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Session 3: Promoting Digitalization of Supply Chain in  
ASEAN-Japan

# The Vision for Digitalization of Supply Chain in ASEAN and Japan – Interim Report

Keita Oikawa

Economist

Economic Research Institute for ASEAN and East Asia

# ERIA and Digital Innovation and Sustainable Economy Centre

## About ERIA

- Established in 2008 as an International Organization
- Member countries: 10 ASEAN countries and 6 ASEAN dialogue partners (AU, CN, IN, JP, KO, NZ)
- Three objectives: deepening economic integration, narrowing development gaps, and achieving sustainable economic development
- Conduct researches and make policy recommendations

## About Digital Innovation and Sustainable Economy Centre

- Will be launched in 2023 as a dedicated division within ERIA to catalyze digital innovation and a sustainable economy in ASEAN and East Asia
- Four goals: fostering public private dialogue, catalyzing regional open innovation, nurturing technological-savvy talent, and providing practical policy proposals
- The digitalization of supply chains in ASEAN and Japan is the first project of this centre.

# Background and objective

ASEAN and Japan face challenges related to emerging supply chain issues. To overcome challenges collaboratively, ERIA's Digital Centre provides a dialogue platform for stakeholders to discuss benefits through data-sharing across supply chains.

Suppliers  
(Tier 2~)

Supplier  
(Tier 1)

Company

Logistics

Retail

Status of goods and resources in end-to-end supply chain

- CO2/GHG emissions
- Environmental issues and circular economy

- Human rights
- Safety issues
- Other (e.g. food loss)

Addressing compliance and ESG issues in the supply chain

# Method

## Method

- ✓ **“Start small, grow big”** strategy – gradually expand target regions and industries
- ✓ **Identify pain points** within specific industries and **develop use cases** to address these challenges by **forming discussion groups** composed of supply chain stakeholders

## Immediate focus: target countries, industries, and experts

### Indonesia

#### (Automotive)

Nita Kartikasari (KADIN)

### Singapore

#### (Logistics)

Teng Theng Dar (BASE)  
Ariel Goh (ITE College East)

### Thailand

#### (Automotive)

Archanun Koppaiboon  
(Thammasat U)  
Piti Srisangnam  
(Chulalongkorn U)

### Viet Nam

#### (Electronics)

Le Thi Thu Thuy (VCCI)  
Truong Gia Binh (FPT)

# Vision – mission and value proposition

## Mission

Establish a **reliable supply chain** which can provide **transparency**, **connectivity**, **sustainability**, and **competitiveness** with **collaboration between ASEAN and Japan**.

## Value proposition

**Transparency**: Provide increased visibility in supply chains and build trust among all the stakeholders with adequate, accurate and secured data and information sharing.

**Connectivity**: Improve supply chain efficiency by promoting connections across suppliers, manufacturers, and customers through digital and data exchange.

**Sustainability**: Drive ethical and environmental responsibility in industry ecosystem by actively pursuing carbon emission reduction and human rights protection with harmonized standards.

