



Nagoya University COI-NEXT
My-mobility Co-creation Center

**A super-mobile Society that
fulfills everyone's desires
to go, to see, and to participate**



Japan Science and Technology Agency
The Program on Open Innovation Platforms for Industry-academia Co-creation (COI-NEXT)

A super-mobile Society that fulfills everyone's desires to go, to see, and to participate



Target 1

Increased opportunities for social participation and business opportunities through enhanced local mobility

Target 2

Implementing a local mobility system that reduces travel stress, makes travel more enjoyable, and minimizes social costs

Target 3

Establishment of the "Tokai Local-Mobility Model" and its dissemination and deployment to other regions



This center aims to realize a super-mobile society where even those who do not use their own cars have equitable access to opportunities for social participation. The Tokai region is not the only region in Japan with a car-dependent transportation system, and the social costs of excessive car use is high. For those who do not have access to a personal vehicle (cannot or do not want to drive), daily mobility is difficult and deprives them of opportunities to be active. Therefore, using advanced technology, changing business models, and shift in people's mindset, we will build a local mobility system that reduces travel stress, makes local travels enjoyable and minimizes social costs. It thereby advances sustainable regional revitalization through increased opportunities for social participation and business opportunities.

Greetings

Regional public transportation is in decline, making it increasingly difficult to get around our communities without a personal car. The My-mobility Co-creation Center will pioneer a completely new type of local mobility through new technologies such as automated driving and revolutionary new business models.

Designated Professor **Takayuki Morikawa**

Project Leader (PL)

GREMO,
Institutes of Innovation for Future Society,
Nagoya University,
Tokai National Higher Education and Research System



My-mobility Co-creation Field

The co-creation field is being developed in the Tokai region to realize our vision, with the goal of eventually promoting and expanding these projects throughout the rest of Japan.

Gifu City, Gifu Prefecture

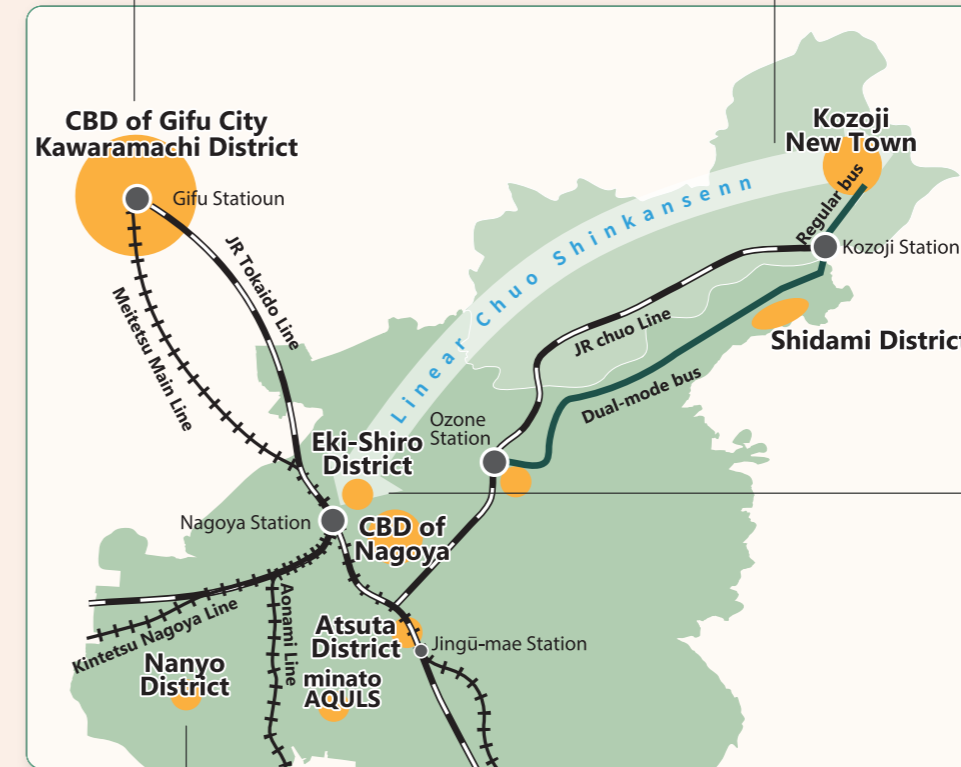
Gifu "Yuran (Exploring) City" Revitalization Project

Regional innovation to revitalize the "Yuran (Exploring) City" concept with automated buses to enhance urban mobility.

