



Perspectives on Open Science



June 9, 2021

ITS Japan Automated Driving Project Group

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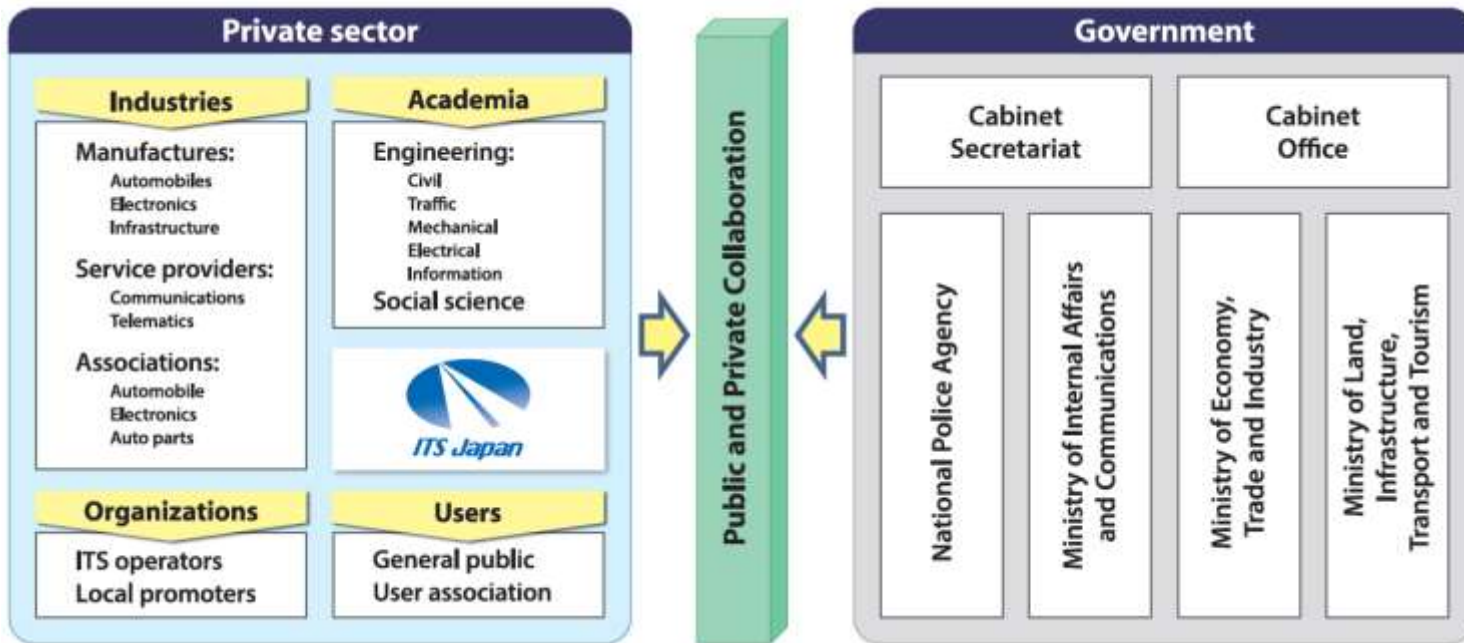


- **ITS Japan**
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■ Roles

- Promoting ITS R&D and deployment
- Liaison among ITS-related public and private organizations and academia
- Supporting ITS-related standardization activities





