

# Initiatives for Locally Produced and Locally Consumed Mobility

Kazuhiko Saito <sup>1)</sup>

*1) Nagaoka Institute of Design, Department of Product Design  
4-197 Senshu, Nagaoka-shi, Niigata, 940-2088, Japan (E-mail: saito@nagaoka-id.ac.jp)*

**KEY WORDS: Vehicle development, Design, Vehicle plan (B2)**

“Tisan-Tisyo” means local production and local consumption the area, which are popular wards for agriculture and their crops. The one of major industry in Nagaoka are various types of the metalworking. Nagaoka-shi, Niigata pref. is the area where processing and the production of metal products are prosperous, and approximately 191 companies classified in metal product production in the city operate it. clarifying whether it is possible if make use of this local industry, and produce it in an area, and do the local production for local consumption type mobility assuming what local, use with a study theme, and is the mobility of what kind of form of the study is intended. I started a study in 2015, and I performed two prototype production of the first and second one until now, and possibility and a problem of Nagaoka and the mobility production in the Niigata area became clear.

Concept "Casual Agricultural Bike".

13,165ha equal to 6.8% of areas of the city is the cultivated land, and, in Nagaoka-shi, about 19,900 people of 7% of population become the agriculture household number. when thought about a local characteristic, assuming the thing that was available for the work in the fields and the assistance of the crop and the crop transportation of the private vegetable garden scale, considered the role as the high farming car of the mobility, and did a concept with "a casual agricultural bike".

As a condition of the mobility which supported a living, it was usable casually and established a small motorbike (following, moped one kind) equipped with engines in this way less than 50cc cubic centimeter displacement which it was cited in that maintenance was easy, and there were few financial burdens with the category of this mobility and aimed for structure, specifications to be established within the performance and the size to meet this standard. In addition, I decided to have possible performance for the run of the upon the snow from December through March if it was road-surface condition of the degree that a car could run because it was a snowfall, an area with much snow.

As a result of having performed questionnaire survey after the completion of the first prototype (Fig.1), it understood generally that there was a pending problem in the getting on and off characteristics although there were many favorable opinions. There was the following comment by the hearing investigation from old one. "The car is not necessary anymore but does not want to get into a senior car. This was waiting for such a vehicle in the middle existence. It is only hard that I put up a foot when I get on. A target could find possibility of the development and, as the local mobility which wanted you to do something about there, thought an active senior to become easy to thereby use even other age and decided to produce a Second prototype with an aim over the getting on and off inclination. I took in the matter which became clear by questionnaire survey and did the flame the seat ahead with a cheap design through a fall, a foot like a motor scooter to be able to ride with feet together. I assume the center part battery space and can put the baggage such as bags by flattening the top surface. Regardless of age sex, it thereby became the frame shape that it was easy to get in. (Fig.2)

A past study was able to confirm that the production of main parts with the drawing was possible from a result in in Nagaoka-shi and Niigata pref. In addition, I think that the procurement prospect of the hardware concerned with the production of the local production for local consumption type mobility stood because the mass production parts are to utilize the Internet business, and acquisition is possible.

If the vulnerable road users including the elderly person thought about the situation that was not appreciated in the area, it was revealed that it was necessary mobility from questionnaire results. But it is a research stage now and predicts it when the further problem becomes clear by using it in future in real environment. I aim at the mobility having high completeness by social implementation and am going to promote a project.



Fig.1 First Prototype



Fig.2 Second Prototype