Nagoya City and Kozoji New Town, Kasugai City, also in Aichi Prefecture

Nagoya North-East Corridor Project

Regional innovation combining automated driving, advanced bus technology, on-demand transit, MaaS, and other initiatives in the corridor connecting Nagoya Station and Kasugai City's Kozoji New Town.



Nanyo District of Nagoya City, Aichi Prefecture

Nagoya South-West Corridor Project

Regional innovation through data-driven MaaS (Mobility as a Service) programs, including resident-led co-creation of mobility service, urban bike-sharing services, and a variety of coupons for local shopping areas.

Eki-Shiro District of Nagoya City, Aichi Prefecture

Historic Commercial District Revitalization Project

Regional innovation through the introduction of advanced mobility systems, such as automated driving, that incorporate technologies to enhance the value of travel in the historical commercial Eki-Shiro District, located between Nagoya Station and Nagoya Castle.

Okino-Erabujima Island, Kagoshima Prefecture

Local mobility project for decarbonization on remote islands

Regional innovation for decarbonization via sustainable, eco-friendly initiatives that will work even for remote islands--through the introduction of automated driving and other mobility technologies and through support for local communities.



Research and development to realize the vision

In order to innovate and maintain mobility within the scope of daily life, so called "local mobility," it is necessary not only to provide low-cost, high-quality services utilizing advanced technologies such as automated driving, but also to transform business models to solve the profitability problems inherent to public transportation. Here, we are tackling the research and development challenges that need to be overcome in order to get there.

Make local mobilities sustainable

Business model changes for sustainable local mobility services

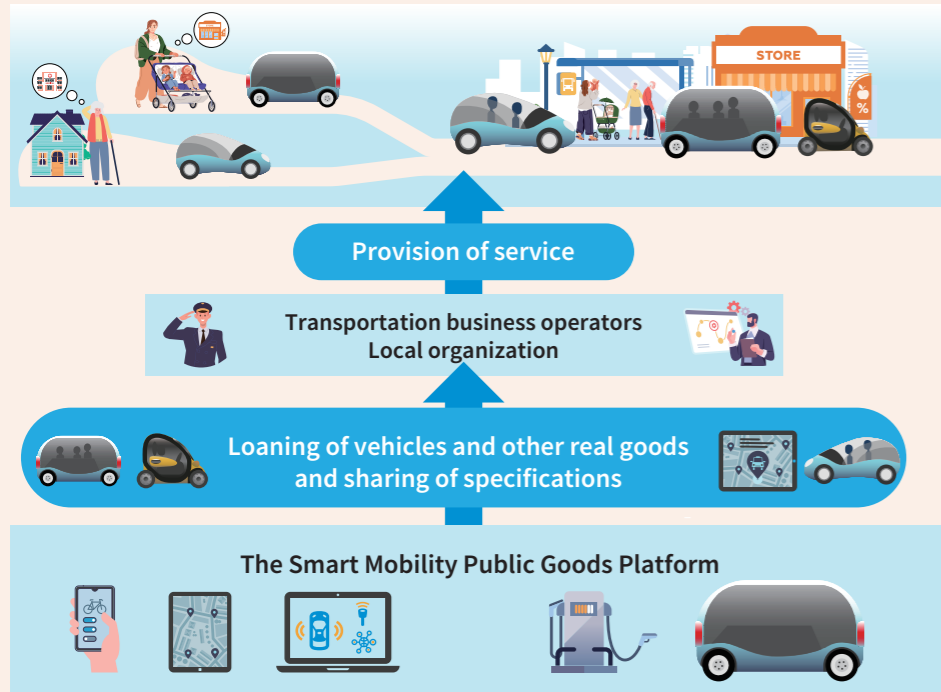
We will make policy proposals for the establishment of a "My-mobility/My-town" business model and a smart mobility public goods platform, with the aim of realizing sustainable local mobility.

