

# Toward Urban Sustainability and Assessment of Future Urban Images

KIUCHI Nozomu (Dr.(Eng.)), Head, Urban Planning Department, Urban Disaster Mitigation Division

NISHINO Hitoshi, Head, Urban Planning Department, Urban Facilities Division

SAKATA Tomohiko (Dr.(Eng.)), Senior Researcher, Urban Planning Department, Urban Planning Division

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## 1. Introduction

The Urban Planning Department is carrying out “Research on assessment of future images of urban/rural regions during a period of population decline”, with the cooperation of the Research Center for Land and Construction Management. Its purpose is to support the implementation of modulated urban and regional policies typified by “compact cities”, which will be sustainable under tight financial and environmental restrictions in local cities, where the population is expected to continue to decline in the future, by developing assessment tools and methods permitting a more rational selection of policies related to future urban structures, by objectively comparing multiple alternative proposals consisting of groups of policy measures<sup>1)2)</sup>.

## 2. Outline of achievements of the research

Figure 1 shows the structure of the assessment tools which have been developed and an outline of the flow of assessment using the tools. The tools consist of a model which estimates the impact of alternative policy measures on future urban structures, and a model which evaluates the estimated results, both of which run on a personal computer.

As the Future Urban Structure Estimation Model, a land-use transportation model, which is used in such cases overseas, is adopted, and introduces perspectives needed for the period of population decline, and responds to a wide variety of entry data. The Future Urban Structure Evaluation Model, on the other hand, can calculate 36 kinds of indices spanning five themes: daily life, safety, environment, vitality, and cost. Case studies were carried out of three cities and regions with differing characteristics, confirming their effectiveness.

In the near future, the aim is to prepare and promote the wide use of a guideline to assessments of future images, in order to contribute to the application of these research achievements by regional governments, etc. It has already been introduced at the National Conference of Urban Planning Department Managers sponsored by the Ministry of Land, Infrastructure, Transport and Tourism, as “an example of a Scenario type Assessment Method” for proposed revision of “Urban Planning Operational Guidelines”.

## 3. Conclusions

The use of assessment tools which were developed and the implementation of “Future Urban Image Assessment”, will permit rational selection based on objective quantitative comparisons of alternative proposals and allow the study of specific images of “compact cities” suited to each city. And by preparing alternate proposals and comparing the results during citizens’ participation deepen understanding of desirable urban structures by citizens, leading to greater involvement of citizens in urban planning.

[Reference]

- 1) K. Yamashita: City Renovation to Survive the Depopulation and Super-aging Age, Annual Report of the NILIM, 2009.
- 2) N. Kiuchi et al.: Development of Assessment Method for Future Urban Visions in the Depopulating Period, SB11 Helsinki World Sustainable Building Conference, 2011.

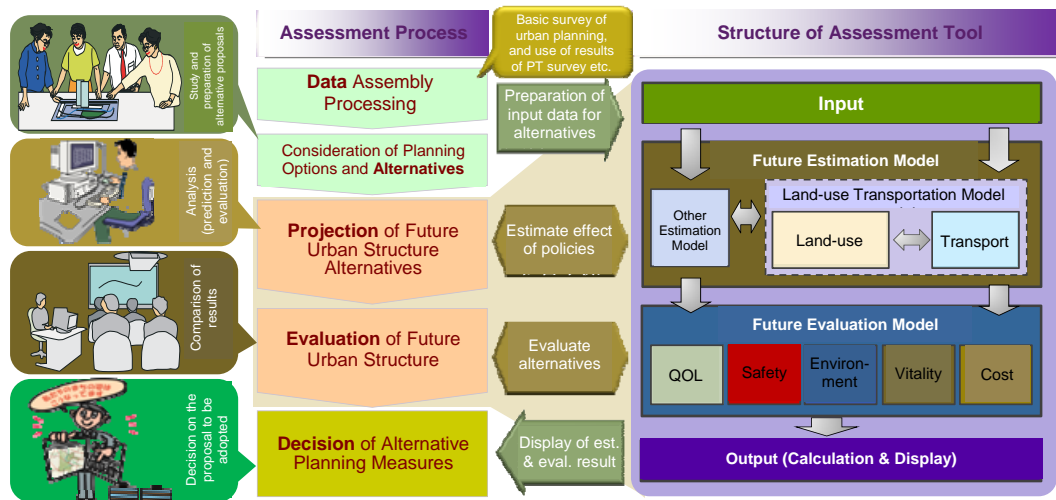


Figure 1. Image of Assessment and Outline of Tools