

TransAID + ITS Japan / UTmobl seminar + expert meeting

April 7, 8 , 2020

The University of Tokyo ITS Center/ITS Japan

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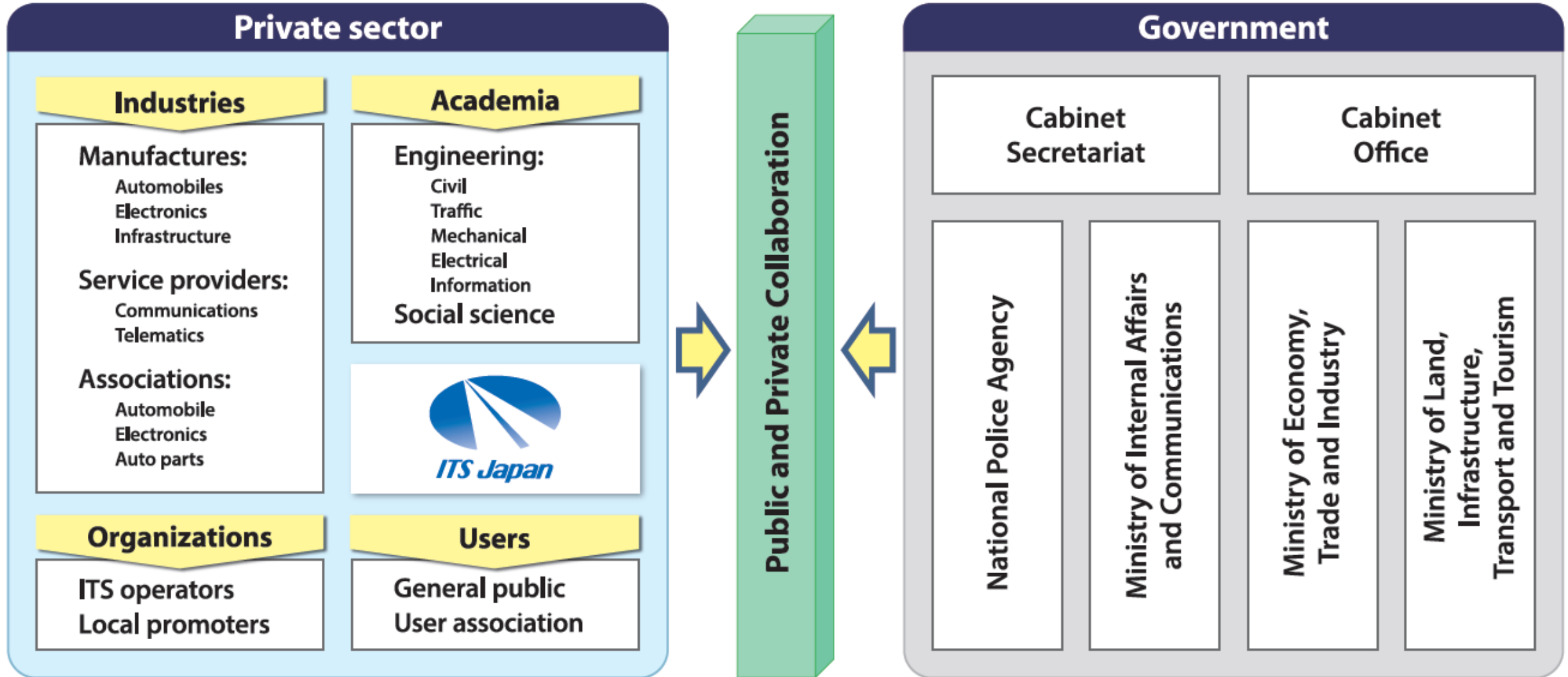
ITS Japan

■ Roles

- Promoting ITS R&D and deployment
- ITS World Congress Asia-Pacific area contact
- Asia-Pacific ITS Forum Secretariat
- Liaison among ITS-related public and private organizations and academia
- Supporting ITS-related standardization activities



