



Plenary 2

Physical Internet initiatives worldwide

Physical Internet Initiatives in Japan


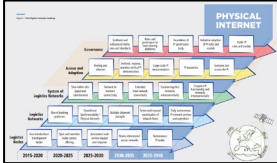



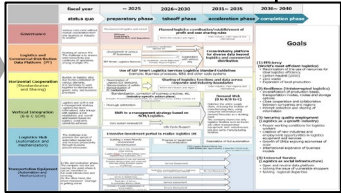


- Updates on PI Roadmap by the Japanese government
- Launch of Japan Physical Internet Center

Tadashi Mizutani

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Physical Internet Initiatives in Japan

	2019	2020	2021	2022	2023
Events worldwide	 PI Roadmap by ALICE 				
Physical Internet Realization Council In Japan					
Raising awareness of PI in Japan					

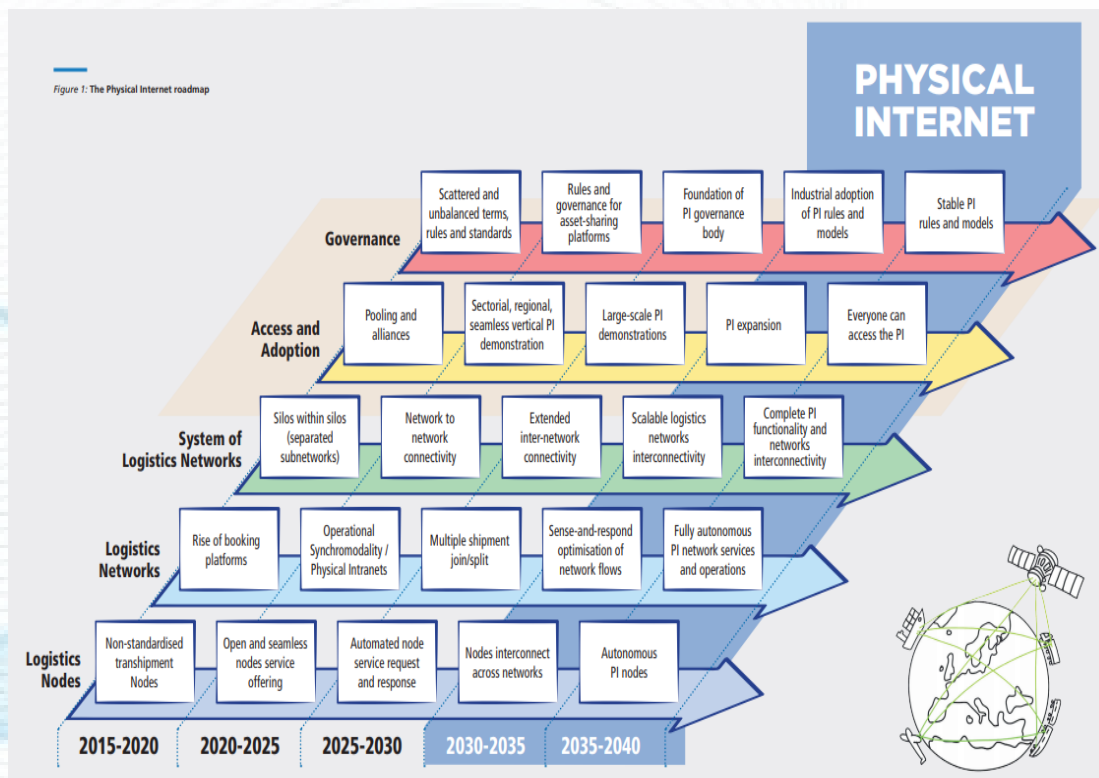
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Physical Internet Roadmaps



Created by ALICE in 2020

Created by Japanese Gvmt in 2022



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 Resolving 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 Cooperation with various PFs	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.	Dissemination of Logistics EDI Standards Standardization of pallets Standardization of PI Containers	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.	Standardization, correction of business practices, etc. (industry-specific action plans) Examples: Processed foods, supermarkets, etc., department stores, building materials and housing equipment	Shift to a management strategy based on SCM/Logistics. Core system renewal/DX Life Cycle Support	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.	Intensive investment period to realize logistics DX Building a robot-friendly environment Standardization	Progress of equipment industrialization	Realization of full automation 2030 Logistics Robotics Market Size 1,909 billion yen (approximately 8 times the FY2020 level)	
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 services. On the other hand, the driver manpower shortage is getting worse.	Widespread use of relay transportation (relay sharing) Logistics Hubs (Truck data linkage, transportation base automation, etc.) Commercialization of near and medium formation driving system and unmanned following vehicle formation systems on highways Source: Auto, Transport and Real Estate	Service Deployment	Realization of automated trucks on highways Service Deployment	