- #Regional public transportation #Resident-led #A sense of ownership
- #Examination of management approach
- #Smart mobility as a public good #Institutional design

My-mobility/My-town



The Public Goods Platform



For comfortable travel

Development of comfortable and low-cost local mobility systems

We will develop advanced local mobility systems (door-to-door medium-volume transportation systems, automated buses, and automated personal vehicles) that will dramatically improve the level of service for secondary and tertiary transportation in the region.

- #Personal Rapid Transit : PRT #Smart Roadway Transit : SRT #Guideway Bus
- #Automated driving small-scale local mobility #Advanced bus systems

Personal Rapid Transit : PRT



Guideway Bus



Automated driving small-scale local mobility

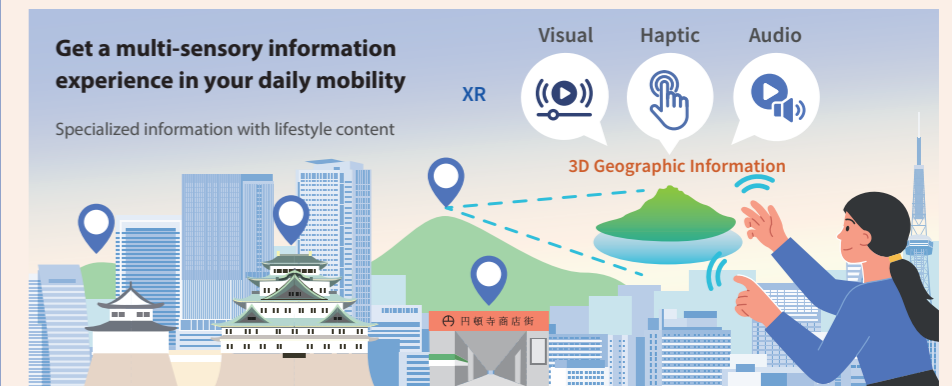


Make mobility fun with ICT technology

Development of a multi-modal infotainment system to enhance mobility value

We will develop a multi-modal infotainment system that provides experiential content that makes use of the situation and information while the vehicle is in motion, transforming travel from a stressful experience to a pleasure.

- #3D geographic information #Cyber-physical #Lifestyle contents
- #Ultrahigh-speed information communication #Multi-modal interface



Social acceptability

Evaluation of social value and promotion of social implementation through the use of convergence knowledge

We are also working to assess the impact of advanced mobility systems on all aspects of people and society as well as put legislation in place to ensure that these systems run smoothly.

- #Well-being assessment
- #Travel stress assessment
- #Legislation #Road Traffic Act
- #Road Transport Vehicle Act
- #Road Transportation Act

Well-being assessment



Legislation



Implementing advanced technology

Flagship project to promote progressive regional development and responsive R&D

We will demonstrate R&D items consisting of advanced technology, institutional reform, and mindset transformation in actual projects, and feed back new issues to R&D items, while at the same time promoting regional development.

- #Urban planning #Value co-creation #Open innovation



Automated driving demonstration in the Endoji shopping arcade



Automated driving demonstration in Kawaramachi District, Gifu City



Last-mile automated mobility service operated by an NPO in Kozoji New Town, Kasugai City

Installation of local mobility systems for decarbonization on remote islands

We are working to redesign decarbonized regional public transportation by outlining a phased mobility introduction strategy that takes into account energy limitations on remote islands, taking advantage of eco-friendly simulations and automated driving technologies.