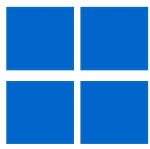
Positioning among related Organizations





International Cooperation





Board of Director Companies



DENSO

FUJITSU

HITACHI

HONDA

JTEKT

 **MITSUBISHI ELECTRIC**
Changes for the Better

NEC

NISSAN

OKI

Panasonic

 **SUMITOMO ELECTRIC**

TOSHIBA

TOYOTA

AISIN

clarion

IBM

IHI

ISUZU

KDDI

 **mazda**



 **MITSUBISHI MOTORS**

 **NTT**

OMRON

Pioneer

 **SUBARU**

 **SUZUKI**

 **YAZAKI**

ARIB

DRM

HIDO
Highly Efficient Drive

Internet ITS

 **JAF**

JAMA

JAPIA

JARI

UTMS JAPAN

 **vics**



Organization



Chairman

President

Executive Director
Senior Vice President
Vice President

Focus on “Deploy Level 4 Mobility Service”

Administration Group

Strategic Planning Group

Market Promotion Group

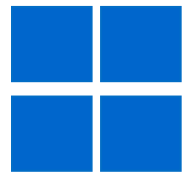
International Affairs Group

Government and External Affairs Group

Automated Driving Project Group

Integrated Mobility Service Project Group





Operational Design Domain (ODD) management for automated driving

- **Service Approval based on the Service and ODD**
 - New approach for Level 4 mobility services





Public-Private ITS Initiative/Roadmaps 2019

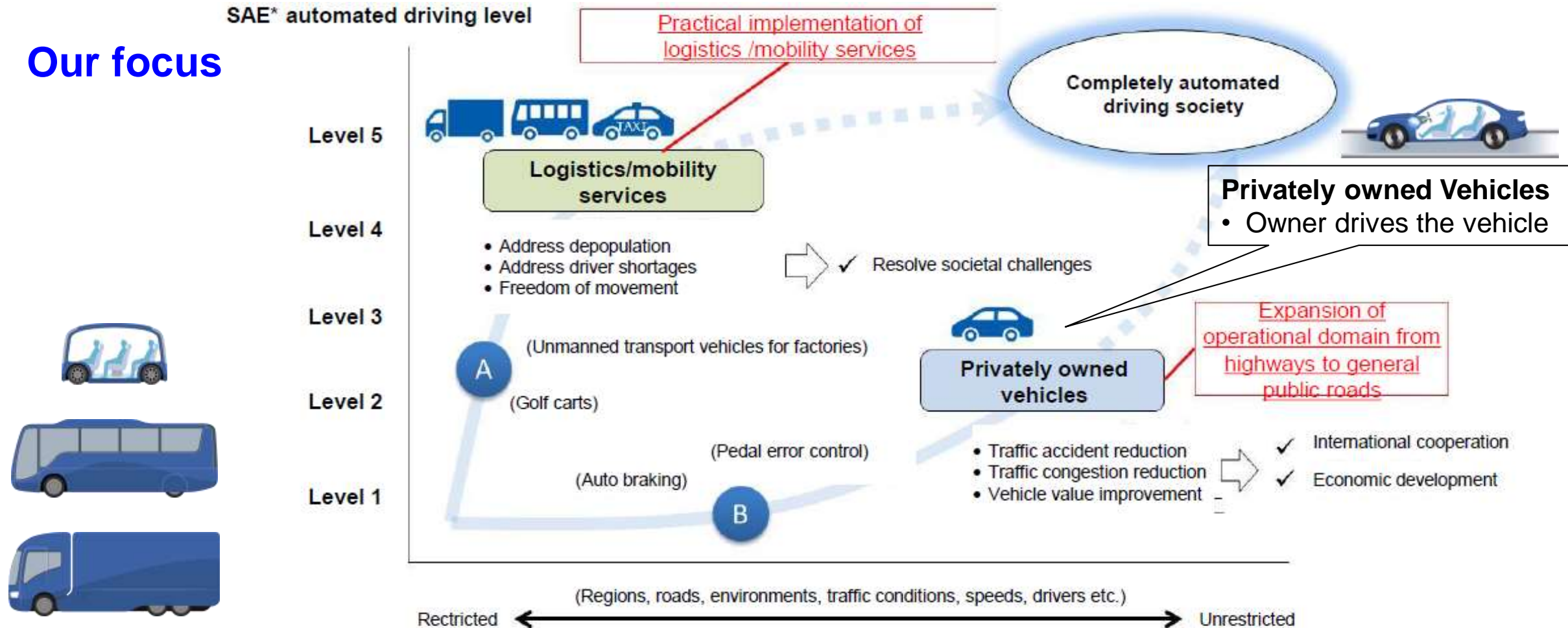
IT Strategic Headquarters Japan



■ Different Path for Privately-owned Vehicles and Logistics/Mobility Services

Our focus

SAE* automated driving level



*SAE (Society of Automotive Engineers) : Standardization body in the U.S.



