

"Future-type mobility" smuggling up to people

- The state of future mobility considering in activities of communities and enterprises -

Executive Summary

1. The background and objectives of this research

The "future-type mobility" means the "mobile object contributing to the movement of people." In Japan rushing into the super-aged society, a "car" is not necessarily suitable mobility originally. Rather, it is expected that the new mobility suitable for each migrant is brought forth based on the various technologies cultivated in the automobile industry. Not only the conventional industry but also the improvement in ICT, etc., contribute to the output of background. Automatic-operative-method technology is one example. Besides, it is expected that other new technologies or new products are provided to migrants. The expectation is natural in Japan, where the population composition, the state of public transportation, etc., differ entirely depending on the area. Based on the presupposition, the base brought forth by the "future-type mobility" industry and market has been confirmed in the research over three years.

2. The composition and outline of this report

This fiscal year research focused on communities and researched what kind of mobility is selected in more extensive depth after surveying the transport policy in certain areas. The analysis of multiple areas' activities enables examining whether it can be generalized (modeled) under certain conditions. If it can be generalized, it can be expected to inject the "future-type mobility" satisfying the content. It can also be a trigger to draw out the "future-type mobility" industry in Japan (Chapter 1.)

The following ten cities were noted this time (see Table 1.)

Table 1 Hearing targeted cities and the low-speed electric community bus "MAYU" running in Kiryu City, Gumma Prefecture (4)

Local mid-sized city	(1) Wajima City, Ishikawa Prefecture	(2) Kyotango City, Kyoto Prefecture	(3) Toyooka City, Hyogo Prefecture	(4) Kiryu City, Gumma Prefecture	(5) Aizuwakamatsu City, Fukushima Prefecture
Big city suburbs	(6) Tama City, Tokyo Prefecture	(7) Kasugai City, Aichi Prefecture			
Local big cities	(8) Utsunomiya City, Tochigi Prefecture				
Core big cities	(9) Kyoto City, Kyoto Prefecture	(10) Kobe City, Hyogo Prefecture			



In addition, hearing surveys of companies developing business centering on mobility (Chapter 2) and the mobility manufacture side (Chapter 3) were also conducted. In Chapter 2, two companies, Yamato Transport and Odakyu Electric Railway, were focused, and the activities to improve the "local" value were surveyed by using mobility as a tool. Concerning two companies' activities, different business, such as services to help local residents with problems and the progress of MaaS, was focused. However, although the content differs from each other, both companies aim at the social activities to enhance the local value by using management resources in the "area," where their business is developed, from the viewpoint of the residents in the area. Also, the two companies' activities mentioned above made it clear that mobility is one tool to be used for the service, not a leading player. Both companies pointed out making efforts to improve the local value by understanding the incidents (reality) that are really occurring in the area from the local viewpoint and introducing system tools, such as mobility and ICT, to resolve issues and provide services.

In Chapter 3, a continuous survey was conducted for two companies adopted in the previous actual condition survey, and the change between the periods was confirmed. A new survey for the manufacturers with the robot technology was also conducted, one of the "future-type mobility" preparations was confirmed from a new viewpoint. All three cases reviewed in this chapter intended to provide mobility from each user's viewpoint. However, on the other hand, some cases suggest that it is not easy to inject new mobility. How is new mobility injected the mobility market smoothly? In this fiscal year research, concerning new mobility and its technology, it was recognized that it is not well-known that many manufacturing enterprises are asking for deregulation or working on a demonstration test or a social implementation experiment. How is the great "wall" facing manufacturing enterprises, such as legal regulation, overcome? It was pointed out anew that the public opinion as pointed out by enterprise's cases introduced in this report would be required, and users need to raise their consciousness.

Following the FY 2017 research, Chapter 4 summarized the overseas mobility industry's trend mainly based on literature, newspaper report, enterprise Website, etc. Overseas cases are taken up here to confirm the mobility industry trend in Japan and that of overseas in parallel. Since the legal regulations concerning a car in Japan and foreign countries is different, they should not be compared uniformly. Even so, it highlights that the mobility environment in Japan is extremely different from overseas.

