

**「Cross-ministerial Strategic Innovation Promotion Program (SIP)/
Automated Driving for Universal Services/
Construction of Collaboration Structure in Promotion of Joint Research
on Automated Driving with Overseas Research Institutions」**

FY 2021 Report

The University of Tokyo
Mobility Innovation Collaborative Research Organization (UTmobI)

March 2022

“Construction of Collaboration Structure in Promotion of Joint Research on Automated Driving with Overseas Research Institutions” Contents

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2. Create the plan and arrange the establishment of research bodies for promoting international collaborative research in automated driving area

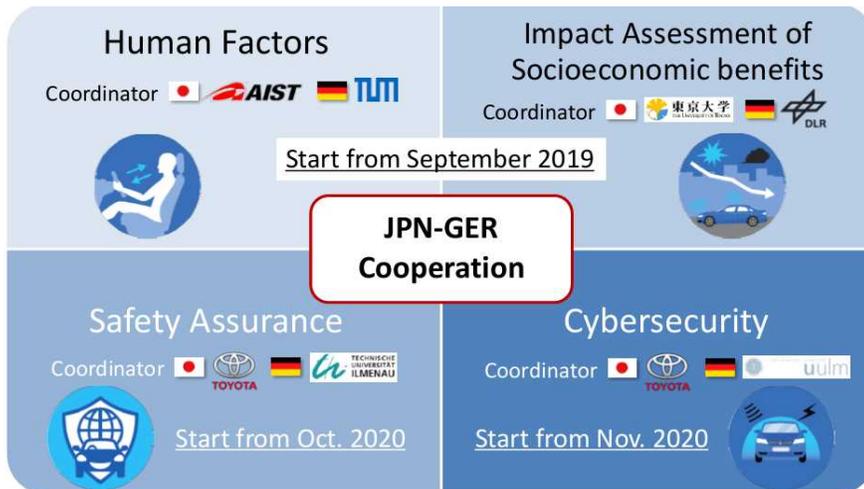
- 1) Studying future sustainable collaboration model
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1. Promote collaboration environments with overseas research institutions and creation of research theme, as a main window of SIP-adus international cooperation

1) Developing environments of international cooperation with government level

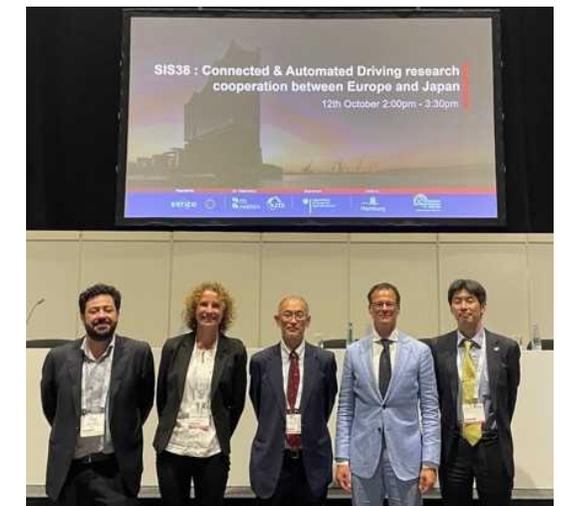
Germany-Japan

- Management of intergovernmental meeting
 - 4th Steering Committee (25th Jun. 2021)
 - 5th Steering Committee (15th Mar. 2022)
 - Coordinating secretariat meeting (26th Apr., 17th May, 14th Jun., 24th Aug., 21st Sep., 26th Oct., 25th Nov. in 2021, 18th Feb., 23rd Mar. in 2022)
- In addition to confirming the progress of the four collaborative items (shown below), discussions have begun on the continuation of Japan-Germany collaborative activities after the end of SIP-adus 2nd phase.



EU-Japan

- Management of intergovernmental meeting
 - Bi-lateral Meeting (1st, Jul. 2021)
 - Coordinating secretariat meeting (7th Sep, 28th Oct. in 2021, 31st Jan. in 2022)
- Organized a joint session in ITS World Congress 2021 in Hamburg, Germany with EC
- The Annual Status Report was prepared to summarize the progress of EU-Japan cooperation.