Level 4 Mobility Service

■ Provide service to meet local needs

- Service Description, ODD
 - ✓ Vehicle, Route

Service in Urban area



Service in suburban area

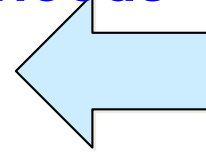




Level 4 Mobility Service

■ Provide service to meet local needs

- Service Description, ODD
- ✓ Vehicle, Service Route



Approval based on the Service and ODD

Service in Urban area



Service in suburban area



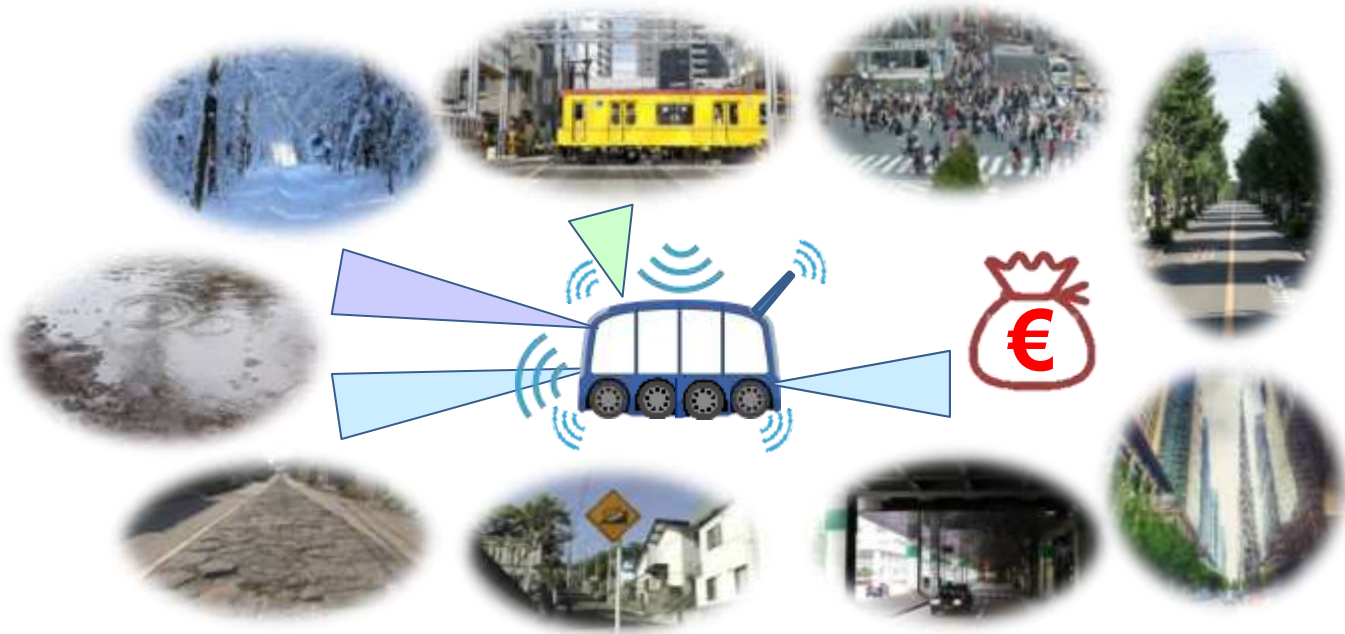
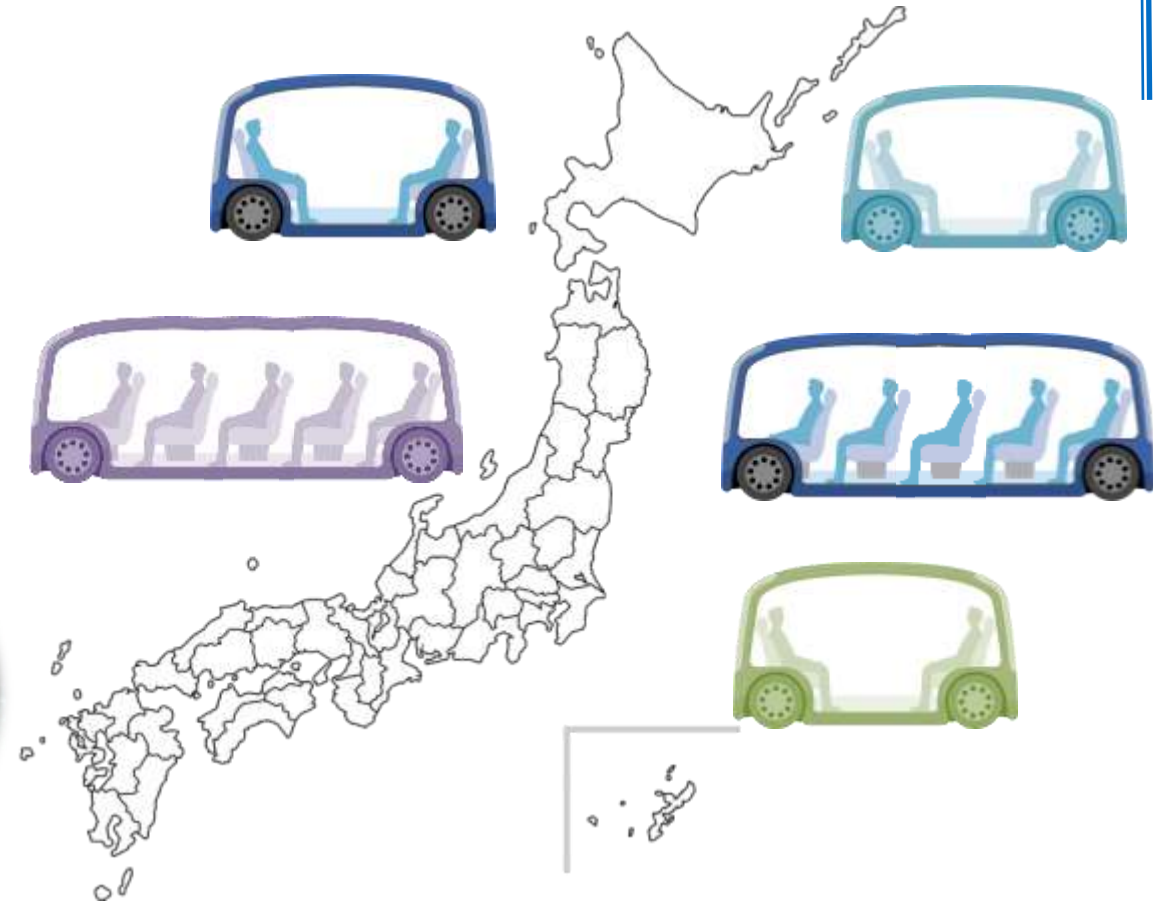
Vehicles run in Service Area



