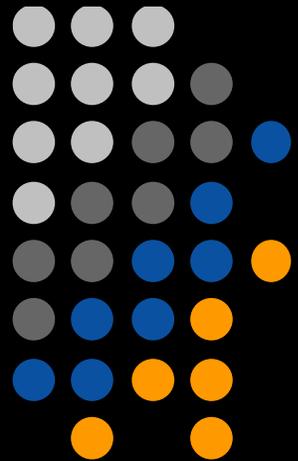


Challenge to establish ecosystem of sustainable mobility

-Academic collaboration and practice-



Prof. Yoshihiro SUDA

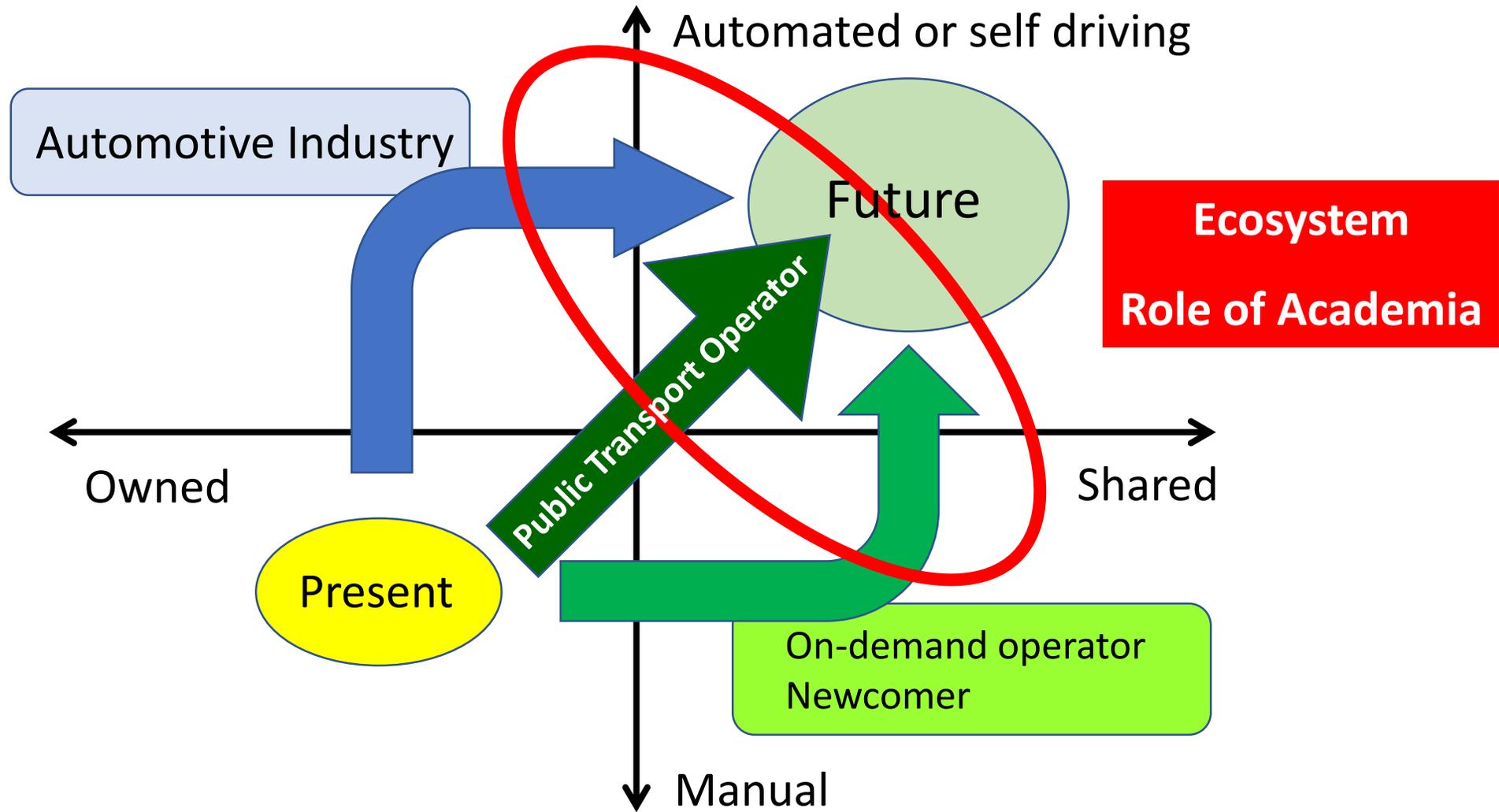
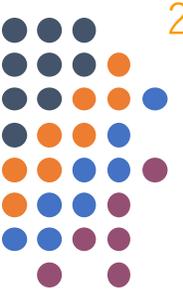


