

Strategy for Promoting Data Utilization to Realize Society 5.0

 **December 12, 2017**
 **Keidanren**

Society 5.0

The term “Society 5.0” denotes a society where data is utilized to address **challenges originating in 6 fields.**





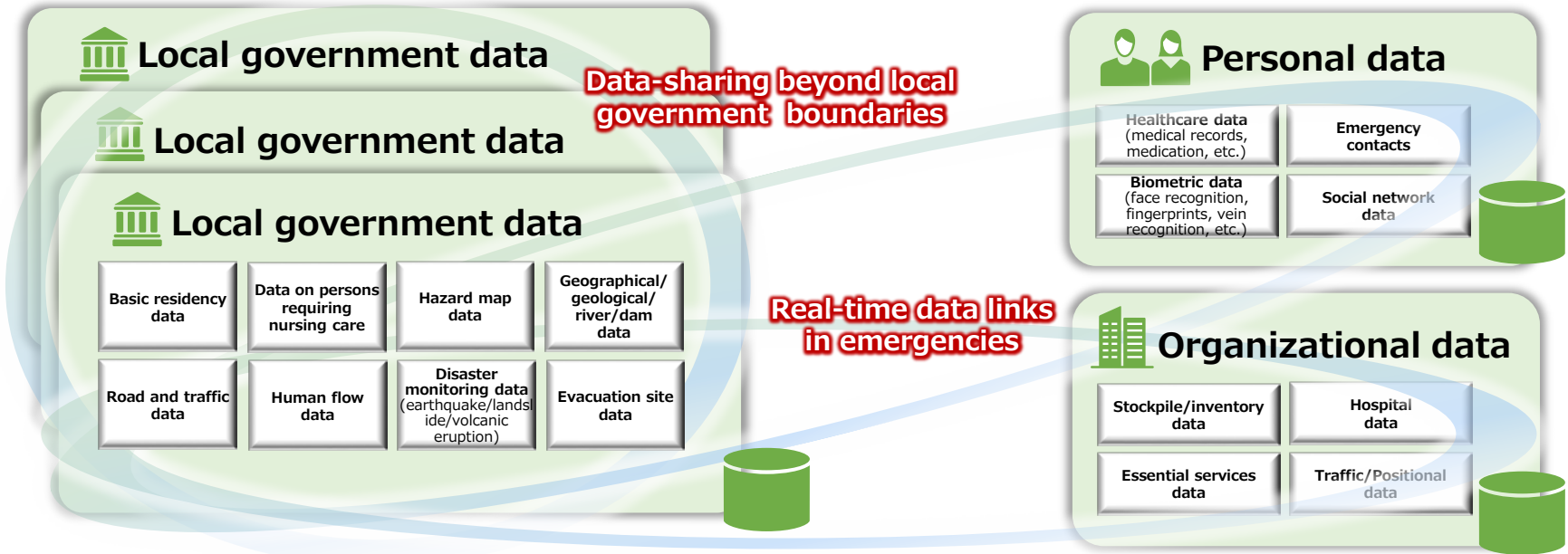
Disaster Response

Current situation

Japan is among the countries struck most often by earthquakes and natural disasters frequently occur. Companies develop business continuity plans to maintain operations, but links among data-holders are lacking.

Future vision

Suitable data-based disaster preparedness and response. Implementation of swift and appropriate rescue and evacuation plans. Optimal allocation of resources during recovery.



- Bringing together various data currently dispersed across the public and private sectors will go beyond local government boundaries to preserve all aspects of safety and security in times of disaster.

Current situation

Japan aims to attract 40 million visitors annually by 2020.

Data-based marketing is lacking.

Future vision

Enhance visitor satisfaction and ensure safety in tourist areas through implementation of data-based tourism strategy.

Benefit from economic effects of tourist spending.

Public data

Road and traffic data	Tourist area data
Map data	Public security data
Border control data (entries/exits)	Disaster data
Infrastructure data	Building data

Organizational data

Human flow data	Purchasing data
Accommodation data	Traffic data

Personal data

Basic traveller data	Social network data
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Implementation of data-based tourism strategy

Data links



POINT

- Establish bodies to gather and manage data from various data-holders.
- Establish methods and techniques to safely and efficiently aggregate and manage various forms of data.
- Promote open systems and anonymous processing for relevant data held by local governments.



Healthcare

Current situation

Concerns over sustainability of social security systems.
Difficulty maintaining regional medical and nursing care systems.

Future vision

Provide individually optimized services that contribute to longer healthy life expectancy and fair medical fees.
Utilize data to improve medical staff productivity.