Vehicles

■ Meets local needs

- ODD
- Vehicle specification
- Vehicle capability





Level 4 Mobility Service Operation

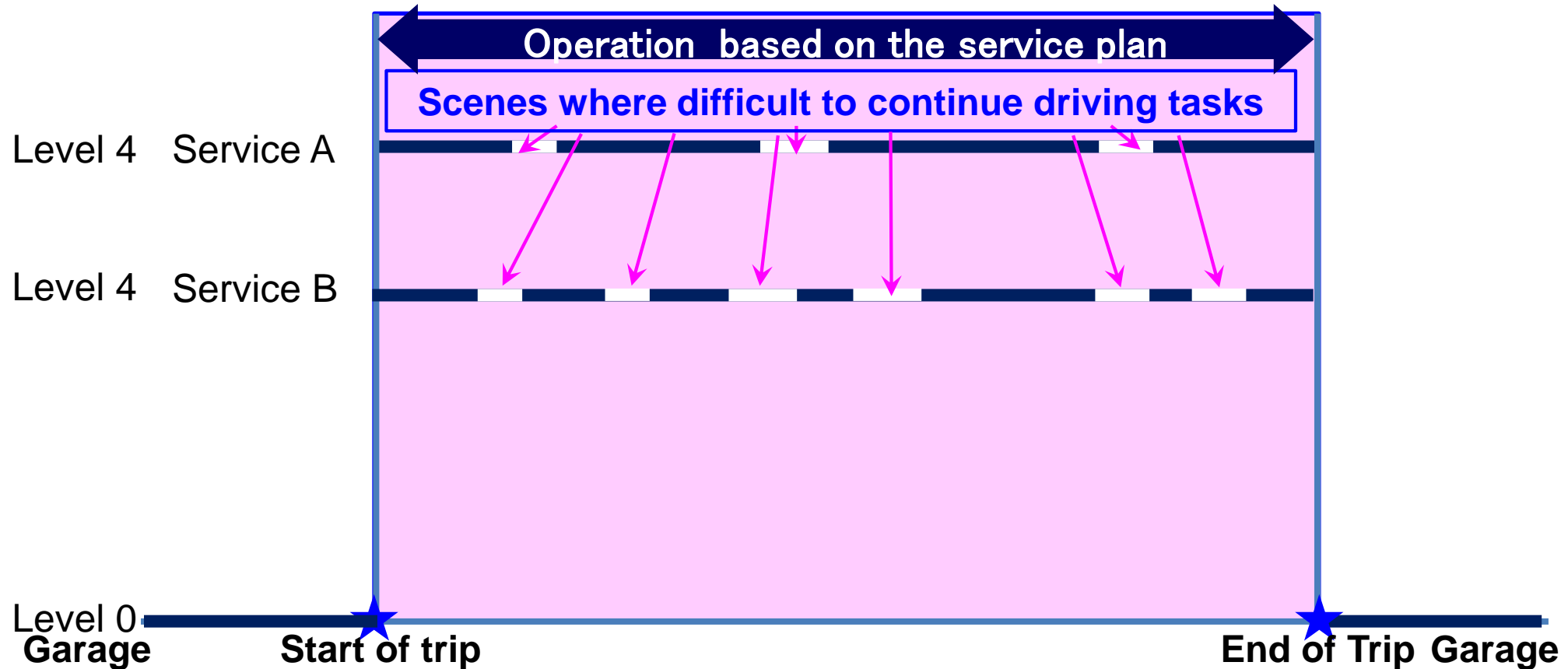
- Vehicles travel safely all the way at Level 4 specified by Operation Plan





Level 4 Mobility Service Operation

- Scenes where difficult to continue driving tasks exist based on the Service
 - Route, Weather, Other road users, Technology limit, system capability





