Promotion of “Industrial Data Sharing”

～ Formation of an “Ecosystem” ～

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(1) The Necessity of “Industrial Data Sharing" and formation of “Ecosystem”

■ Data is an important “Factor of Production" in the digital society.
Sharing and utilization of data can **increase efficiency and add value** in the industrial supply chain.
The degree to which it is promoted will directly affect **the competitiveness of companies and industries**.

■ “Industrial Data Sharing” is **a kind of “Community” activity** in which **specific data required for a specific purpose** is linked and shared with **specific parties who share the same purpose, in a specific way to realize the purpose appropriately**.
In order to promote “Industrial Data Sharing," it is important to form an **“Ecosystem"** in which many such “Communities/Use Cases" are created.

Examples of a “Community/Use Case" for “Industrial Data Sharing”

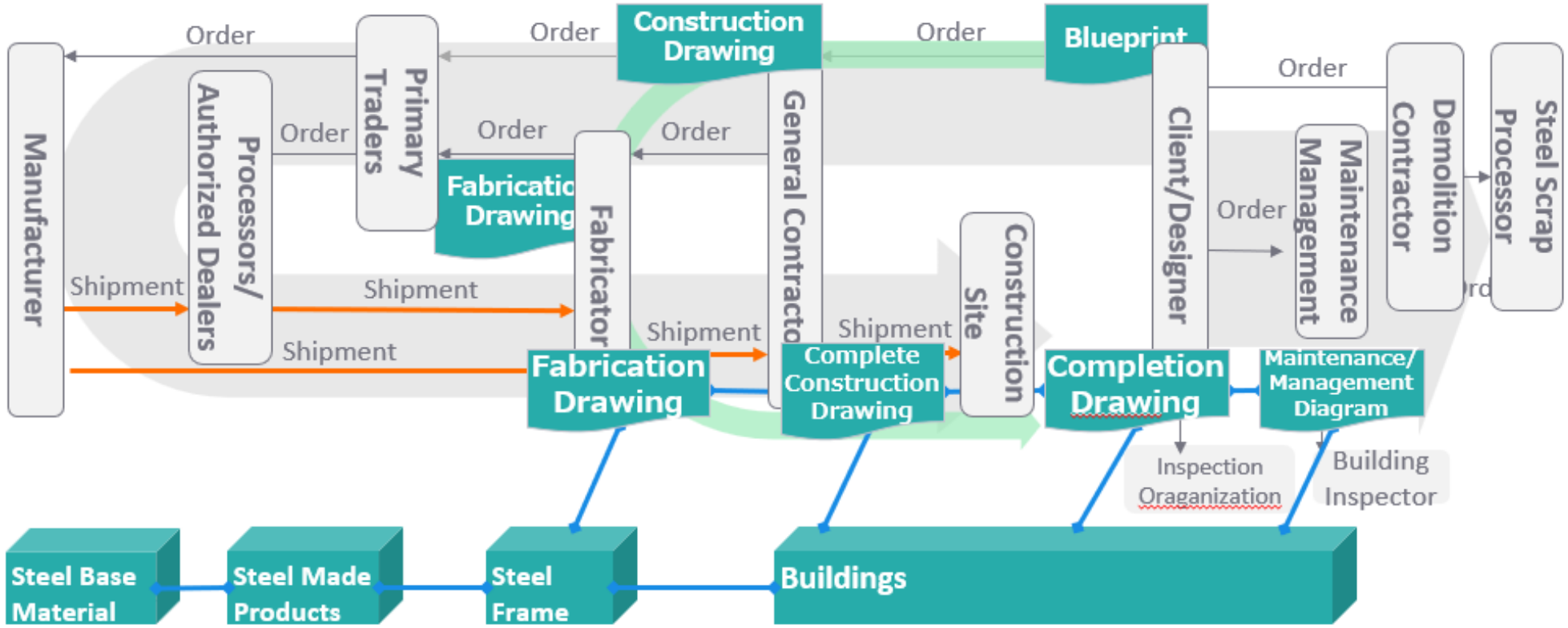
- Data sharing of **quality certification documents for construction steel materials** (by DA)
- Data sharing of **CFP of Vehicle-mounted Storage Batteries** (ABtC, by METI)
- Data sharing of **plastic material life cycle information** (PLA-NETJ, by CAO)
- Data sharing of **weather, land, and other agriculture-related data** (WAGRI, by MAFF)

etc.

Use Case Example - Data Sharing of Quality Certification Documents for Construction Steel

- In the Steel Industry of Japan, a quality certification document (Mill Sheet) is distributed with the product along the supply chain. There is no standardized format for the Mill Sheet, and so a lot of manpower is required for retyping data.
- The Digital Agency is working on the digitalization of the Mill Sheet to **realize greater efficiency and robustness of the entire value chain,** for example, **reduction of acceptance and inspection period**, **visualization of progress**, **reuse of surplus materials** and **shortening of payment period**.

The Flow of Products and Drawings for Construction Steel



(2) Initiatives of the Digital Agency

- In order to promote “Industrial Data Sharing" in Japan, it is important to address individual use cases **considering the formation of an "Ecosystem"** that creates many “Communities/Use Cases”.
- Through the process, the Digital Agency will analyze the factors that prevent the creation of “Communities/Use Cases” and take necessary measures in an agile manner.

