

ALICE – JPIC webinar on the PI Maturity Model

Logistics problem in Japan & Japanese PI Roadmap

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28 April, 2026

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Empower the change



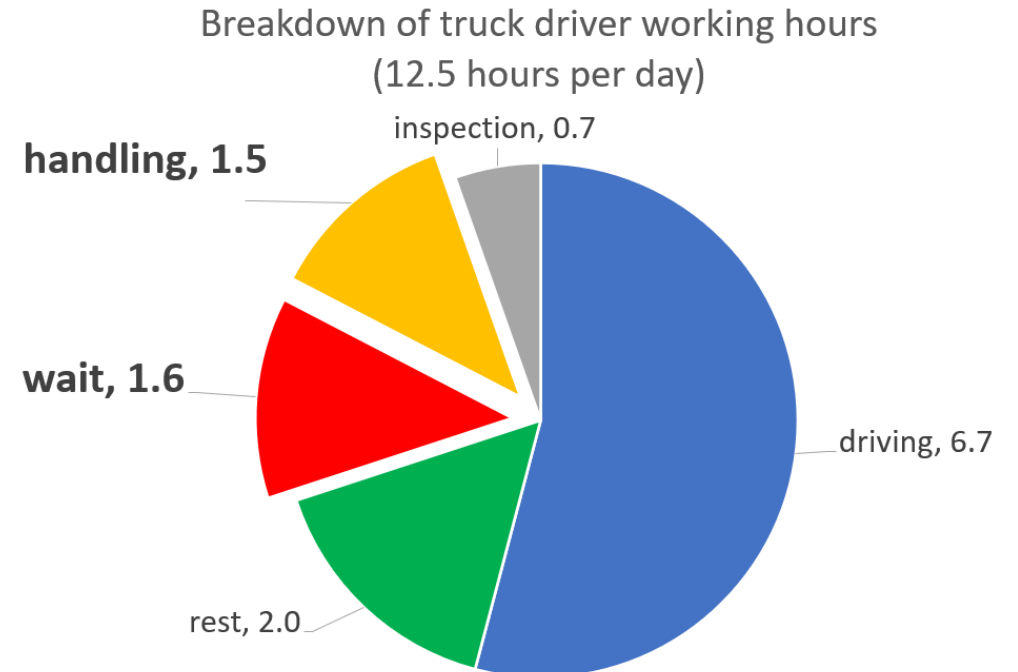
Logistics problems in Japan

■ Low truck fill rate

- Truck fill rate is **40%**
- In April of 2024, truck driver overtime was reduced to **960 hours per year**
- Estimated truck capacity shortage
14% in 2024
34% in 2030

■ Idle time of truck drivers

- **3 hours** for loading/unloading and waiting at warehouses



Progress in legislation to improve logistics

■ Who must comply?

- They are required to declare to the authority **by the end of May 2026**
 - Sellers, Buyers, and Franchisers: Shipping or receiving cargoes of more than 90K tons per year
 - Warehouse Operators: Holding cargoes of more than 700K tons
 - Road Freight Carriers: Holding more than 150 truck fleets

■ What they need to do?

- Submit a medium/long term plan for logistics improvement --- **by the end of October 2026**
 - Submit at least once every 5 years even if there is no change in the plan
 - KPIs should be described
 - increase in the average cargo weight per trip per truck driver
 - reduction in driver's waiting and handling time (aiming for less than 2 hours per day)
- Submit an annual progress report
- Appoint a Chief Logistics Officer (for Sellers, Buyers, and Franchisers)