Director of Mobility Innovation Collaborative Research Organization (UTmobl),
The University of Tokyo
Advanced Mobility Research Center (ITS Center),
Institute of Industrial Science,
The University of Tokyo

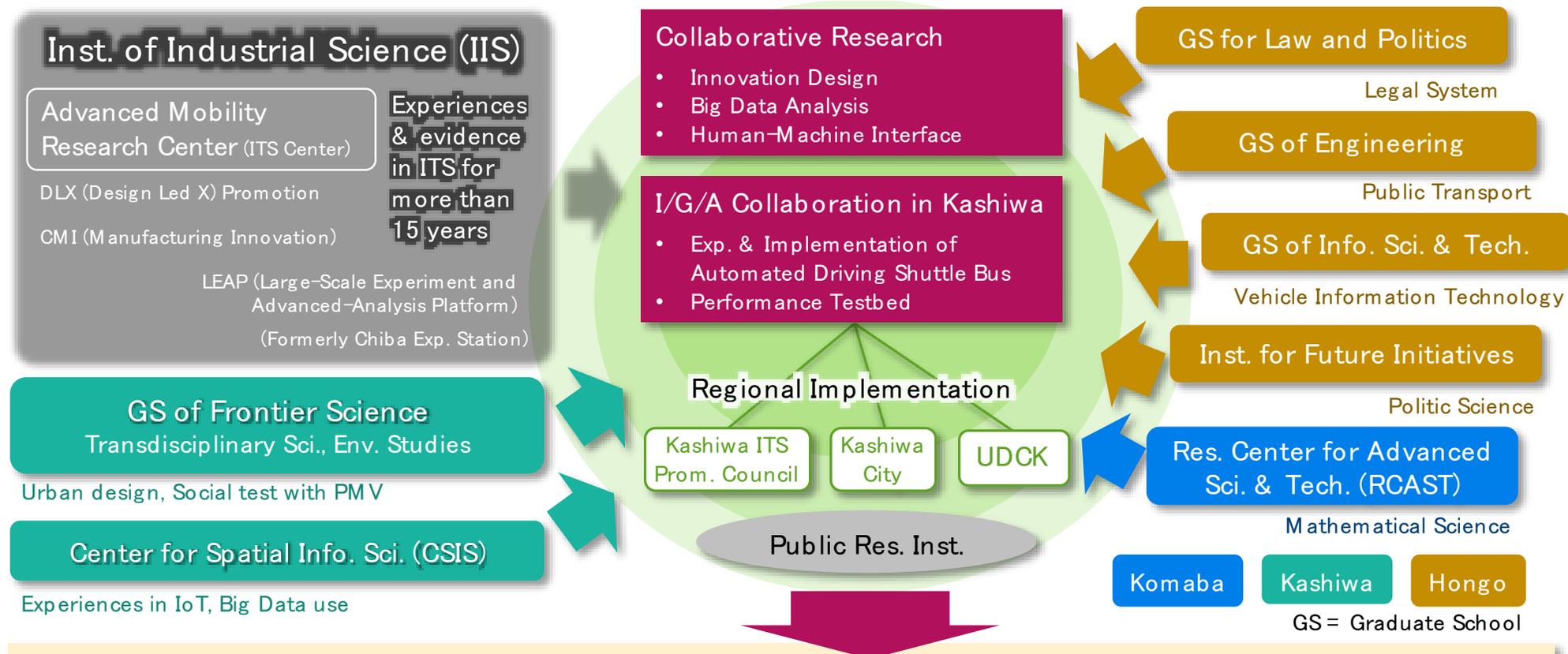


東京大学
生産技術研究所
Institute of Industrial Science,
The University of Tokyo

Mobility as a Service and social change



Mobility Innovation Collaborative Research Organization (UTmobl), The University of Tokyo



- **Intra/International Promotion** of mobility innovation based on the experience at Kashiwa-area using the academic promotion council.
 - **Nurturing Young Persons & Social Return Activity** for promoting mobility innovation (Ideathon, Hackathon)
- Academic research model collaborated with real society beyond simple social return activity
- Systematic knowledge to innovate mobility and promotion for regional implementation





ITS R&R Experiment Fields

(Large-Scale Experiment and Advanced-Analysis Platform (LEAP), IIS)



次世代モビリティ研究設備 東京大学生産技術研究所（柏地区）
 Advanced Mobility Research Facilities Institute of Industrial Science, UTokyo (Kashiwa Campus)