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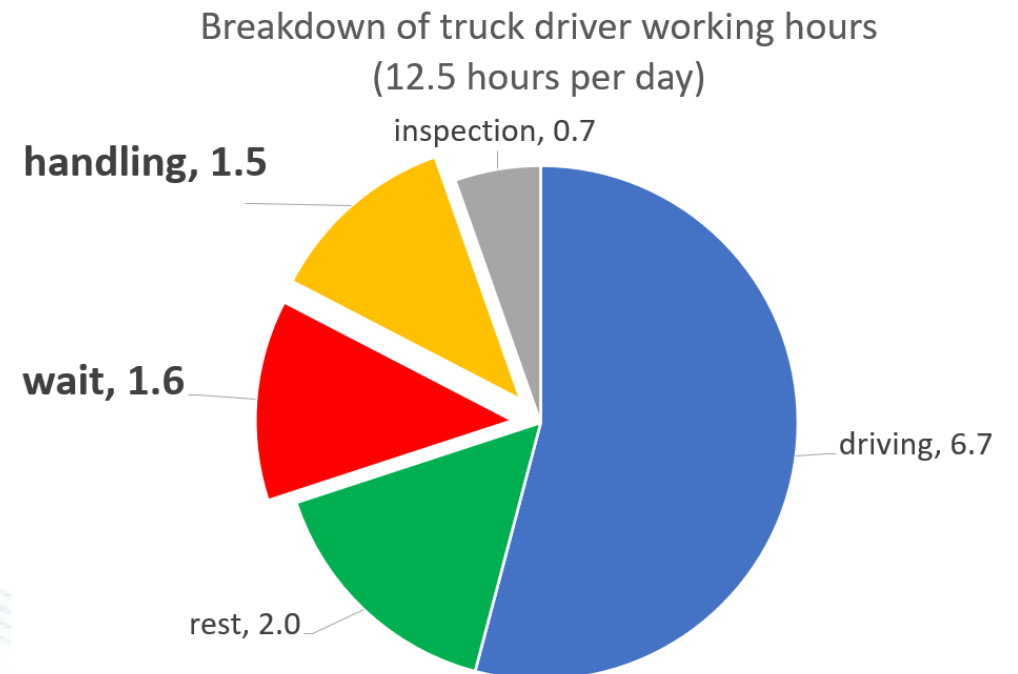
Logistics problems in Japan

Low truck fill rate

- Truck fill rate is 40%.
- In April of 2024, truck driver overtime will be 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



6 areas in PI roadmap by Japanese Gvmt

Governance

Trade and transport data platform

Horizontal cooperation

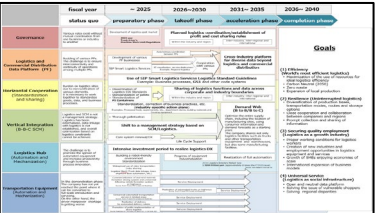
Vertical integration

Logistics hub

Transportation equipment

**Expanded the scope
of thinking from
logistics to SCM**

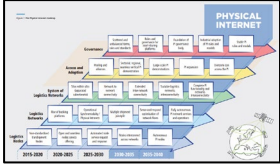
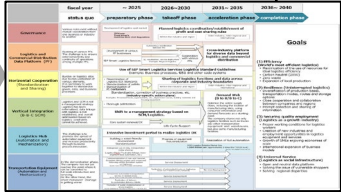


Working groups by industry

	2021	2022	2023
Physical Internet Realization Council In Japan		<p>PI Roadmap by the Japanese government</p> 	
Working groups by industry		<p>FMCG</p> <p>apparel (in department store)</p> <p>building materials/housing equipment</p>	<p>(new) chemicals</p>

4 topics at FMCG Working group

- Standardization of product and location data
- Standardization of logistics containers
- Reform of inter-company business processes
- Data sharing

Launch of Japan Physical Internet Center

	2019	2020	2021	2022	2023
Events worldwide	IPIC 2019	IPIC 2020 	IPIC 2021		IPIC 2023
Physical Internet Realization Council In Japan				PI Roadmap by the Japanese government 	
Raising awareness of PI in Japan	Yamato Group Research Institute 				

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Launch of Japan Physical Internet Center

- Launched in June of 2022
- Led by Mr. Tsutomu Araki, Representative Director of JPIC
- Succeeded activities to raise awareness of PI in Japan from YRI
- Will promote cross-industry initiatives

Mr. Tsutomu Araki



Category	Members
Shippers	  
Logistics Service Providers	   
Material handling manufacturers	 
IT services providers	  

Contact information

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