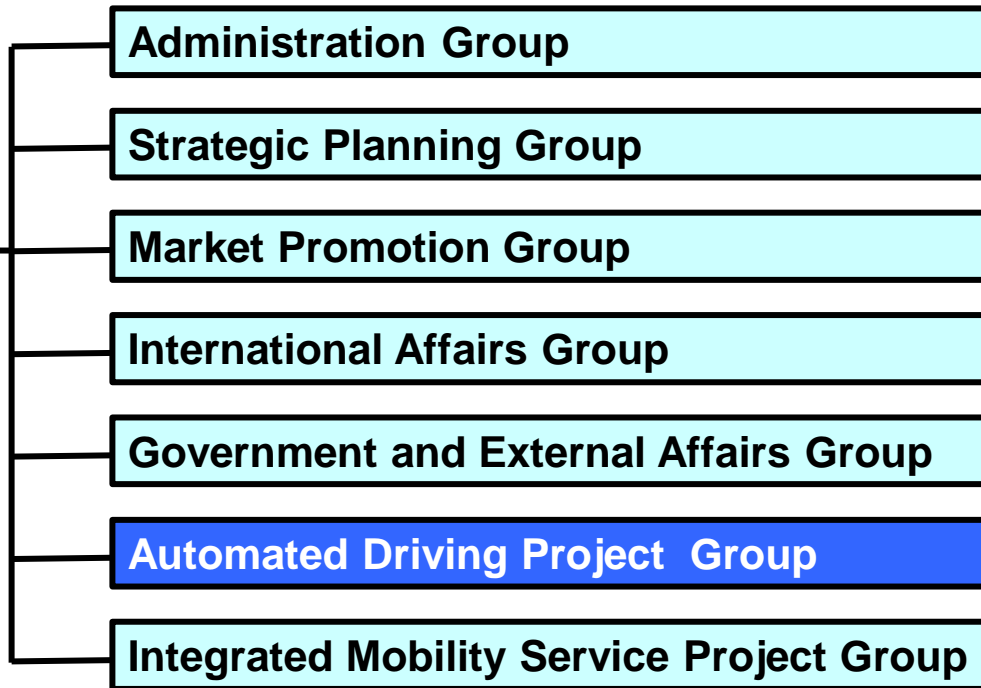
■ Organization

About 30 members

Chairman

President

Executive Director
Senior Vice President
Vice President



Board of Director Companies

DENSO FUJITSU HITACHI HONDA

JTEKT MITSUBISHI ELECTRIC NEC NISSAN OKI

Panasonic SUMITOMO ELECTRIC TOSHIBA TOYOTA

AISIN Clarion IBM IHI ISUZU KDDI MITSUBISHI

MITSUBISHI MITSUBISHI NTT OMRON Pioneer SUBARU

SUZUKI YAZAKI ARIB ORN HIDO Internet ITS

JAF JAMA JAPI ORN ITS VISIT



■ International Cooperation





Deployment Path



Public-Private ITS Initiative/Roadmap 2019 IT Strategic Headquarters Japan

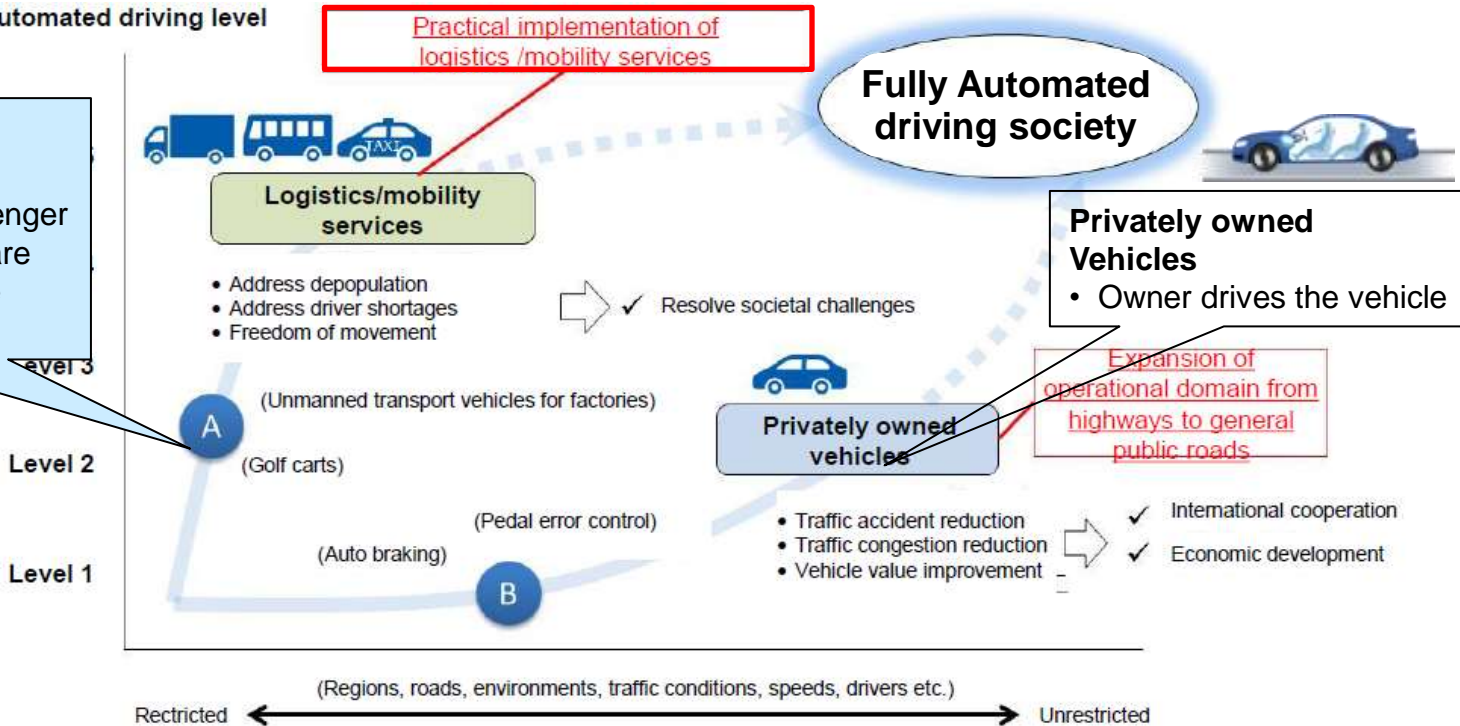
Our focus

Logistics/Mobility Services

- Ride the vehicle as passenger
- Various type of vehicles are expected for different use cases



SAE* automated driving level



※SAE (Society of Automotive Engineers) ; Standardization body in the U.S.



Pilot Tests in Europe



■ A lot of Tests in many places

SPAC E

Drag the map to interact.
Click on a point to explore an initiative.

	RAC, Intellibus Perth Perth AUSTRALIA		Digibus, Austria, national pilot Vienna AUSTRIA
	Autonomous shuttle service Brussels Health Campus Jette BELGIUM		Digibus, Willischwandt Willischwandt AUSTRIA