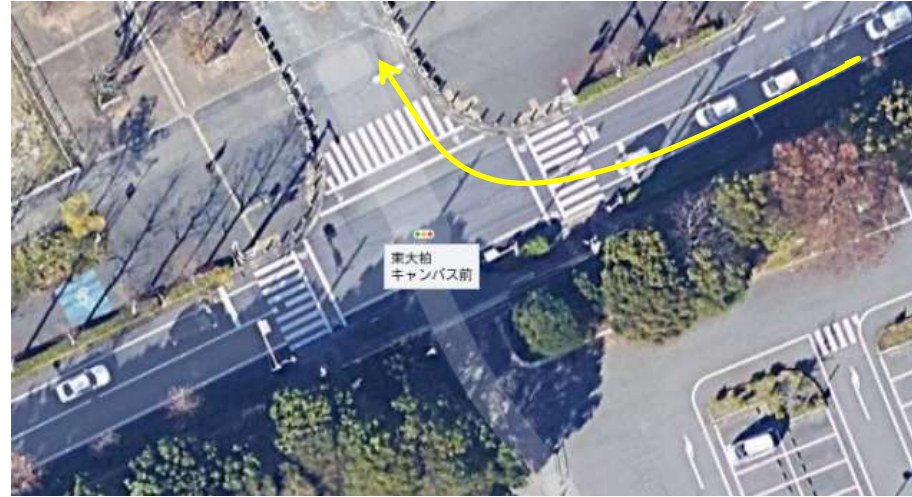
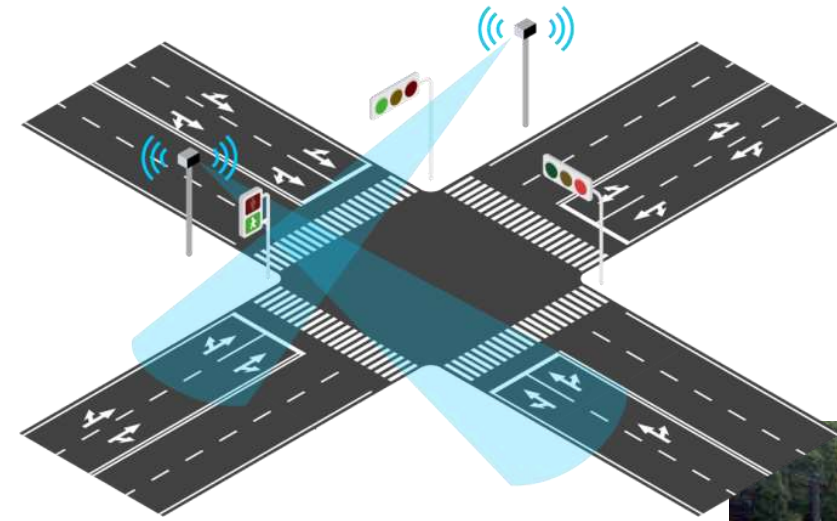
V2X for Mobility Services

- I2V-based traffic management measures for cooperative automated vehicles
- V2X communications and protocol solutions for cooperative automated driving