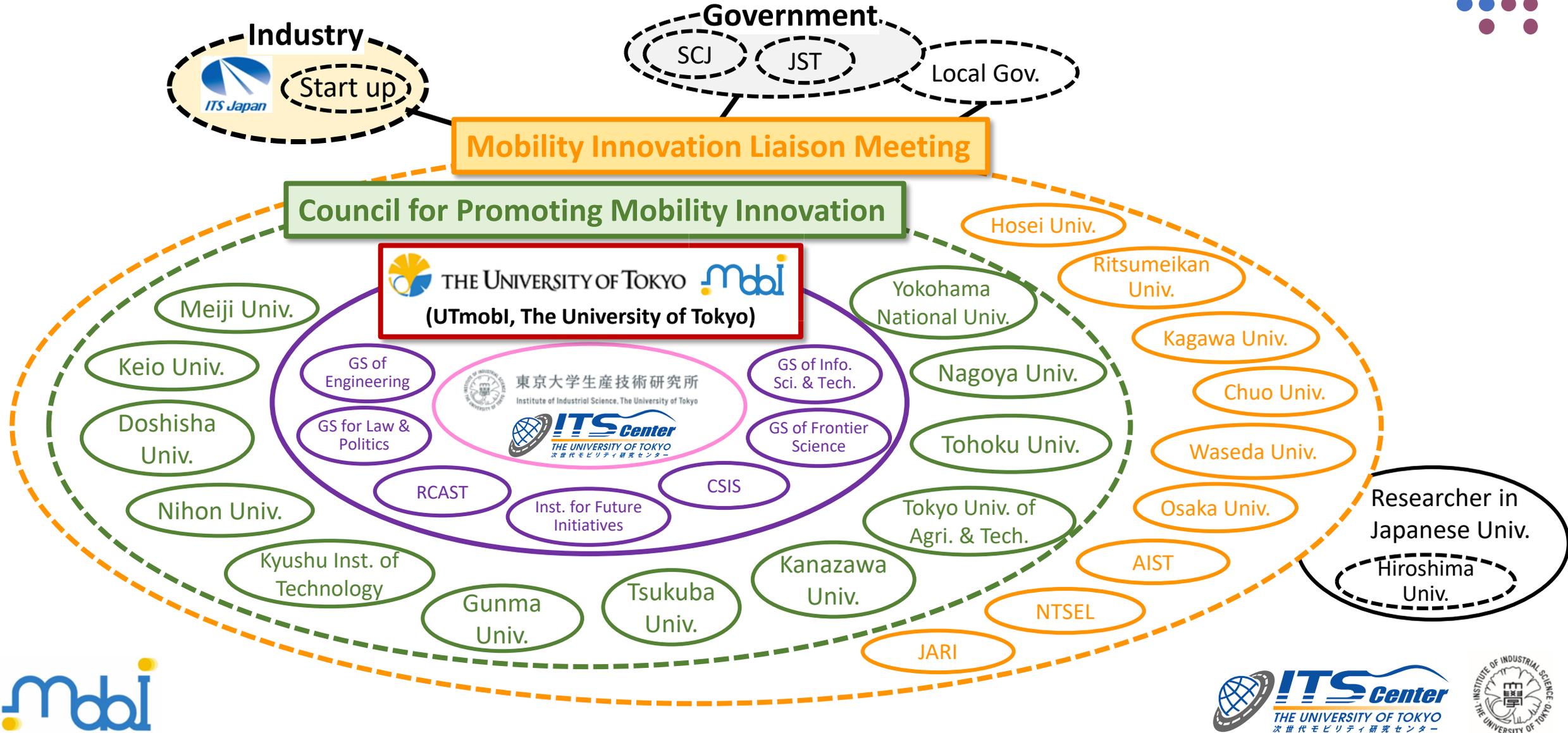
Utilization by venture company of automated driving technologies (Kashiwa Open Campus 2019, The Univ. of Tokyo)