	KIP Curtin University Perth Perth AUSTRALIA		Future Mobility Lab Adelaide AUSTRALIA
			Marly Autonomous TPF Shuttles Fribourg SWITZERLAND



Pilot Tests in US



■ A lot of Tests in many places



Rochester Automated Shuttle Pilot



Bishop Ranch SAV Pilot Program



Texas A&M University Smart Shuttle Demonstration



University District AV Project



Arlington Driverless Shuttle Pilots



Houston METRO's Project



Columbus Smart Circuit and Linden Leap



I-Street



Pilot Tests in Japan



■ A lot of Tests in many places

Automated Driving Services at Roadside Stations

MLIT/Cabinet Office SIP

1	Akita
2	Kumamoto
3	Hokkaido
4	Nagano
5	Fukuoka

Automated Driving Services

MLIT/Cabinet Office SIP

1	Tokyo
2	Hyogo

National Strategic Special Zone Project

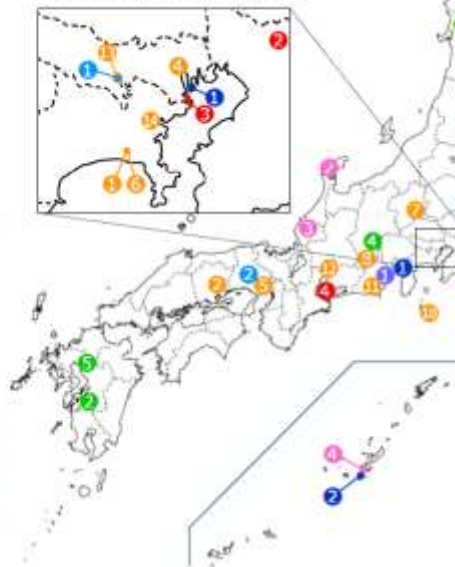
Cabinet Office

1	Miyagi
2	Narita
3	Haneda
4	Aichi

Last-Mile Automated Driving

METI/MLIT

1	Hitachi
2	Ishikawa
3	Fukui
4	Okinawa



Local Government Private Company

University Project

1	Kanagawa
2	Okayama
3	Fukushima
4	Tokyo
5	Hyogo
6	Kanagawa
7	Gunma
8	Nagano
9	Iwate
10	Tokyo
11	Shizuoka
12	Aichi
13	Tokyo
14	Kanagawa