Japanese Physical Internet Roadmap

Progress in legislation to improve logistics


item	fiscal year	~ 2025	2026~2030	2031~ 2035	2036~ 2040	
	status quo	preparatory phase	takeoff phase	acceleration phase	completion phase	
Governance	Various rules exist without mutual coordination from one business or industry to another	Development of logistics spot market 2024 year Truck driver's Overtime Work Limit Regulations	Planned logistics coordination/establishment of profit and cost sharing rules Within the industry and region Inter-industry, inter-regional and international		Goals (1) Efficiency (World's most efficient logistics) <ul style="list-style-type: none"> Maximization of the use of resources for ideal logistics efficiency Carbon Neutrality (2050) Zero waste Expansion of local production (2) Resilience (Uninterrupted logistics) <ul style="list-style-type: none"> Diversification of production bases, transportation modes, routes and storage options Close cooperation and collaboration between companies and regions Prompt collection and sharing of information (3) Securing quality employment (Logistics as a growth industry) <ul style="list-style-type: none"> Proper working conditions for logistics workers Creation of new industries and employment opportunities in logistics equipment and services Growth of SMEs enjoying economies of scale International expansion of business models (4) Universal Service (Logistics as social infrastructure) <ul style="list-style-type: none"> Open and neutral data platform Solving the issue of vulnerable shoppers Solving regional disparities 	
Trade and transport Data Platform (PF)	Budding of various PFs. The challenge is to ensure interconnectivity and continuity of operations among multiple PFs.	Development of various PF businesses SIP Smart Logistics Services	Autonomous coordination between PFs SC visualization, service deployment Example: Regional logistics	Cross-industry platform for diverse data beyond logistics and commercial distribution		
Horizontal Cooperation (Standardization and Sharing)	Burden on logistics sites due to non-unification of various elements. It is necessary to work together to standardize goods, data, and business processes.	Use of SIP Smart Logistics Services Logistics Standard Guidelines Example: Business processes, GS1 and other code systems		Sharing of logistics functions and data across corporate and industry boundaries Within the industry and region Inter-industry, inter-regional and international		
Vertical Integration (B-B-C SCM)	Logistics and SCM is not a management strategy. Logistics has been externalized, data linkage with logistics is not established, and overall optimization based on logistics constraints cannot be achieved.	Dissemination of Logistics EDI Standards Standardization of pallets Standardization of PI Containers	Standardization, correction of business practices, etc. (industry-specific action plans) Examples: Processed foods, supermarkets, etc., department stores, building materials and housing equipment	Demand Web (B2B/B2C) Optimize the entire supply chain, including the location of manufacturing sites, using consumer information and demand forecasts as a starting point. The company shares not only logistics facilities such as trucks and other transportation equipment and warehouses, but also some manufacturing facilities.		
Logistics Hub (Automation and Mechanization)	The challenge is to promote the spread of automated equipment and increase productivity through business process innovation.	Shift to a management strategy based on SCM/Logistics. Core system renewal/DX	Intensive investment period to realize logistics DX Building a robot-friendly environment Standardization	Progress of equipment industrialization		Realization of full automation
Transportation Equipment (Automation and Mechanization)	In the demonstration phase. The company has not yet reached the point where it can be converted to full-scale introduction and servicing. On the other hand, the driver manpower shortage is getting worse	Widespread use of relay transportation (relay sharing) Logistics MaaS (Truck data linkage, transshipment base automation, etc.) Commercialization of rear-end manned formation driving system and unmanned following vehicle formation system on highways Source: Public Private ITS Concept and Roadmap	2030 Logistics Robotics Market Size 1.5099 trillion yen (approximately 8 times the FY2020 level) Source: Nomura Research Institute Ltd.	Service Deployment		Service Deployment
		Unmanned automated transportation service in limited areas Source: Public Private ITS Concept and Roadmap	Realization of automated trucks on highways Source: Public Private ITS Concept and Roadmap	Service Deployment	Service Deployment	
		Realization of delivery by automated delivery robots		Service Deployment	Service Deployment	
		Promotion of public implementation of drone logistics Source: Roadmap for the Industrial Revolution in the Sky 2021		Service Deployment	Service Deployment	

After the PI Roadmap was published

■ Industry working groups formed

● Examples

- Grocery
- Apparel
- Building materials
- Chemicals
- Pharmaceuticals
- Home appliances



intra-industry
(not inter-industry)

■ Need to measure the progress of these flagship projects and guide companies' collaborative actions



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