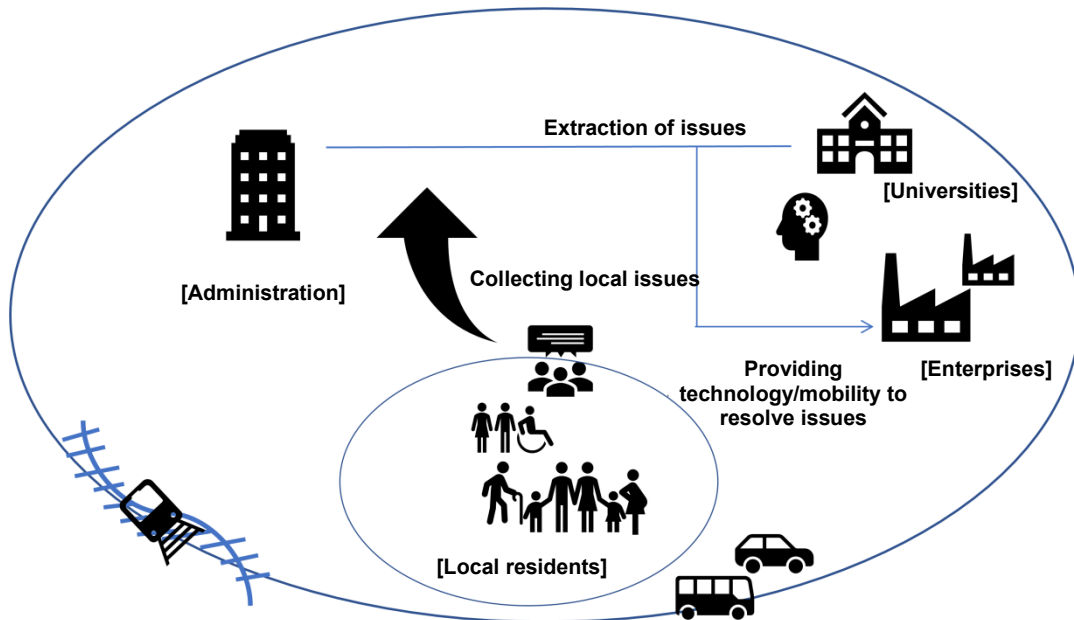
3. Closing remarks

This report confirmed the deployment to the "future-type mobility" centering on areas and enterprises. The conclusion (Chapter 5) is that the areas taken up by this research identified residents' traffic movement issues and have prepared the mobility environment from the residents' viewpoint. The targeted areas have injected mobility and mobility service suitable for the areas as the measures for local traffic issues. While it also includes so-called mobility management, the activities beyond the range of public transportation are deployed.

Therefore, concerning this research report's hypothesis of "whether it can be generalized (modeled) under certain conditions by analyzing the activities in multiple areas," a negative answer is drawn. At the present stage, mobility has been injected to resolve each area's issues, and the mobility injection based on the X urban model has not been generalized yet. However, possibly, there are many things to learn from each city's cases taken up in this research. Also, in the cases of enterprises developing business centering on mobility use, enterprises are deepening their activities that can be said to be a mobility service while their

entering an area, in what kind of areas and how the mobility is used. The following state was confirmed: The manufacturing enterprises bringing forth mobility itself repeatedly examined "what kind of areas their own products fit" and "in what kind of situations they are used." In Japan's activities, activities of not only three parties of the place called a community, a user (resident, enterprise) and a manufacturing enterprise but also the administration side or a public institution such as a university were confirmed, which is important. The activities and approach in which these four parties are main players are a key to the "future-type mobility" industry and the expansion of the market (see Fig. 1.)

Fig. 1 The state of the future-type mobility introduction centering on an area



It is obvious that the automobile industry, which was Japan's strength, is changing significantly. It is changing from the business model of increasing production of and selling cars to the model of allowing diversity according to the situation requiring a car (mobility) and producing required numbers. Also, the manufacturing business itself must change to apply mobility to the situation, such as urban development and amusement. We will change the vector and range of industry to build mobility with different characteristics with small and medium enterprises and venture businesses. Just such a series of activities will make wealthy Japan's "future-type mobility" market.