1) Developing environments of international cooperation with government level

International cooperation window role of SIP-adus



■ Arranged overseas speakers for Keynote speech at SIP-adus workshop 2020

Arranged speakers for Keynote speech from US-DOT and European Commission(DG-RTD) for SIP-adus workshop 2021, and following speakers took a keynote speech;

US : Mr. Kenneth M. Leonard (Director, ITS Joint Program Office, United States Department of Transportation, United States of America)

EU : Ms. Rosalinde van der Vlies (Director, Clean Planet, Directorate-General for Research and Innovation, European Commission)

■ Dissemination of information at international conferences on SIP-adus activities

Attended the following international research conference / Webinar, introduced the activities of SIP-adus, and created a network.

ITS World Congress Webinar “Innovation and Deployment of CCAM” (9th Sep. 2021), ITS World Congress 2021 “Building the Ecosystem”(11th Oct. 2021), TRB Annual Meeting 2022 “Highlights from the 2021 TRB ARTS” (9th Jan. 2022)



2) Creating research themes for international cooperation with expert level

Alliance for Promoting Mobility Innovation

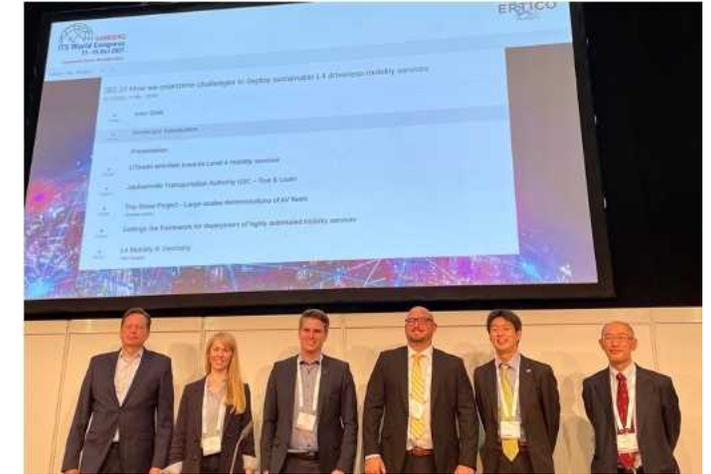
- In order to discuss future themes for international cooperation considering after SIP-adus 2nd phase, and in order to share the latest international research activities of SIP-adus, “Alliance for Promoting Mobility Innovation(APMI)” was held in FY2021.

Time	Main agenda
September 2021	<ul style="list-style-type: none">• New members , information sharing from members• Introduction of international collaborative research theme (RoAD to the L4 project - theme 4)• Launch of “Alliance for Promoting Mobility Innovation” web-site• Information sharing of the latest international research activities
December 2021	<ul style="list-style-type: none">• Information sharing regarding SIP Phase 3 (Cabinet Office)• Status report of researchers’ database update, notice of database updating work• Information sharing of the latest international research activities• Discussion on the meeting after the end of the SIP Phase 2
March 2022	<ul style="list-style-type: none">• Mobility Business Innovation Contest (M-BIC)• Information sharing of the latest international research activities• Consultation on researchers’ database update and utilization• Discussion on the continuation of activities after FY2022

2) Creating research themes for international cooperation with expert level

Sustainable International Collaborative Research Themes: Level 4 Mobility Service Practical Research

- Organized a session to discuss the practical application of Level 4 mobility services at the ITS World Congress (October 2021 @ Hamburg, Germany)
- Collaborative activities with the SHOW project in Europe
 - MOU was signed between European SHOW Project and ITS Japan/The University of Tokyo (October 2021)
 - Held the 1st Joint Workshop (March 10, 2022)