Individual medical/healthcare data dispersed across various data-holders

Vital data	Metabolic syndrome check-up data	Maternal/child health handbook data
Dietary data	Municipal check-up data	Vaccination records
Medication data	School check-up data	Prescription/medication handbook data
Health advice data	Activities of Daily Living (ADL) data	Digital patient record data
Medical bill data	Medical test data	Medical test image data

Mechanism to gather scattered data

Healthcare facilities share and utilize patient data

Private-sector service providers offer advanced healthcare services

POINT

- Healthcare facilities share and utilize patient data to provide individually optimized services.
- Appropriately incorporate check-up support services to improve healthcare quality and medical staff productivity.

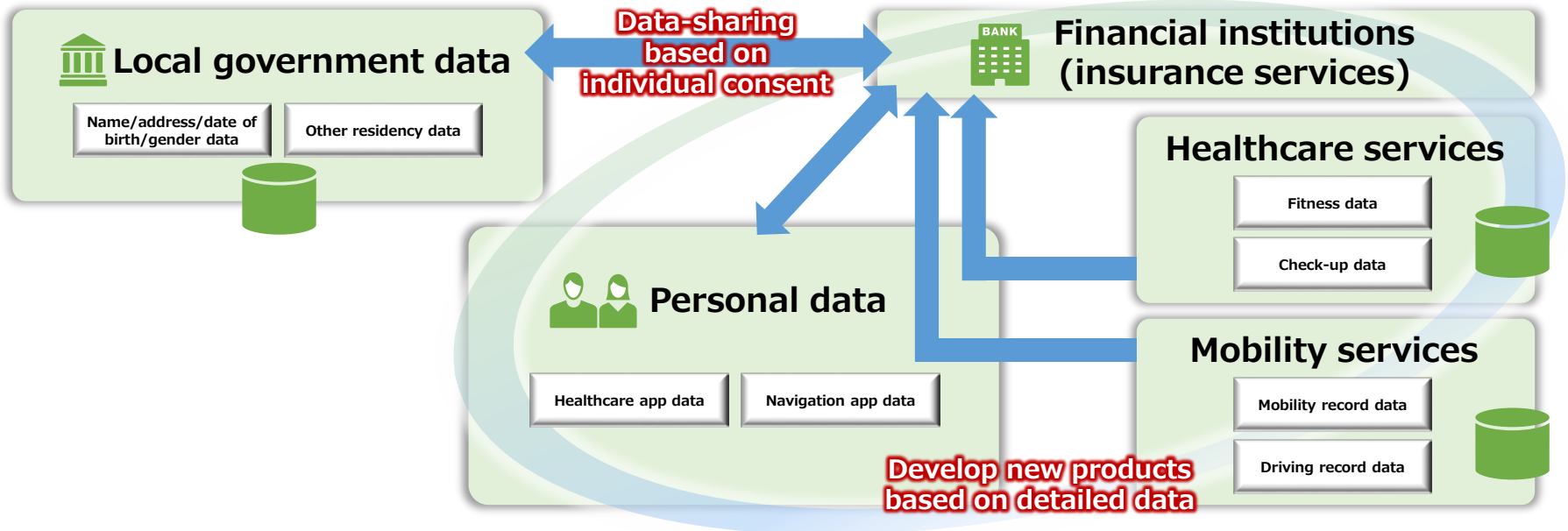
Finance

Current situation

Innovation to develop better financial products.
 Difficulty obtaining necessary data.
 Lack of data linkage.

Future vision

Develop insurance products to meet diverse needs.
 Encourage change in individual mindsets.
 Contribute to realizing a society with automotive safety and healthy life expectancy.



POINT

- Build mechanisms for private-sector utilization of four basic data items (name, address, gender, date of birth), etc.
- Individuals select suitable products from a range designed to meet diverse needs.