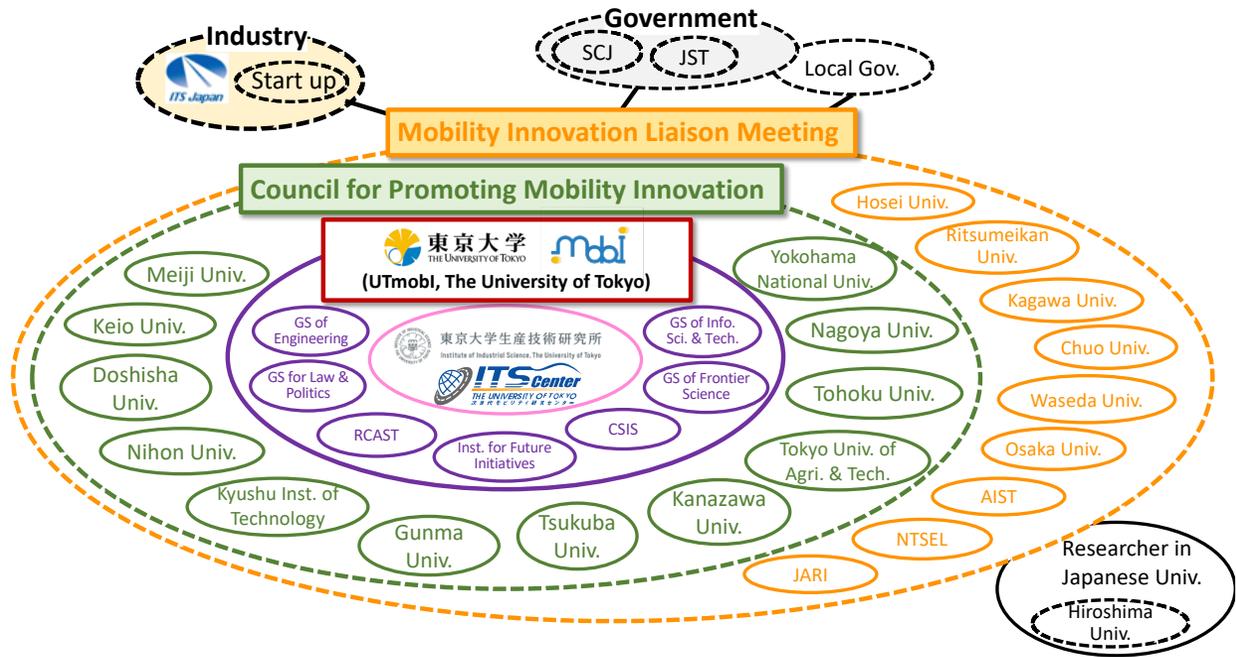
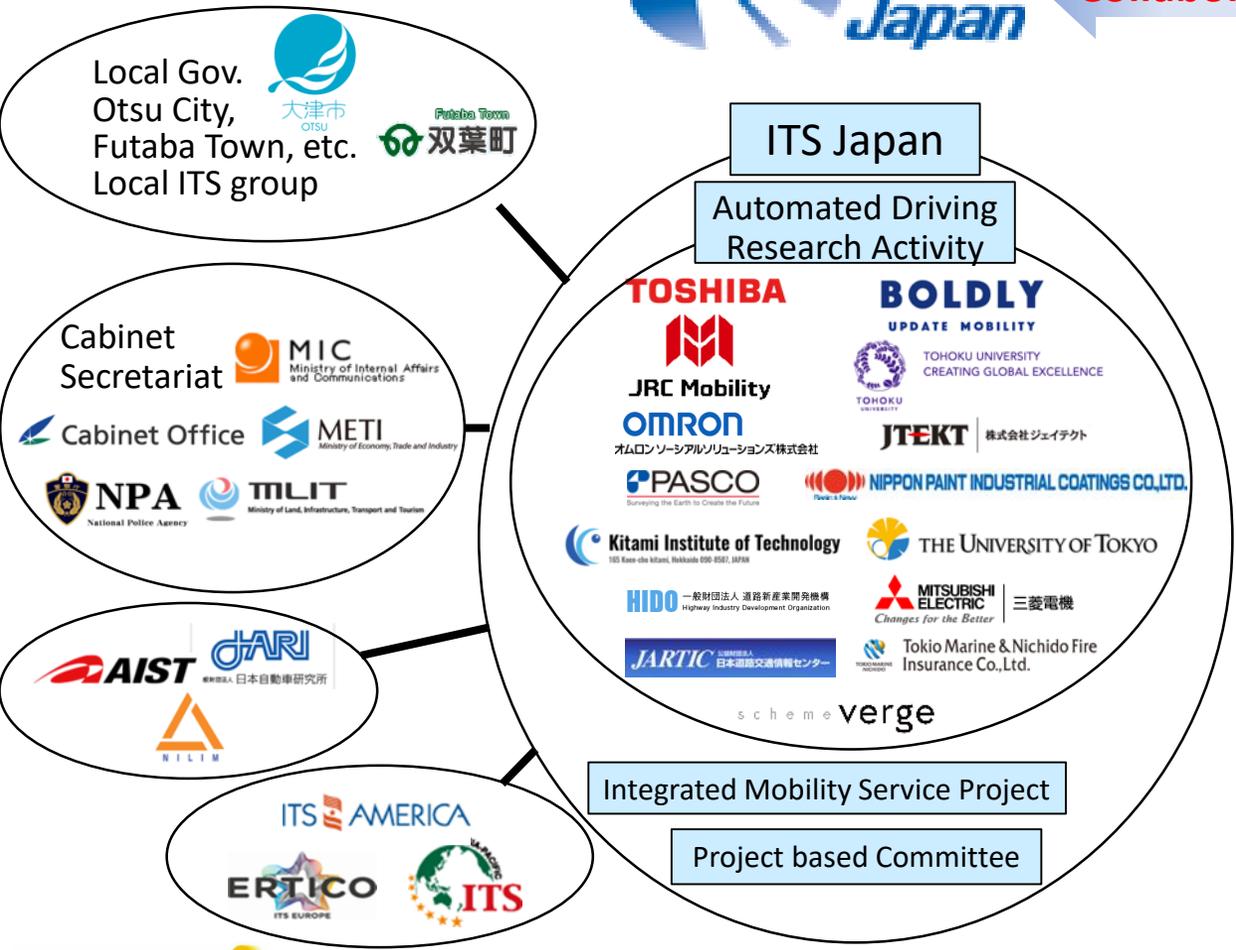
Sustainable Mobility* Framework organization by exploiting automated driving technologies