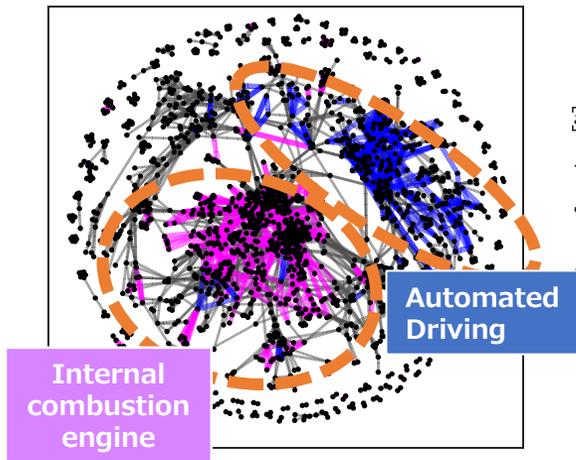


3) Expansion of the database of researchers regarding automated driving

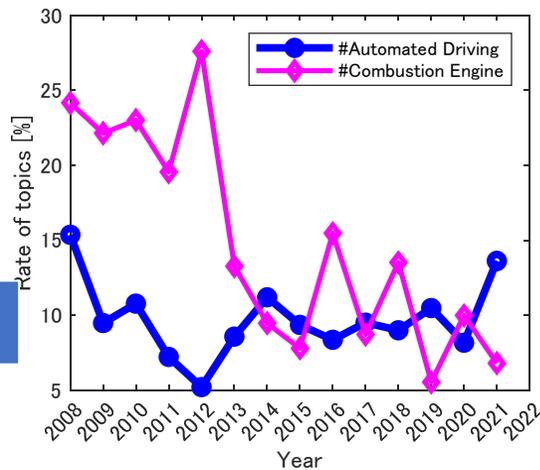
Study on effective use of researchers' database

- In order to create research items (including international collaborative research) and experts network by explore the direction of a research related to automated driving, "co-authored relationship/subject analysis" was conducted as one of the utilization case.
- The procedure for further utilization of data is in progress towards analysis on research trends and on the impact of collaborative activities.

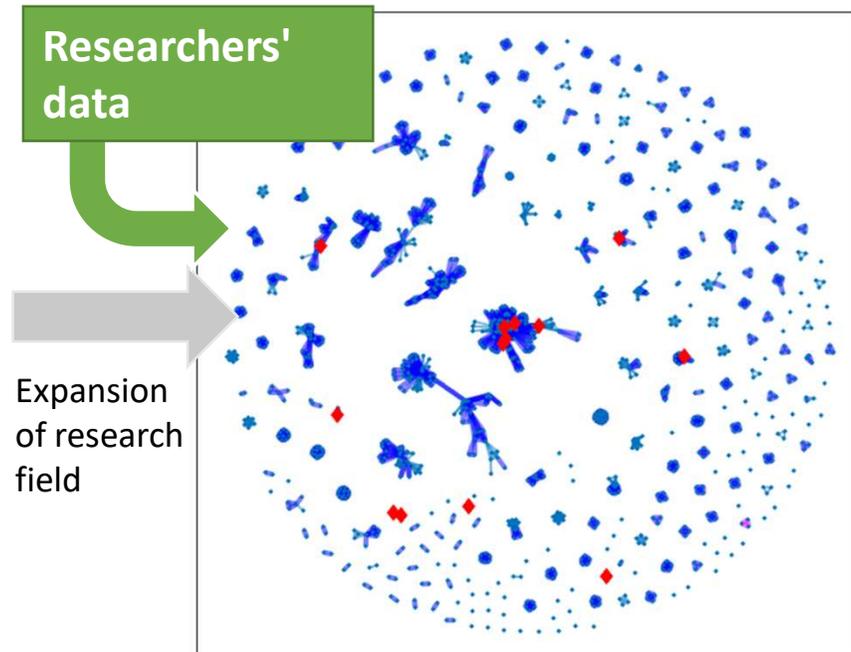
Analysis on automated driving research with JSAE papers



Co-authored relationship analysis



Ratio of subject



Cross-sectional analysis of "automated driving" papers

* Introduced in JSAE annual congress 2022 (spring)

2. Create the plan and arrange the establishment of research bodies for promoting international collaborative research in automated driving area

1) Studying future sustainable collaboration model

Action items and issues towards establishment of a new research body

- The table below summarizes the action items and issues necessary to establish a research body that inherits the role of the APMI, which has been active in the second phase of SIP-adus, from FY2023.