SIP Project

Cabinet Office

1	Tokyo
2	Okinawa

Truck Platooning

METI/MLIT

1	Shin Tomei
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Mobility/Logistic Trend in 2020

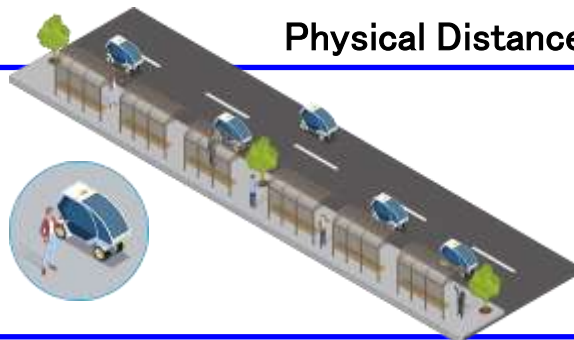


COVID-19 changed user demands

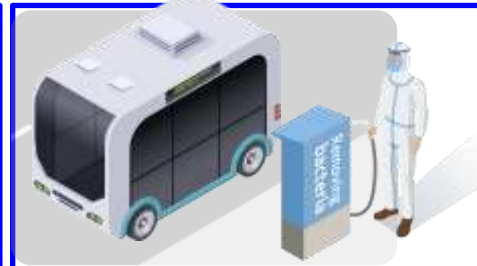
Environment



Physical Distance



Disinfection



Micro-mobility



Use of road and roadside



Driver-less delivery services





Logistic Trend in 2020



■ Increased demand on Delivery services

Size/Pay load

Automated Truck for controlled environment

Automated Heavy Truck

Conventional design automated delivery vehicles

Combination automated delivery vehicle models

Final-50-feet

Last-mile

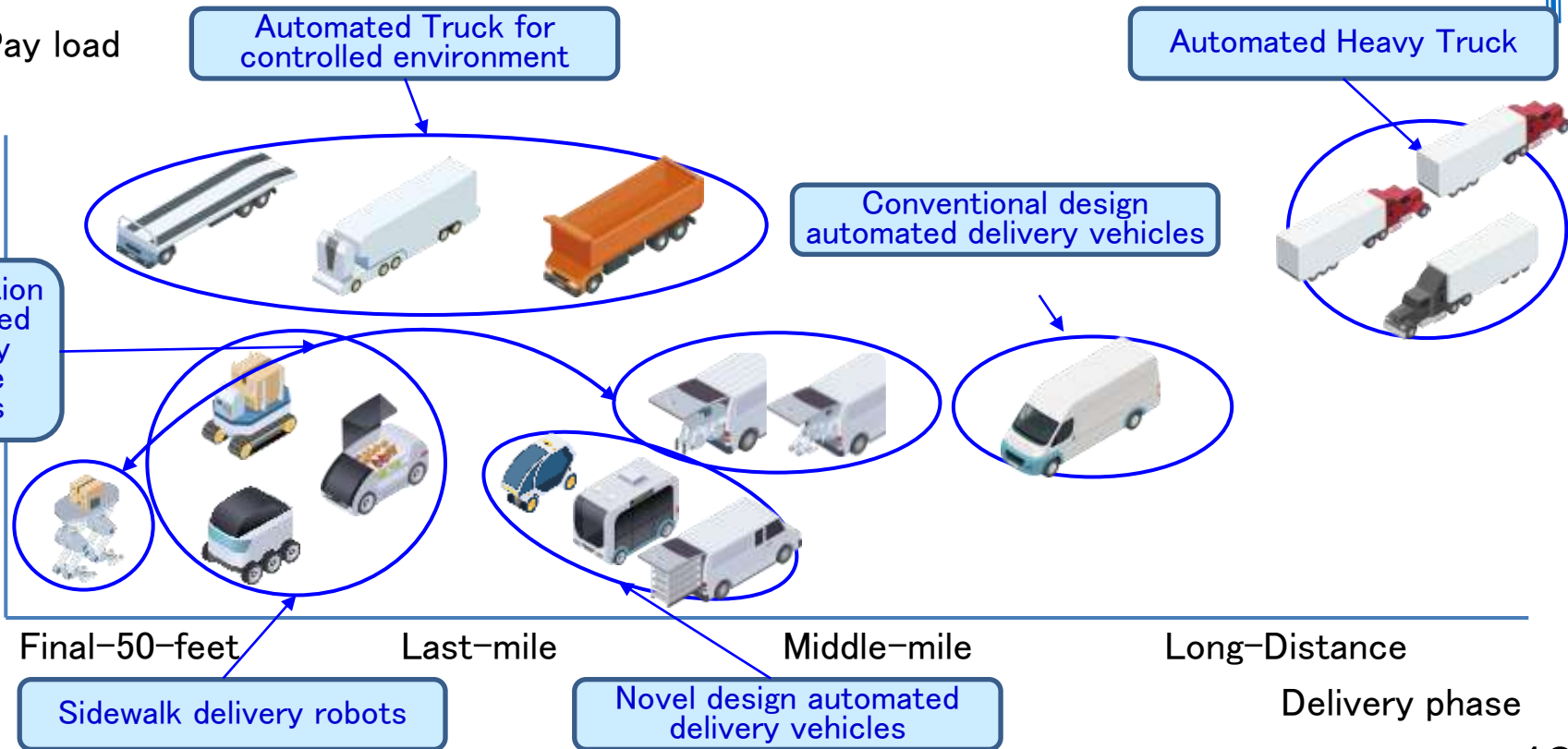
Middle-mile

Long-Distance

Sidewalk delivery robots

Novel design automated delivery vehicles

Delivery phase

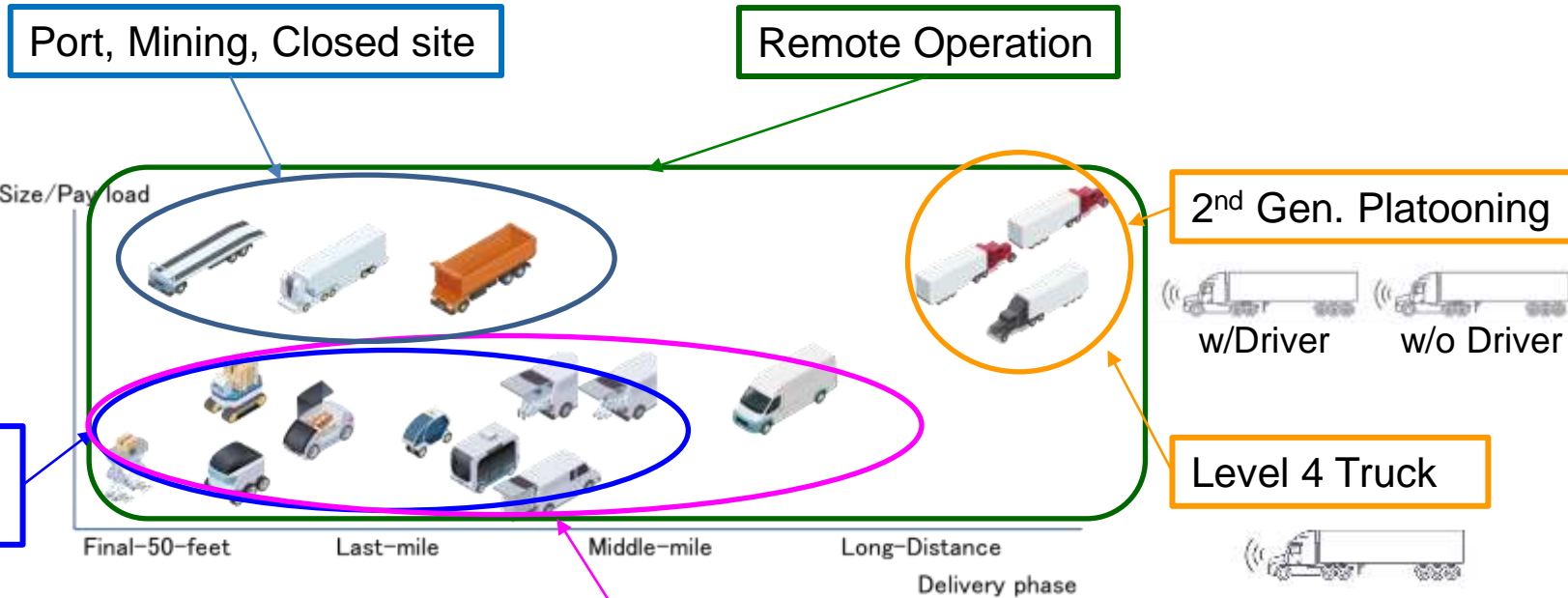




Challenges for New Delivery services



