

# Development of technology to improve the mobility environment in suburban residential areas using "new mobility"

## Urban Planning Department

We are conducting research on the restructuring and improvement of suburban areas based on suburban residential areas.

We aim to develop technologies for the revitalization of suburban residential areas through research on the complexification of facilities for convenient living and the introduction of sustainable transportation service that utilizes new mobility.

## Social background and challenges

- Suburban residential areas that were planned and developed after the high-growth period are becoming old towns over time, and their residents have increasingly difficulty in moving around independently due to aging, etc.
- For sustainable urban development, it is essential to revitalize suburban residential areas as regional base and to restructure suburban areas and improve their nature as regional base.
- The issue is to improve and secure transportation services, which is one of the keys for solutions in revitalization of suburban residential areas.

## Research contents

### Implementation of social experiments using Green Slow Mobility

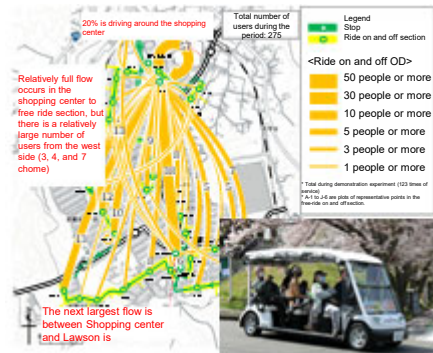
In cooperation with local NPOs and local residents, we conducted a multi-year social experiment in three suburban residential areas near the Tokyo metropolitan area, and implemented interviews with local governments and transportation operators, as well as questionnaire surveys to local residents and users. Based on these, we are working to analyze and accumulate knowledge for social implementation.

#### <Perspectives to be clarified for the realization of sustainable transportation service>

- Service level ○ Effect of introduction ○ Operation method ○ Safety standard

#### [What is Green Slow Mobility?]

- A generic term for small mobility services including vehicles that utilize electrically powered vehicles capable of traveling on public roads at the speed of less than 20 kilometers per hour.
- Commonly called "Grislo," it has five characteristics: "electric," "small," "lightweight," "low speed," and "safe."

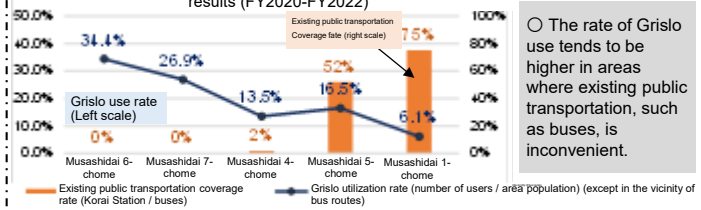


Social experiment (Koma-Musashidai, Hidaka City, Saitama Pref.)

### Analysis for social implementation of Green Slow mobility

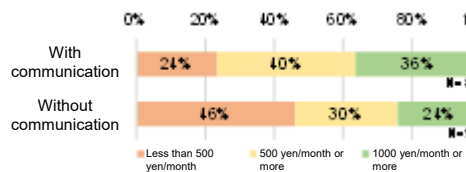
- We identified new ways to introduce mobility according to regional characteristics by advancing analysis from various perspectives, such as the relationship between user attributes and user satisfaction, using ride on and off data (number of users, OD, etc.), data from drive recorders and sensors, and results of questionnaires, etc.
- We obtained know-how for social implementation, including points of attention in discussing with related organizations, how to build consensus, and the process up to introduction.
- The results of the research will be compiled into a guide, guidelines, etc., and will be fed back to public organizations nationwide as information for social implementation.

#### <An example of analysis> Analyzed using the user questionnaire survey results (FY2020-FY2022)



○ The rate of Grislo use tends to be higher in areas where existing public transportation, such as buses, is inconvenient.

#### Relationship between the rates of existing public transportation coverage and Green Slow utilization



○ Users who experience communication in the vehicle tend to have a higher willingness to pay the fare.

#### Relationship between communication and the amount of willingness to pay\*1

\*1 In the case of future social implementation

By maintaining and revitalizing suburban residential areas through improved mobility, ensure sustainable regional bases and contribute to the formation of an intensive urban structure.

☞ See the following for related articles.

- Development of a method for grasping and estimating traffic flow using big data on urban traffic, etc. (p. 113)
- Research on urban functions and public spaces based on new lifestyles (p. 115)