- #Smart Island #Decarbonization #Local mobility design
- #Sustainable local communities

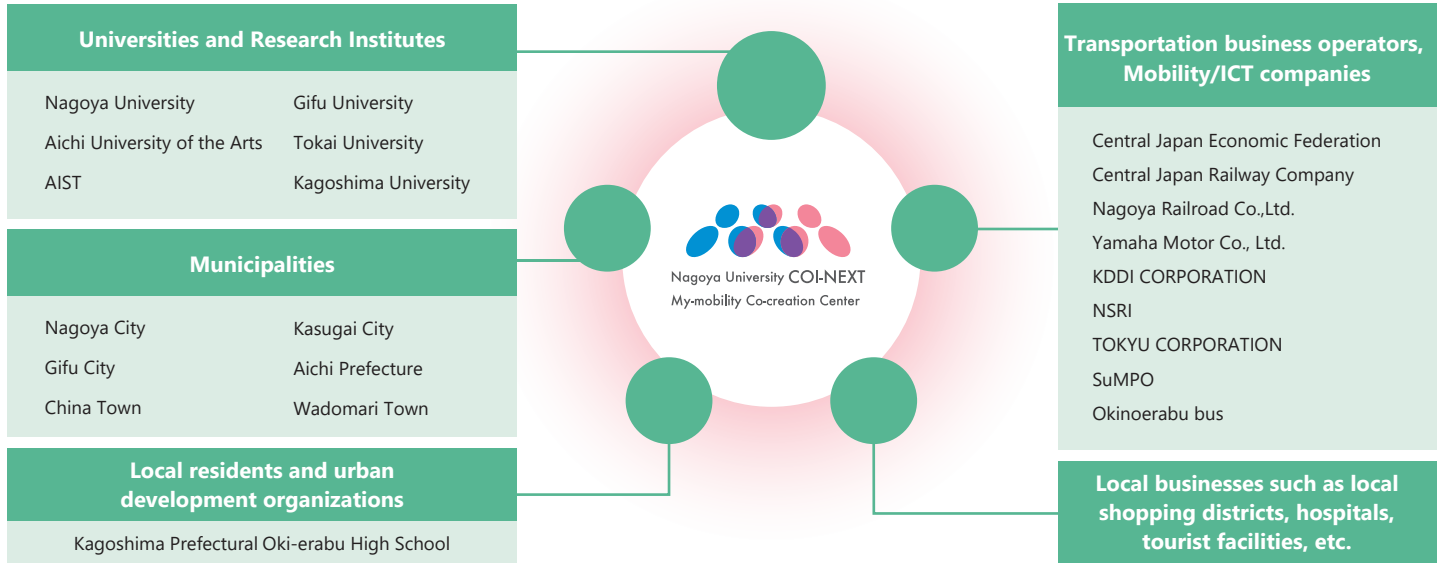


Special automated electric cart based on the "Island Harmony" concept

My-mobility Co-creation Platform

The center is building a co-creation platform involving a diverse range of stakeholders, including universities, research institutes, transportation companies, mobility and ICT companies, local governments, local businesses such as local shopping districts, hospitals, tourist facilities, and local residents.

The center is led by members of the Global Research Institute for Mobility in Society (GREMO), one of Japan's largest comprehensive mobility research institutes, and is based on the experience gained during Nagoya University's COI (completed in FY2021). The Institute is working closely with the Chubu Economic Federation, the two major transportation operators in the Chubu region, and local governments to develop innovation in local mobility.



Activity bases and research infrastructure

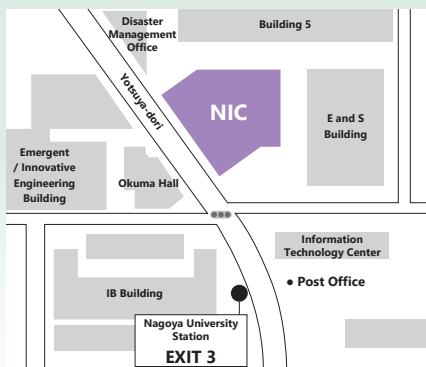
The National Innovation Complex (NIC), located on Nagoya University's Higashiyama Campus, is equipped with experimental facilities and equipment related to mobility, one of Nagoya University's strengths, and provides a venue for innovation.



Contact

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Recruiting project participants

The COI-NEXT My-mobility Co-Creation Center at Nagoya University is looking for partners who want to work together with us to realize our vision!

Eligibility

- Organizations and municipalities facing local mobility challenges
- Businesses and R&D institutions that wish to participate in the activities of the center

Web Site