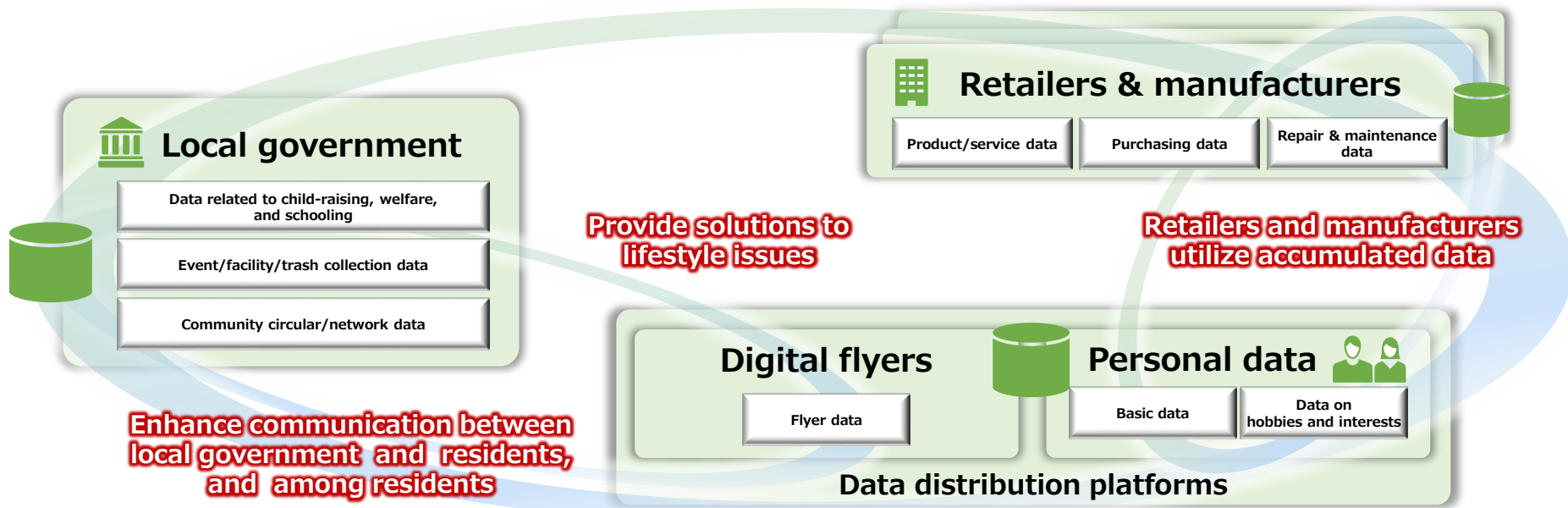
Lifestyles

Current situation

Loss of communities associated with falling birth rate and aging society.
Declining citizen satisfaction due to weaker ties.

Future vision

Enhance local communication through digital communities.
Create services people need.




POINT

- Use data distribution platforms as a basis for community digitization (e.g., digital flyer services). Retailers and manufacturers use accumulated data to create new services people need.



Manufacturing

Current situation

Trend towards smart manufacturing overseas.
Lag in utilization of factory data.

Future vision

Clarify scope for collaborative use of factory data.
Enhance international competitiveness of Japanese manufacturing through smart solutions, such as more efficient design and development.

Clarify domains for collaboration and competition

		Design data	Production data	Repair/maintenance/Kaizen data (including site data)
Sample aim		Good product design	Maintain/enhance production quality and efficiency	Eliminate downtime, achieve Kaizen goals
Closed or disclosed data	Copyrighted data	Facilities and equipment <input type="text" value="Factory design data (plans, etc.)"/>	<input type="text" value="Production instruction data (recipes, etc.)"/>	
	Products	<input type="text" value="Component processing data (CAD, etc.)"/> <input type="text" value="Product assembly data (assembly CAD, etc.)"/>		
Closed or disclosed data	Non-copyrighted data		<input type="text" value="Production data (production volume, volume of work in progress, etc.)"/>	<input type="text" value="Market data (complaints, etc.)"/>
			<input type="text" value="Environmental data (ambient temperature, humidity, etc.)"/>	<input type="text" value="Test data (material quality, appearance, weight, length, etc.)"/>
			<input type="text" value="Human movement data (paths of worker movement, etc.)"/>	<input type="text" value="Image data (real-time/non-real-time)"/>
			<input type="text" value="Device data (parameters, operating times, speeds, vibration, temperature, noise level, etc.)"/>	<input type="text" value="Device repair & maintenance data (R&M records, etc.)"/>
Open data	Facilities and equipment <input type="text" value="Device data (catalogs, user manuals, etc.)"/>			
	Products <input type="text" value="Component/materials data (catalogs, etc.)"/>			

Cross-sector data utilization



POINT

- Clarify which elements of manufacturing data can be shared.
- Achieve greater efficiency throughout the supply chain, conduct environmentally responsible operations, and maintain international competitiveness.