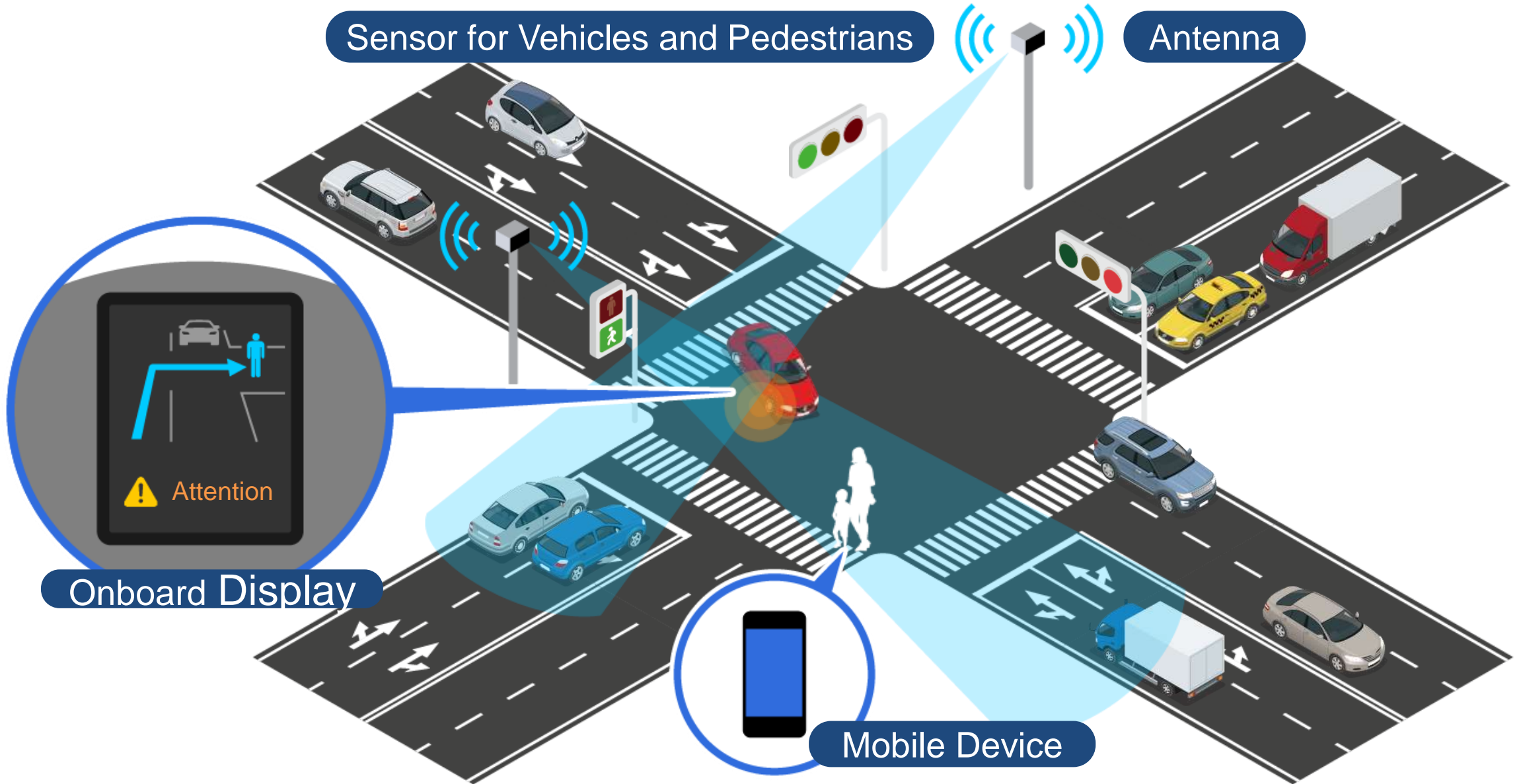
Potential risks at Right turn

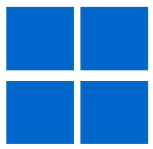
- V2X Technologies have potentials to