* Tentative



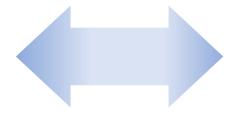
Consortium to realize Level 4 Mobility Services



International Collaboration

- Collaboration with SHOW project in Europe -

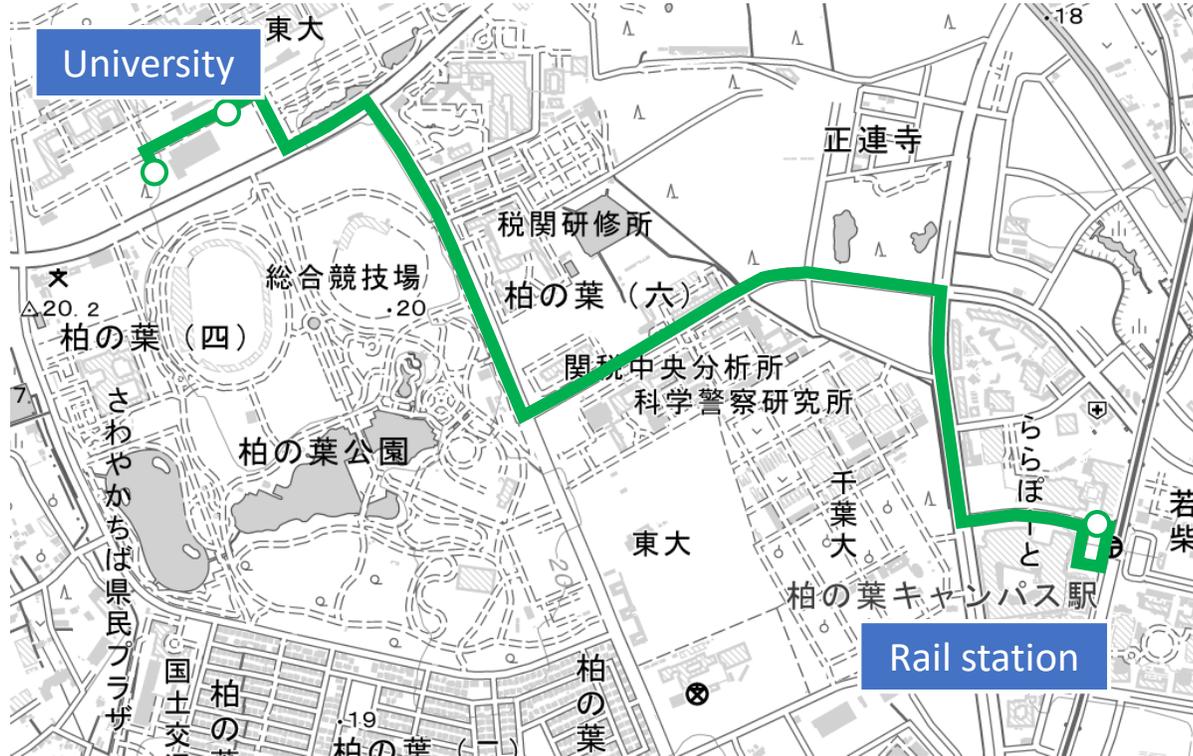
- NDA was concluded between SHOW and ITS Japan/Univ. of Tokyo.
- Discussion has been started for future collaborations.