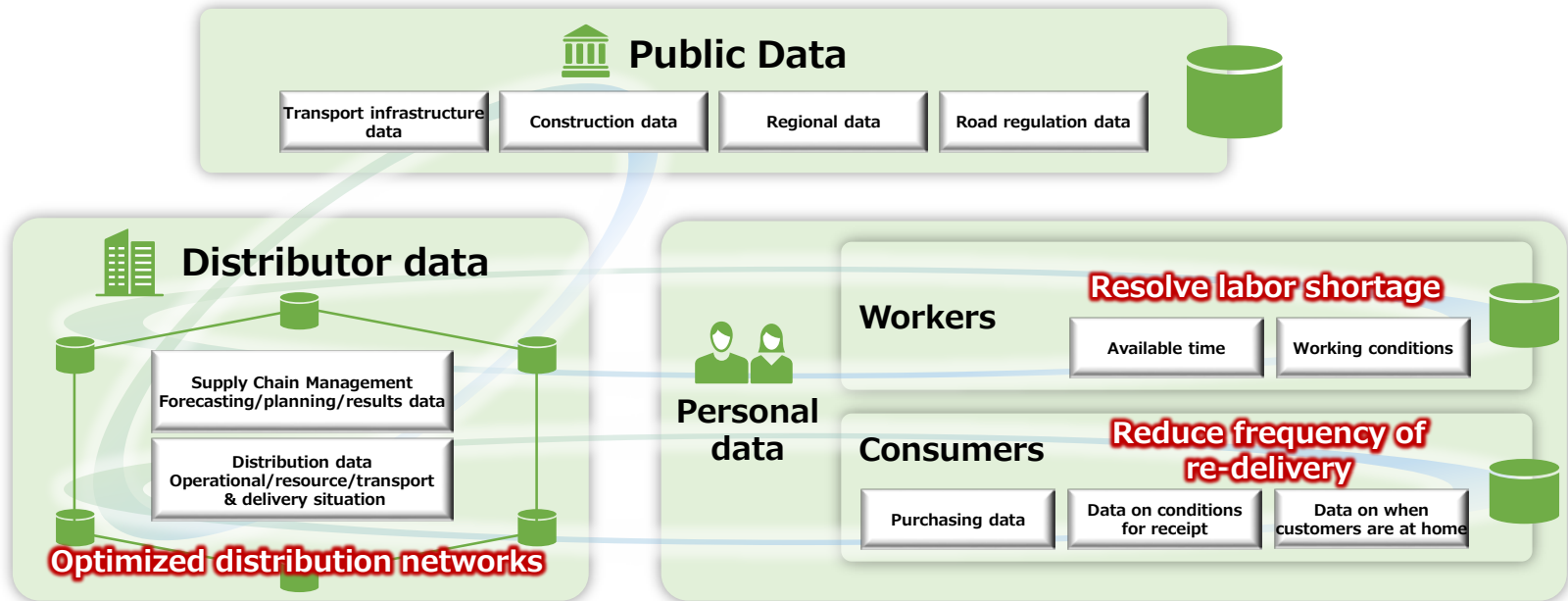
Distribution

Current situation

Lack of distribution operators associated with falling birth rate and aging society.
Greater efficiency in distribution networks is a pressing issue as transportation efficiency declines.

Future vision

Greater sharing of distribution resource data among companies.
Vigorously promote reduced frequency of re-delivery, etc.
Build comprehensively optimized distribution networks.