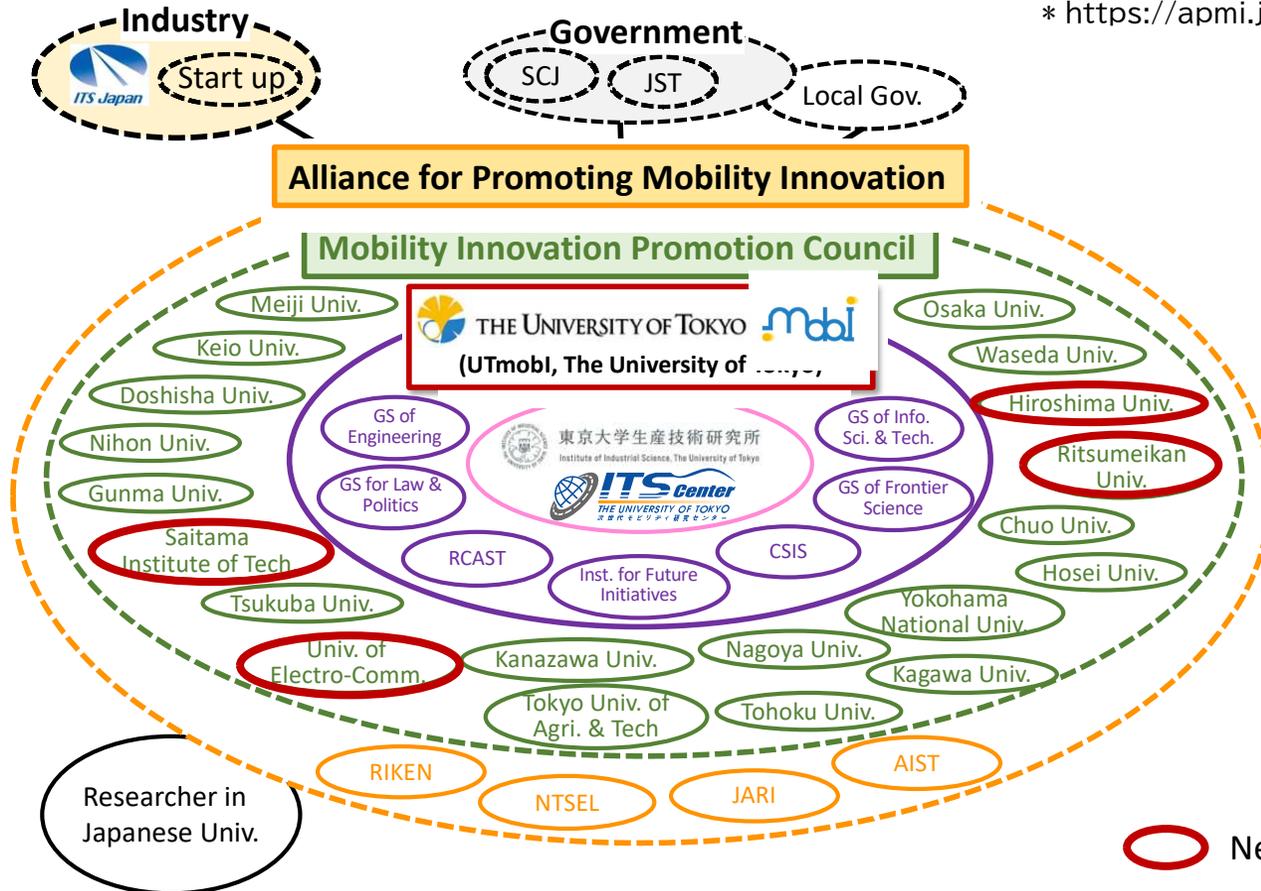
Action Items	Issues
① Study on the role and position of the new body	• Clarification of differences from existing organizations
② Study on the activity plan of the new body	• Balance with operational scale and expected financial balance
③ Trial of activities <ul style="list-style-type: none">• Establishment of joint research structure• Creation of researchers' database• Trial of human resources development activities• Trial of public relations activities, etc.	• Coordination in specific project
④ Study of organizational form	• Clarification of participation merits and data collection
⑤ Coordination with related parties including ministries and agencies regarding (1) to (4)	• Planning and implementation of specific projects
⑥ Preparation for establishment of the new body based on (4)	• Opportunities for public relations activities as a succession organization
	• Securing sustainable operating resources
	• Hearing various opinions
	• Confirmation of necessary legal procedures and preparation of documents

1) Studying future sustainable collaboration model

Strengthening academic collaboration

- Holding the APMI meeting
- Expansion of Alliance members (4 universities)
- Launched APMI website* (Aug. 2021, updated March 2022)

* <https://apmi.jp/eng/index.html>



New members

Member page on website
(English edition)

1) Studying future sustainable collaboration model

Joint research structure centered on academic collaboration

- Regarding the Level 4 Mobility Service practical application research that has been carried out in collaboration with ITS Japan, a consortium consisting of related universities and research institutes applied for and adopted a project under the METI & MLIT.