Future Initiatives

1. **“Modularization” of functions and components required for “Industrial Data Sharing”**
2. **Securing the “Trust” required for “Industrial Data Sharing”**
3. **Promoting behavioral change in Business Executives**

Measure 1: "Modularization" of functions and components required for “Industrial Data Sharing" (1/2)

- **The functions required** to implement “Community/Use Case” activities for “Industrial Data Sharing” (systems used for data sharing, “trust” functions, etc.) **will vary depending on the nature of the “Community/Use Case" (ex. data type, purpose, manner, members, etc.).**

- As we aim to create numerous “Communities/Use Cases" of “Industrial Data Sharing" in the future, it is **inefficient to build the components of the required functions from scratch each time**.
  - It should be avoided that components are excessively customized and built specifically (=only used in a specific “Community/Use Case”) . (As a result, business will become more digitally compatible.)

- In order to strengthen the supply chain on both the function provider’s side and user’s side, “Modularization” of functions and components is required.

Measure 1: "Modularization" of functions and components required for “Industrial Data Sharing" (2/2)

■ **So called “Modularization” (Shifting from tight coupling to loose coupling.)**

- By reconfiguring the existing systems into components by each function and creating a mechanism to enable easy collaboration between the components, it would be possible to **rearrange the combination of the components according to the nature of the “Community/Use Case”**.

■ **In order for the Digital Agency and IPA(Information-technology Promotion Agency, Japan) to promote “Modularization“, the following will be considered**

- Give support to designing a suitable architecture for each Use Case
- Development and provision of “Modules”
- Guidance on the development and operation of “Modules”
- Enforce discipline in the “Communities/Use Cases” which are promoted by the government

Measure 2: Securing the "Trust" required for "Industrial Data Sharing".

■ In general, there are three risks that needs to be addressed by the "Trust" function.

I. Risks related to the authenticity of the business (Entity)
II. Risks related to the data itself
III. Risks related to systems used for Data Sharing, etc.

■ To deal with the risks listed above, the steps below should be taken.

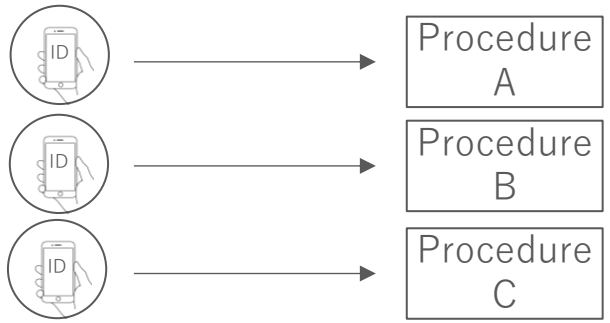
① Clarify the "Trust“ function required for “Industrial Data Sharing” and classify it.
② List the trust services that provide each function.
③ Analyze and evaluate the each trust services.
④ Indicate how to best combine trust services according to the nature of the “Community/Use Cases“.

■ Regarding **I.**, the use of the **gBizID authentication function** is considered as one of the trust services to deal with “Communities/Use Cases” where official corporate authentication is required.

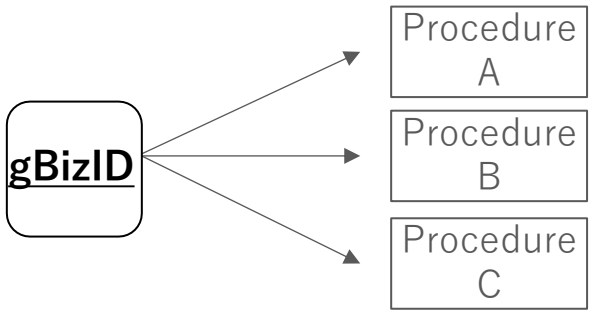
(Reference) Overview of gBizID (Common Identification System for Business Owners)

■ gBizID is a service that **issues accounts to business** (legal entities and sole proprietors) **after verifying their existence**, and allows legal entities to **log in (authenticate) to various administrative procedure systems with a single account.**

Before the release of gBizID



After the release of gBizID



1 A **single ID** can be used to authenticate (log in) to multiple administrative procedures.

2 **Identity verification with a My Number Card** eliminates the need for existence verification documents for each procedure.

3 gBizID Prime provides security through **two-factor authentication**

Promoting behavioral change in Business Executives

Data Governance Guidelines (Draft)

■ **“Data Governance Guideline”**
The guideline which is regarded as a part of corporate governance policy, asks for business executives to strengthen data governance since data is an important resource for business. The guideline summarizes **the necessity of data governance and the key points to keep in mind when putting it into practice**.

■ **Outline**
Data is an important resource, and “Data governance” should be an important part of management issues that business executive should address.
The following are the four main components listed as an important element of data governance implementation.

1. Business process which is in line with cross-border data
2. Data Security
3. Data Maturity (The comprehensive strength of organizations that create value by data)
4. Action Guidelines for the use of high technologies such as AI

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