support on board sensors





V2X Communication at Intersection





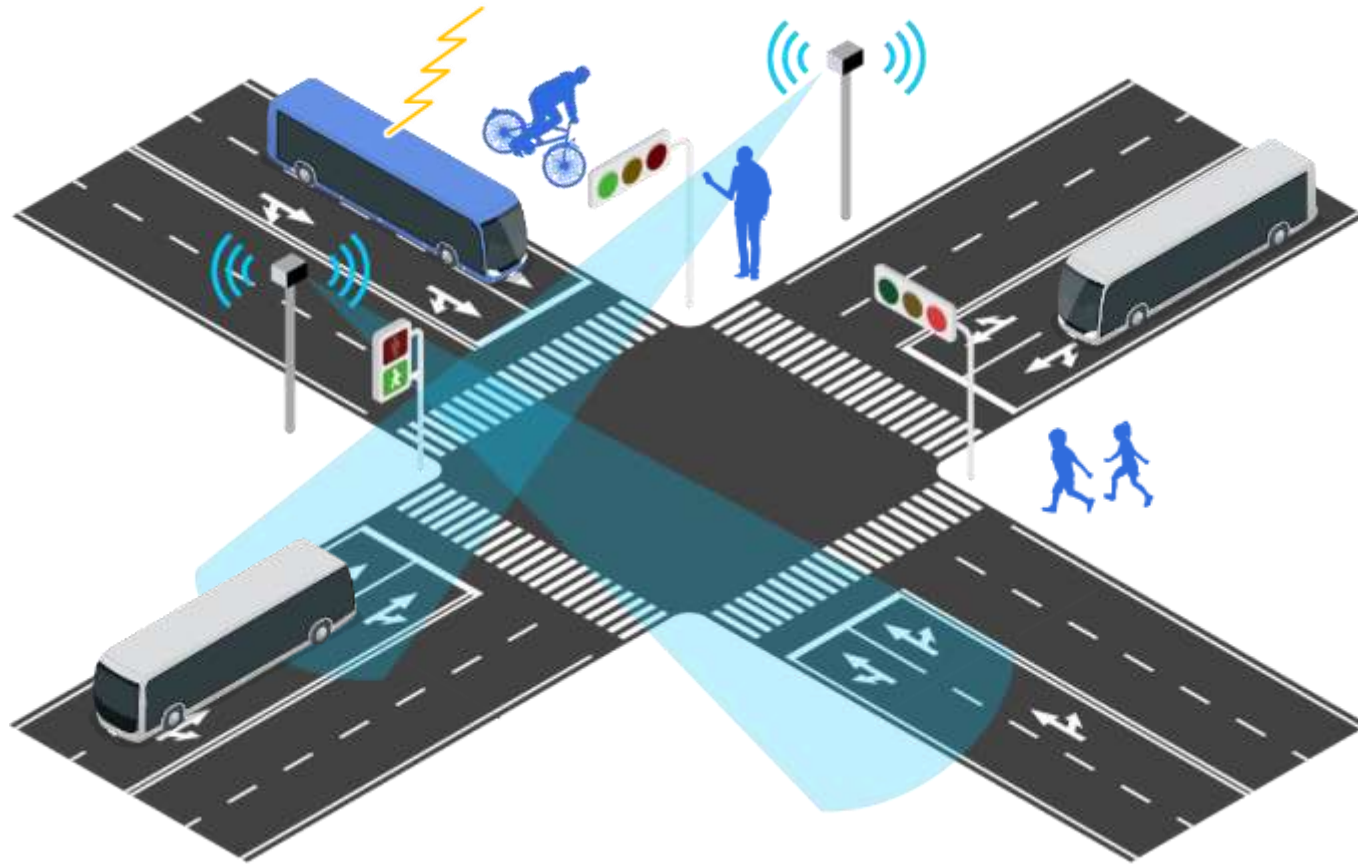
V2X Communication for Vulnerable road users