Major consortium member of RoAD to the L4 theme 4 (Cool4)

< University >

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

Nagoya University, Global Research Institute for Mobility in Society, Institutes of Innovation for Future Society (GREMO)

The University of Electro-Communications, Advanced Wireless Communication Research Center

Doshisha University, Mobility Research Center

< Research Institute >

AIST, Information Technology and Human Factors

Japan Automobile Research Institute

< Industry >

ITS Japan
Mitsubishi Research Institute
Mitsui Fudosan
Panasonic
Shimizu Corporation
BOLDLY

< Local >

Kashiwa City
UDCK (Urban Design Center Kashiwa-no-ha)

* Blue letter : Member of "Alliance for Promoting Mobility Innovation"

2) Creating the plan and arranging the establishment of research bodies

Outline of the new body

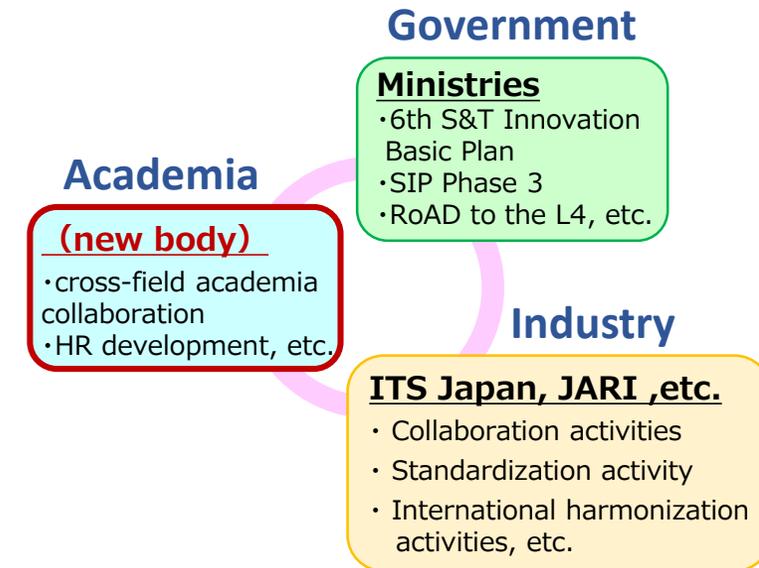
- Considering the establishment of a general incorporated association with a legal personality centered on academic collaboration, which will succeed the APMI activities under SIP-adus.

Establishment time (tentative) : 1Q, FY2022

Role : Inheriting the framework of academic collaboration, it will collaborate and promote initiatives related to mobility innovation in Japan, and contribute to the development of socio-economic and academic research.

Activity plan:

- ① Policy proposals for the society of new mobility era
- ② Promoting collaboration for cross-field R&D and social deployment for the society of new mobility era
- ③ Promotion of academia networking and support of industry-academia collaboration of new mobility
- ④ Promotion of Collaboration with overseas research body and projects of new mobility
- ⑤ Organizing collaborative workshop, seminar on new mobility
- ⑥ Human resource development and public relations of new mobility
- ⑦ Other necessary business



2) Creating the plan and arranging the establishment of research bodies

Discussions with related ministries and agencies

- Continuing from FY2020, a plan regarding the role, position of the organization, activity content, and so on of new body was prepared and discussion meeting with related ministries and agencies were held. The following opinions were obtained.
 - The important points of the Science and Technology Innovation Basic Law and the 6th Science and Technology Innovation Basic Plan are the cooperation between humanities and science. This is a strength, so this move should be a precedent.
 - As a further development of the activities of SIP Phase 2, it would be better to consider it in a way that leads to SIP phase 3, and if it is difficult to do activities under SIP, it may be possible to act as a part of RoAD to the L4 project.
 - I agree on the role and significance of the new research body.
 - The issue is how to set up a concrete organization and how to secure funds. The point is to be able to clarify the needs of the new research body so that the industry can provide operating funds.

END

This report documents the results of Cross-ministerial Strategic Innovation Promotion Program (SIP) 2nd Phase, Automated Driving for Universal Services (SIP-adus, NEDO management number: JPNP18012) that was implemented by the Cabinet Office and was served by the New Energy and Industrial Technology Development Organization (NEDO) as a secretariat.