Long Term Automated Bus Pilot Deployment (Kashiwa-city)



- Long term deployment since 1st Nov. 2019



※Source : Chiriin Map (Denshikokudo Web)



Connect between rail station and university by Automated Bus

Connected-ITS pilot project (Hiroshima-city)



Test vehicle & Test route

◆ Tram : 4 vehicles



Support monitor(HMI)



760MHz・GNSS



Vehicle onboard unit



◆ Transit Bus : 3 vehicles



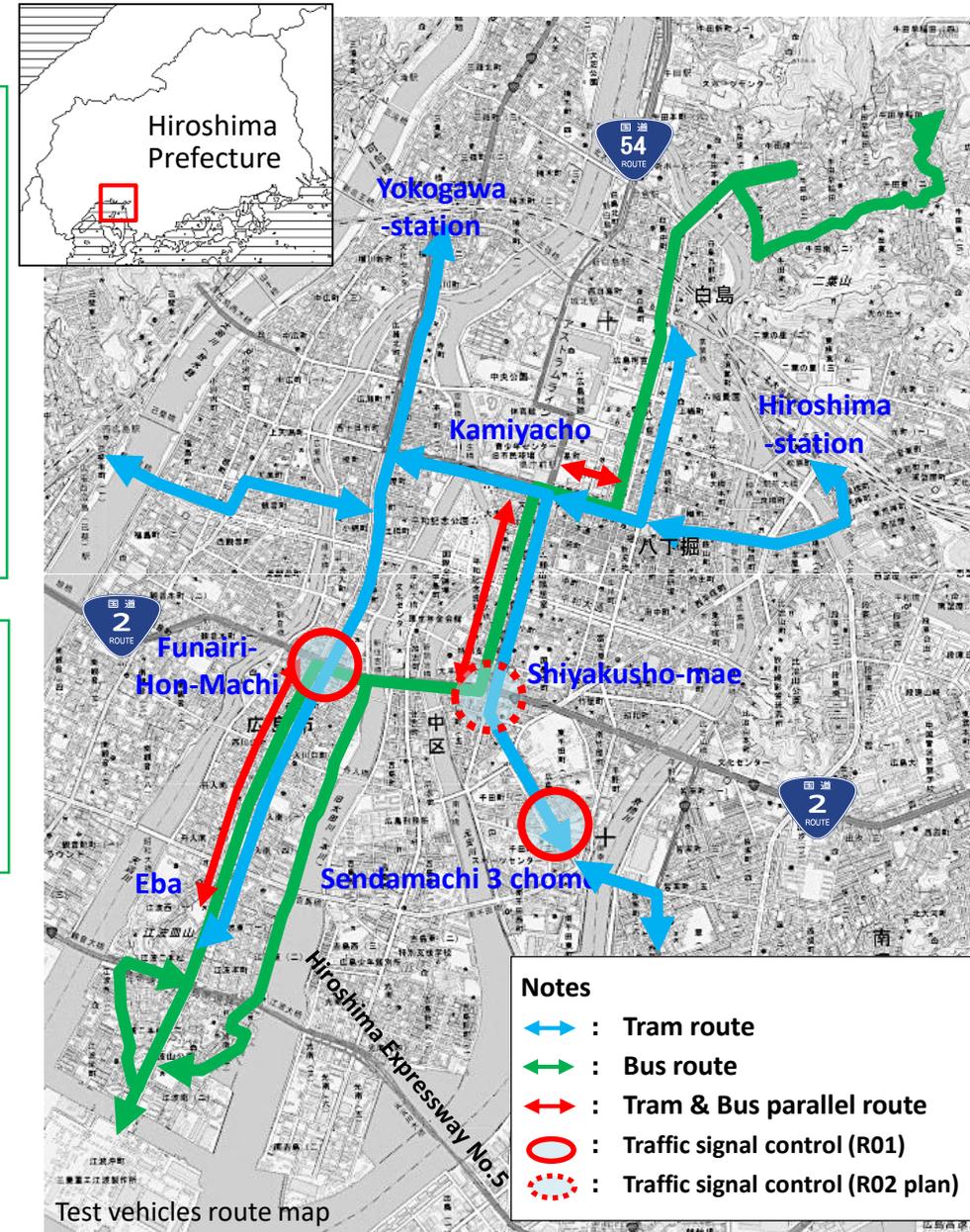
Vehicle onboard unit



Support monitor(HMI)



