengthening Industrial Competitiveness

- By leveraging industrial data spaces, companies can expand and enhance data linkage and create new value and services. This will ultimately strengthen the overall industrial competitiveness of Japan.

(2) Addressing Global Challenges

- Through interoperable industrial data spaces, companies can establish a reliable data linkage system that transcends the boundaries of individual companies and industries to address global challenges such as environmental issues (e.g., green transformation (GX) and circular economy (CE)).

(3) Responding to Disclosure and Regulations

- Through industrial data spaces, companies can meet the need for disclosure of ESG investors and consumers, which contributes to enhancing corporate value.
Data spaces enable smooth and reliable compliance with environmental regulations.

3. Actions to Be Taken by the Public and Private Sectors

(1) Presenting of Strategy and Roadmap

- The Digital Agency should take the lead, in collaboration with METI, to promptly present a government-wide strategy and roadmap for the societal implementation of an industrial data space.
- Development of the trust framework should be prioritised as a matter of the utmost importance.

(2) Development of the Trust Framework

- The Digital Agency should systemically advance the necessary environmental improvements for constructing the trust framework, which is the premise for the reliability and interoperability of industrial data spaces.
- Formulate and steadily implement operational rules to ensure that industries appropriately enjoy the benefits of public interest and reliability.

(3) Utilisation of Existing Data Linkage Systems

- To construct industrial data spaces, acceleration and expansion of existing data linkage systems should be pursued through public-private collaboration. (e.g., linking “Ouranos Ecosystem” with the trust framework to enhance its international reliability and interoperability)

3. Actions to Be Taken by the Public and Private Sectors

(4) Appropriate Cost Sharing by Public and Private Sectors

- The government should fundamentally expand the budget for the initial stages of an industrial data space.
The industry bears an appropriate share of the running costs for management and operation.
It is also necessary for the government to provide SMEs with its support.

(5) Creation of Attractive Use Cases

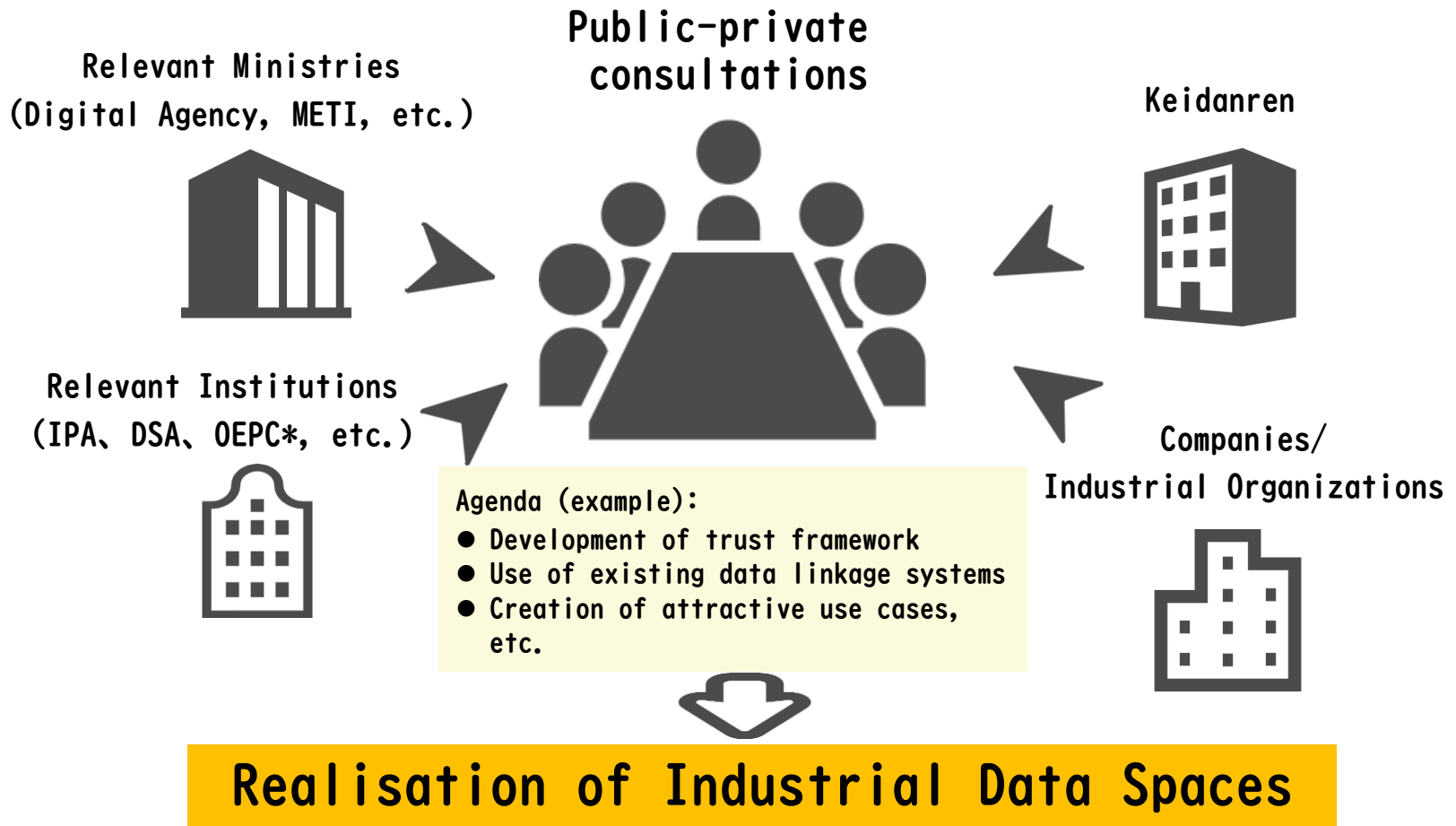
- Create attractive use cases under close public-private collaboration.
Promote specific benefits to a wide range of industries and companies.

(6) International Deployment of Industrial Data Space

- The public and private sectors utilise frameworks such as the Asia Zero Emission Community (AZEC) and to involve like-minded countries and regions in ASEAN, to promote its use as a data linkage platform in Asia.
- The Digital Agency should lead international discussions on the formation of international mutual recognition of trust framework and data cross-border management rules.

4. Conclusion

- Keidanren will establish a new public-private council to realise an industrial data space and work closely with the government and relevant institutions.
- We will continue to deliver opinions and raise awareness on industrial data spaces.



Glossary

Data Spaces	Standardised mechanisms for linking large volumes and varieties of reliable data between different countries, industries and organisations
Data Sovereignty	Allowing data providers to determine the scope and use of data disclosure
Trust Framework	An ICT infrastructure that enables companies to securely and safely distribute data across industries and borders. To prevent data tampering and spoofing of the sender during data transmission, it possesses functions such as identity verification of companies and employees based on international agreements, and the issuance of digital certificates accordingly
GAIA-X	A plan to build cloud service infrastructure to support data sharing and utilisation on an EU-wide scale. It includes a technical framework that controls access to data based on trust and contractual procedures, protecting data sovereignty while ensuring interoperability with various cloud services
Ouranos Ecosystem	A mechanism for linking multiple information processing systems. The METI, in collaboration with relevant ministries and agencies, as well as the Information-technology Promotion Agency (IPA), is working on expanding use cases, including data linkage in the battery supply chain
Use Cases	Specific scenarios for the social implementation of a system
DFFT (Data Free Flow with Trust)	The concept of promoting the free flow of data internationally, where useful data for solving business and social problems can flow freely regardless of national borders, while ensuring trust in privacy, security and intellectual property rights