- The issues to resolve are global common



- Driving environment
- Operational regulation
- Policies

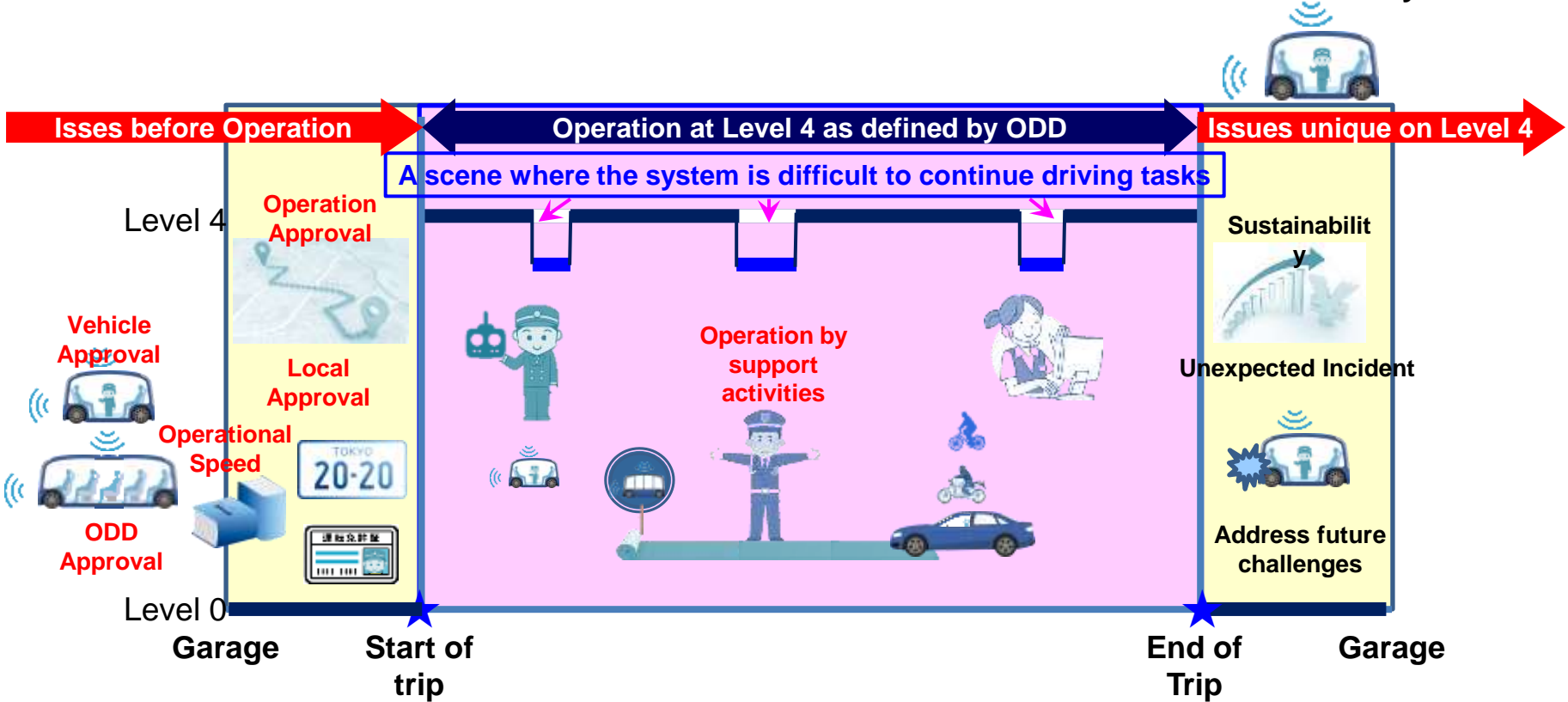


Challenges for Driverless operation



■ The issues to resolve are global common

No on board Driver is assumed for Level 4 Mobility Service





Practice on Open Science



■ Collaboration activities between SHOW, ITS Japan and The University of Tokyo



The SHOW project
Large-scale demonstration of AV fleets

SHOW in a nutshell

Deployment of shared, connected and electrified automated vehicles to advance sustainable urban mobility

-  69 partners from 13 EU-countries
-  January 2020 - December 2023
-  Real-life urban demo in 20 cities
-  H2020 R&I programme GA No 875530
-  30 million EUR funding



Shared automation Operating models for Worldwide adoption

SHOW signs agreement with ITS Japan and University of Tokyo



One of the objectives of the SHOW project is to foster international cooperation on automated mobility by collaborating with global organisations working on Connected, Cooperative and Automated Mobility (CCAM). Therefore, we are happy to announce SHOW has signed in December 2023 a Non-Disclosure Agreement with ITS Japan and the University of Tokyo.

The collaboration will join forces of SHOW, the Automated Driving Project Group from ITS Japan and the Mobility Innovation Collaborative Research Organization (iThrust) from the University of Tokyo. UTPP International Association of Public Transport signed the agreement on behalf of the SHOW consortium.

Under the agreement, parties will exchange information about design, development and demonstration of shared, connected and cooperative automated mobility, so that - at a later point - a collaboration can start on sharing best practices and potentially supporting respective developments in the areas of safety, traffic efficiency, or user experience linked with CCAM.






END