760MHz・GNSS



Test vehicles route map

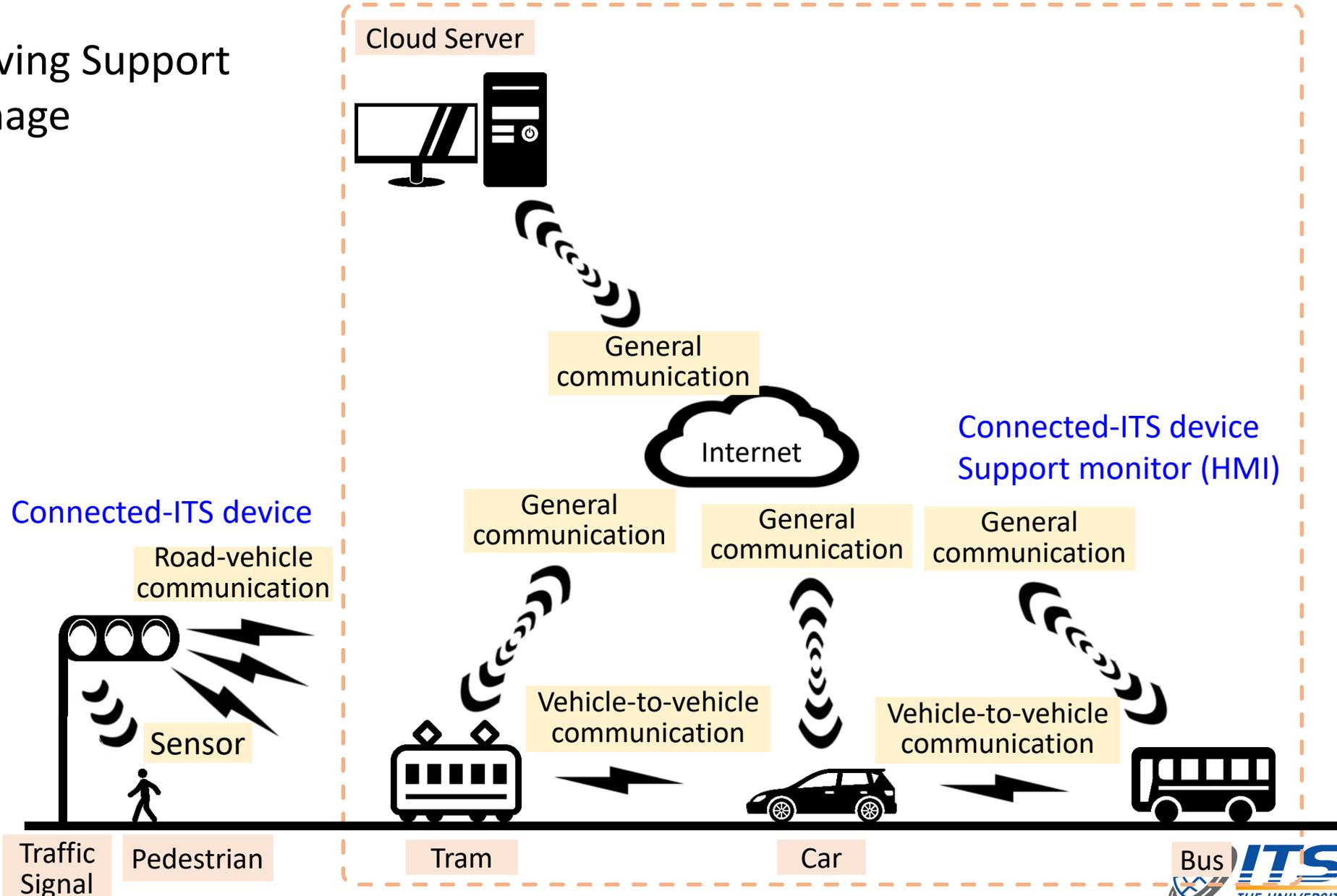
- Notes**
- ↔ : Tram route
 - ↔ : Bus route
 - ↔ : Tram & Bus parallel route
 - : Traffic signal control (R01)
 - : Traffic signal control (R02 plan)



Connected-ITS pilot project (Hiroshima-city)



Safety Driving Support System Image



Connected-ITS device Support monitor (HMI)