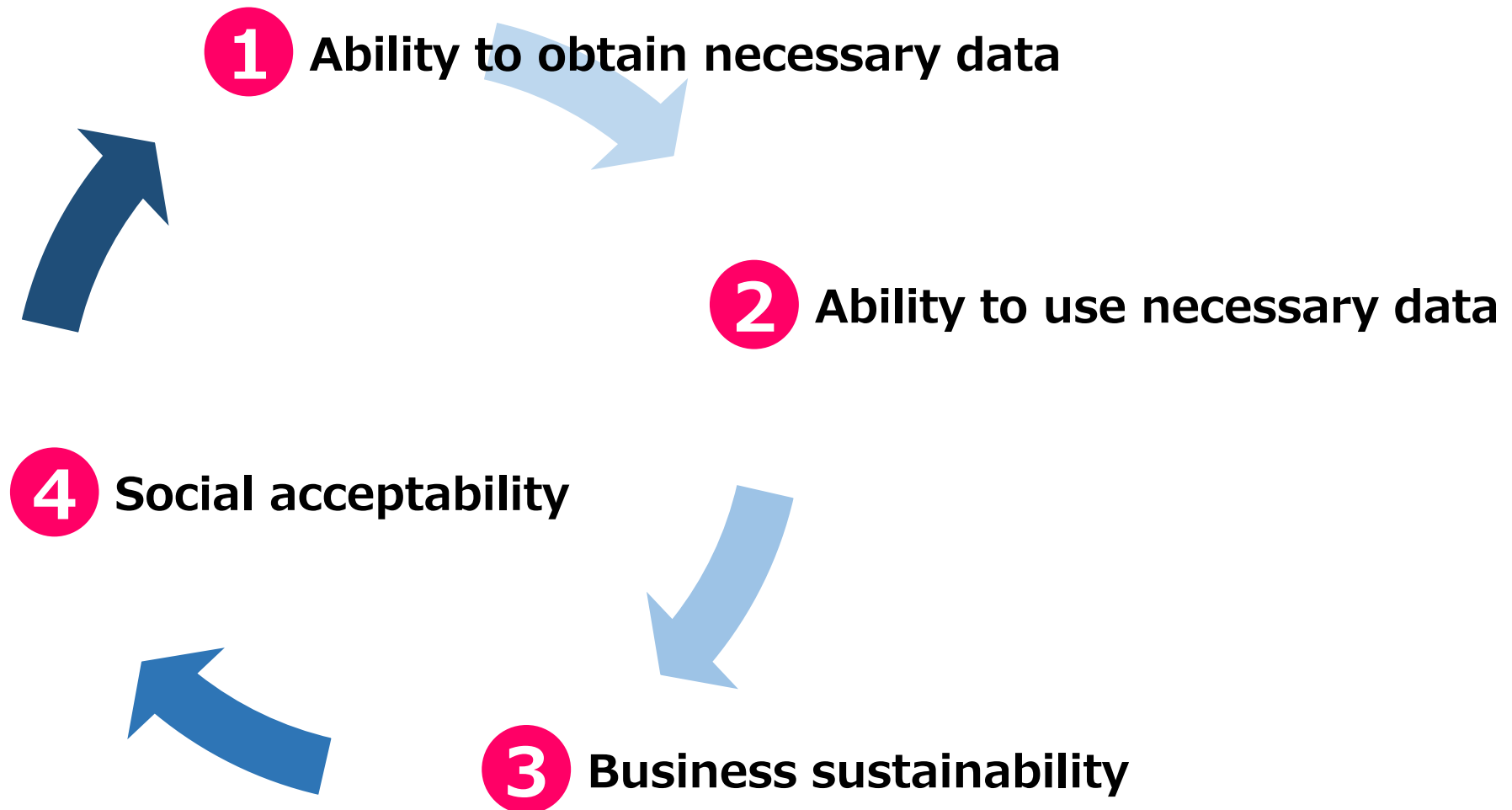


POINT

- Move to new, comprehensively optimized distribution networks based on data-sharing among various distributors.
- Introduce planning derived from AI analysis and create social systems for speedy action.

Key Factors in Realizing Society 5.0

Regardless of field, there are **4 common factors** for promoting data utilization to realize the society described in the first half of this presentation.



1 Ability to Obtain Necessary Data

■ Open access to public data

- ▶ Continue public/private-sector round table discussions and expand fields covered.
- ▶ Encourage open access to data held by regional public bodies.

■ Encourage utilization of personal data held by government

- ▶ Build mechanisms enabling private sector use of four basic data items (name, address, date of birth, gender), etc.

■ Utilize new data distribution mechanisms

- ▶ Establish flexible rules relating to data banks.

2 Ability to Use Necessary Data

For use with peace of mind:

- **Establish rights and responsibilities relating to data**
 - ▶ Revise contract guidelines, etc.
- **Revise Unfair Competition Prevention Act**
- **Establish guidelines relating to use of personal data**
- **Examine dispute resolution procedures**

2 Ability to Use Necessary Data

For use with information technology:

- **Standardize data formats, link application programming interfaces (API)**

- **Develop technologies for data processing, security, etc.**

3 Business Sustainability

Role required of companies

Management team understanding

Promote understanding of data utilization.

Invest in HRD and new systems.

Clarification & expansion of domains for collaboration

Build mutually beneficial collaborative relationships.

Cooperate with venture companies.

International standardization

Encourage cooperation with international standardization bodies and overseas platforms.

3 Business Sustainability

Role required of government

Platform-building

Build data platforms for disaster response measures, healthcare, etc. with high levels of public access.

Commercialization of testing and trials

Support commercialization of outstanding testing and trials systems through cooperation among ministries.

Support for private sector

Government backing for private-sector-led initiatives.

4 Social Acceptability

■ Gain public understanding

“Concern” that data will be used unknowingly

▶ Improve national data literacy.

“Dissatisfaction” about lack of benefits for individuals

▶ Promote understanding of the advantages and disadvantages of data utilization.

■ Role of government

Support data utilization.

Share best practice.

Contribute to education.

■ Role of industry

Develop cutting-edge services.

Ensure security.

Protect privacy.