Remote Operation at Critical locations

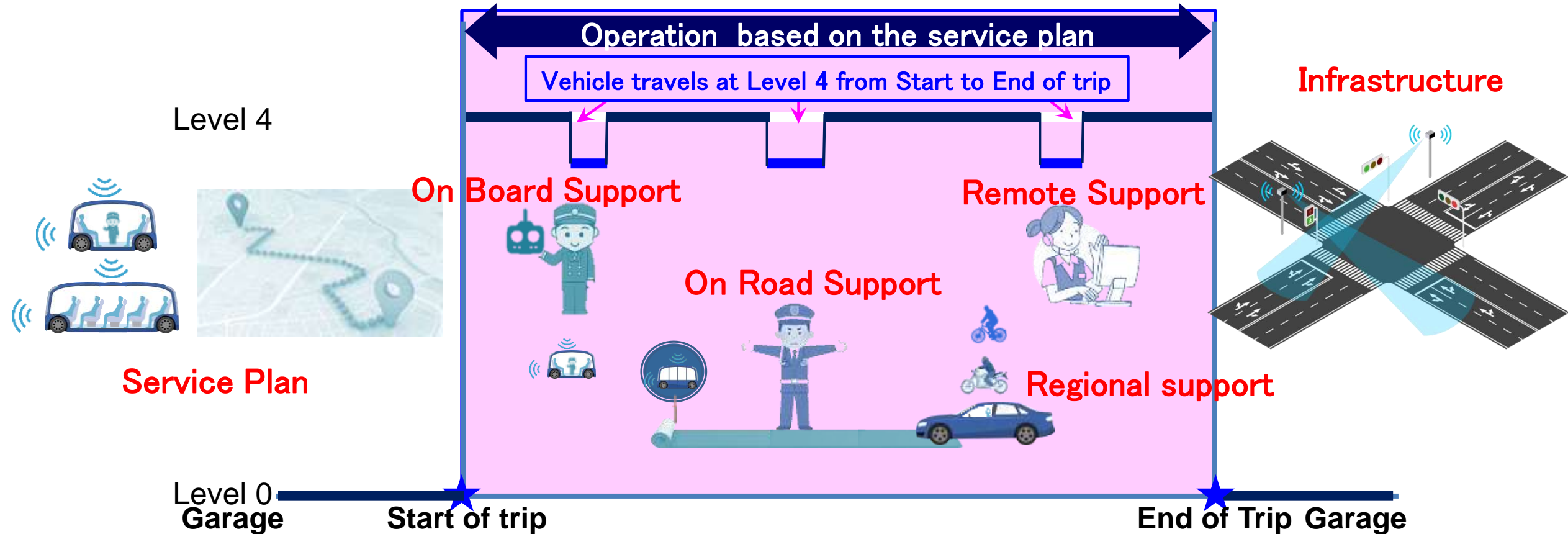
■ V2X





Level 4 Mobility Service Operation

- Measures for the scene Scenes where difficult to continue driving tasks



END