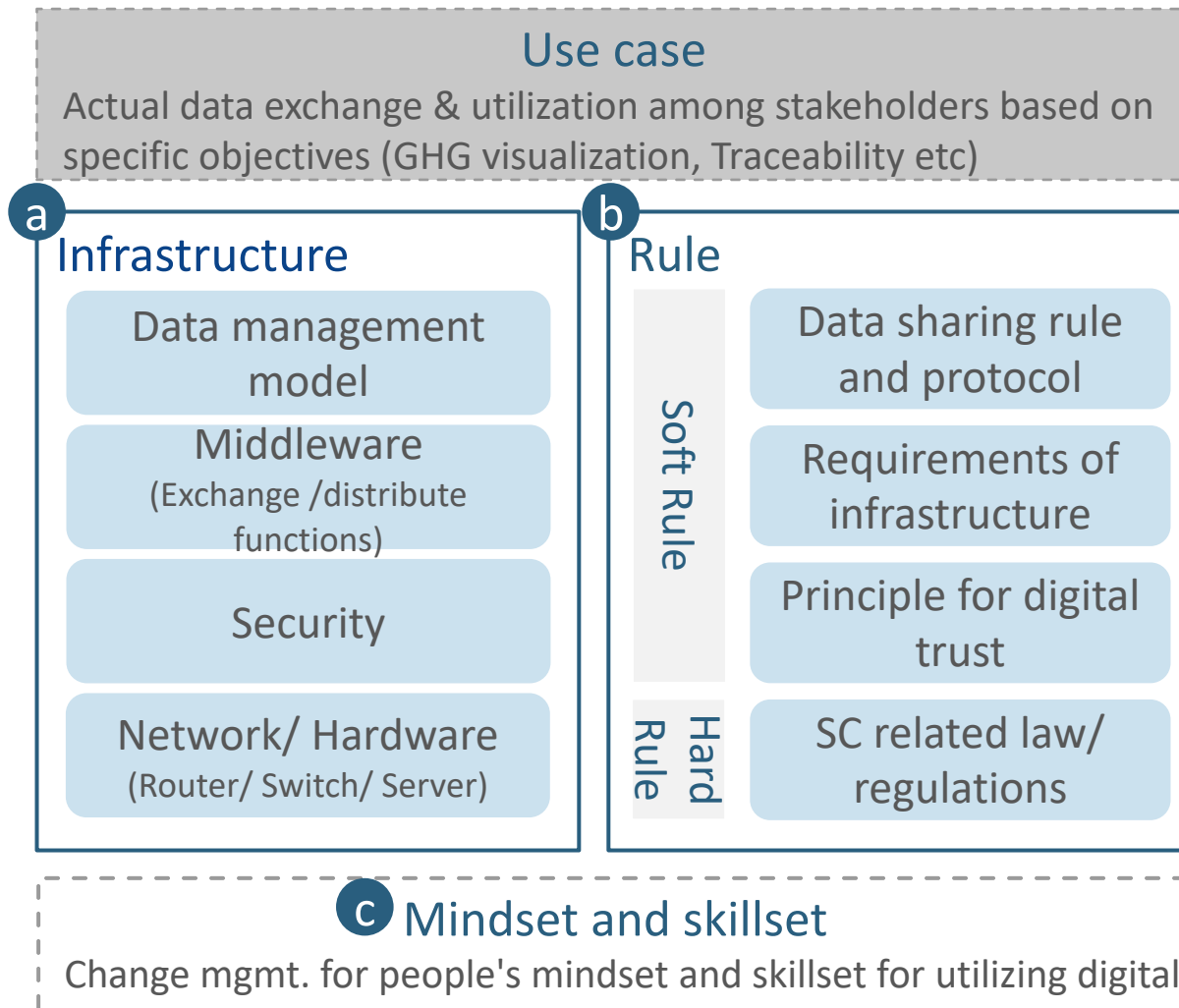
**Competitiveness**: Build supply chain resilience by predicting and mitigating supply chain risk, as well as enhancing functional capabilities of supply chain stakeholders to further improve efficiency.

**Collaboration**: Promote collaboration across ASEAN countries and Japan, and between large enterprises and SMEs by exchanging best practices and know-how.

**Reliability**: Provide disciplined standards and governance for secure data exchange with security and, ensure accuracy and confidentiality of information



# Vision – essential requirements and enablers



## a Infrastructure

### Data management model

- Definition of standard dataset and quality

### Middleware

- Functionalities in infrastructure to support exchange data (i.e. data exchange connector)

### Security

- Functionalities to ensure security in infrastructure

### Network and Hardware

- Physical components of infrastructure

## b Rule

### Data sharing rule and protocol

- Standard rules/processes for data sharing

### Requirements of infrastructure

- Standard specification of infrastructure or systems

### Principle for digital trust

- Digital ID or certification for ensure trust in cyber world

### SC related law/ regulations

- Related law or regulation in the region (i.e. ESG related, data protection related law)

# Vision – potential use cases



SC Resilience



① SC Structure	Supplier structure	Production network	Sales & logistics network
② Risk Prediction	Macro risk (Geopolitical/Pandemic, etc)		
	Supplier risk	Plant shutdown/ accident	
③ SC performance	Operating status/throughput		Transportation delay

Example of use cases

Sustainable SC



④ GHG	End-to-end carbon footprint visualization/reduction		
⑤ Regulatory /Compliance	End-to-end human rights audit/traceability		
	End-to-end regulatory audit/trackability		

Efficient SC



⑥ SC Plan	End-to-end supply chain plan optimization		
⑦ Traceability of goods	Cold chain logistics		
	Ports/Customs info.	Inventory location	Delivery Tracking
⑧ Traceability of Money	PO/ invoice transaction		
	⑨ Capacity	Equip. Capacity/manpower	Delivery Capacity

Engineering Collaboration



⑩ Design / R&D	Additive manufacturing
	R&D collaboration

⑪ line information	Production line optimization
	Digital Twin

Service Collaboration



⑫ Logistics/ marketing services	Last mile /predictive delivery	Customer data marketing	Predictive maintenance
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# Next steps

- ✓ Update the interim report through collective discussions and **finalize the report in November 2023.**
- ✓ Form **sub-discussion groups** to discuss specific use cases in detail, with the goal of realizing tangible benefits from data-sharing.

- ✓ Supply chain digitalization needs **persistent and continuous efforts.**
- ✓ **Deepen the discussion** on supply chain digitalization and **expand the coverage to include more regions and industries** in the **coming year and beyond.**



Thank you!