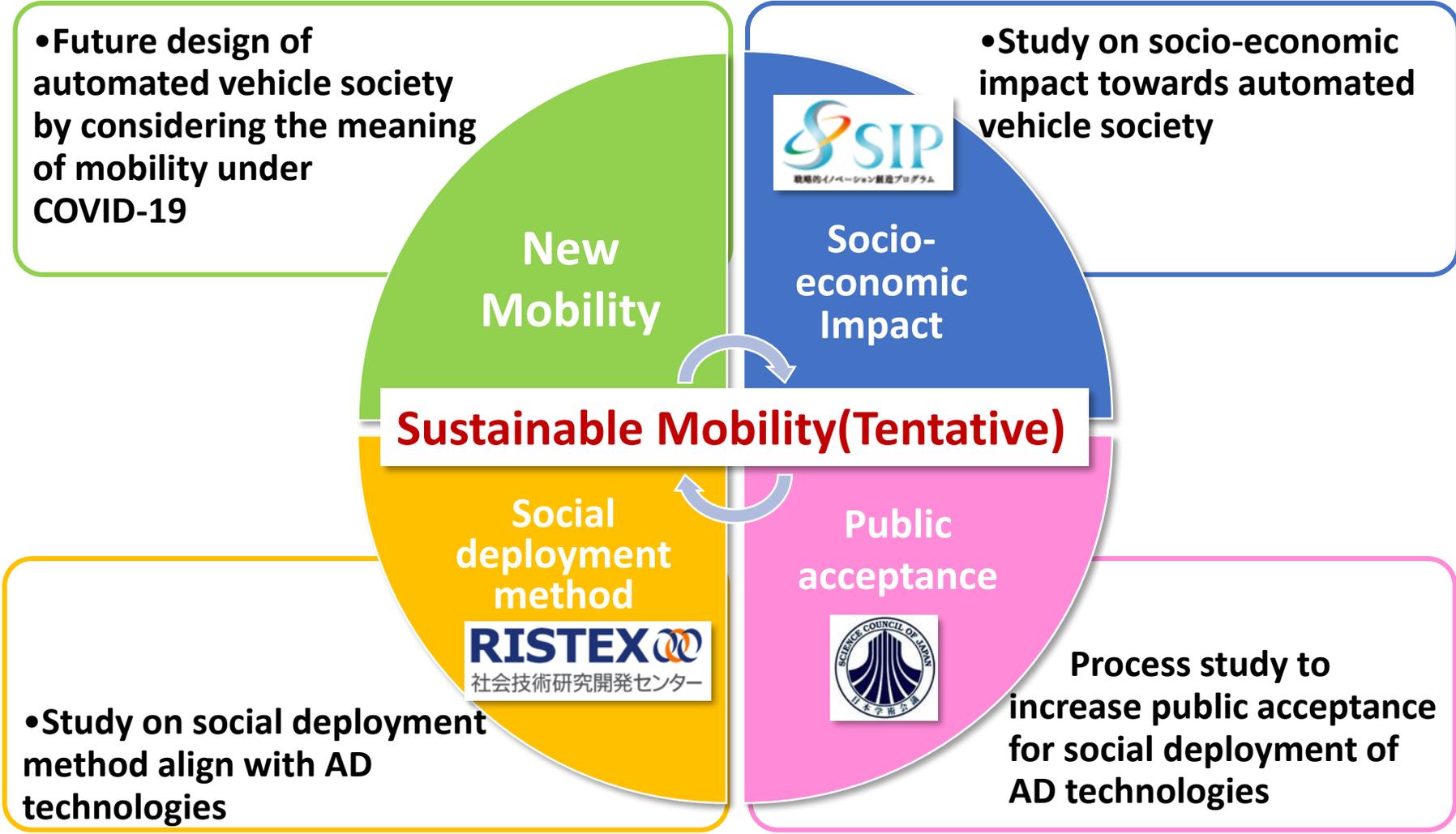
※Source : Public transport priority type Smart city planning project by connected-ITS (Oct. 2020)





Sustainable Mobility* Framework by exploiting automated driving technologies

* Tentative



Mobility Vision for Post COVID-19



Suggestion

- Address demand-flattening and utilize a surplus by demand-flattening.
- Further involvement by public authority for public transport business.
- Realize integrated mobility service by technology development and implementation of new mobility service and MaaS.
- Technology development and system design to contribute effective logistics and productivity improvement.
- Correspond to still-existing mobility demands.

Big wave of society change triggered by infection measures may be a good opportunity to proceed solving these issues, although some of issues cannot be implemented in the past.

Concluding Remarks



- UTmobl and Mobility Innovation Liaison Meeting were established to enhance academia networking to challenge future Mobility Innovation.
- Mobility Innovation Liaison Meeting is promoting activities for Sustainable Mobility.
- Establishment of eco-system is important for sustainable automated vehicle operation.
- Pilot deployments in Kashiwa-city and Hiroshima-city are in progress.