

The Development of Japanese City's Future Simulation System: MyCityForecast (<https://mycityforecast.net/>)

Toshikazu Seto¹, Hiroshi Omata², Yuki Fukushima¹, Yoko Hasegawa², Midori Maeda² and Yoshihide Sekimoto²

1: Center for Spatial Information Science, the University of Tokyo, Email: tosseto@csis.u-tokyo.ac.jp

2: Institute of Industrial Science, the University of Tokyo

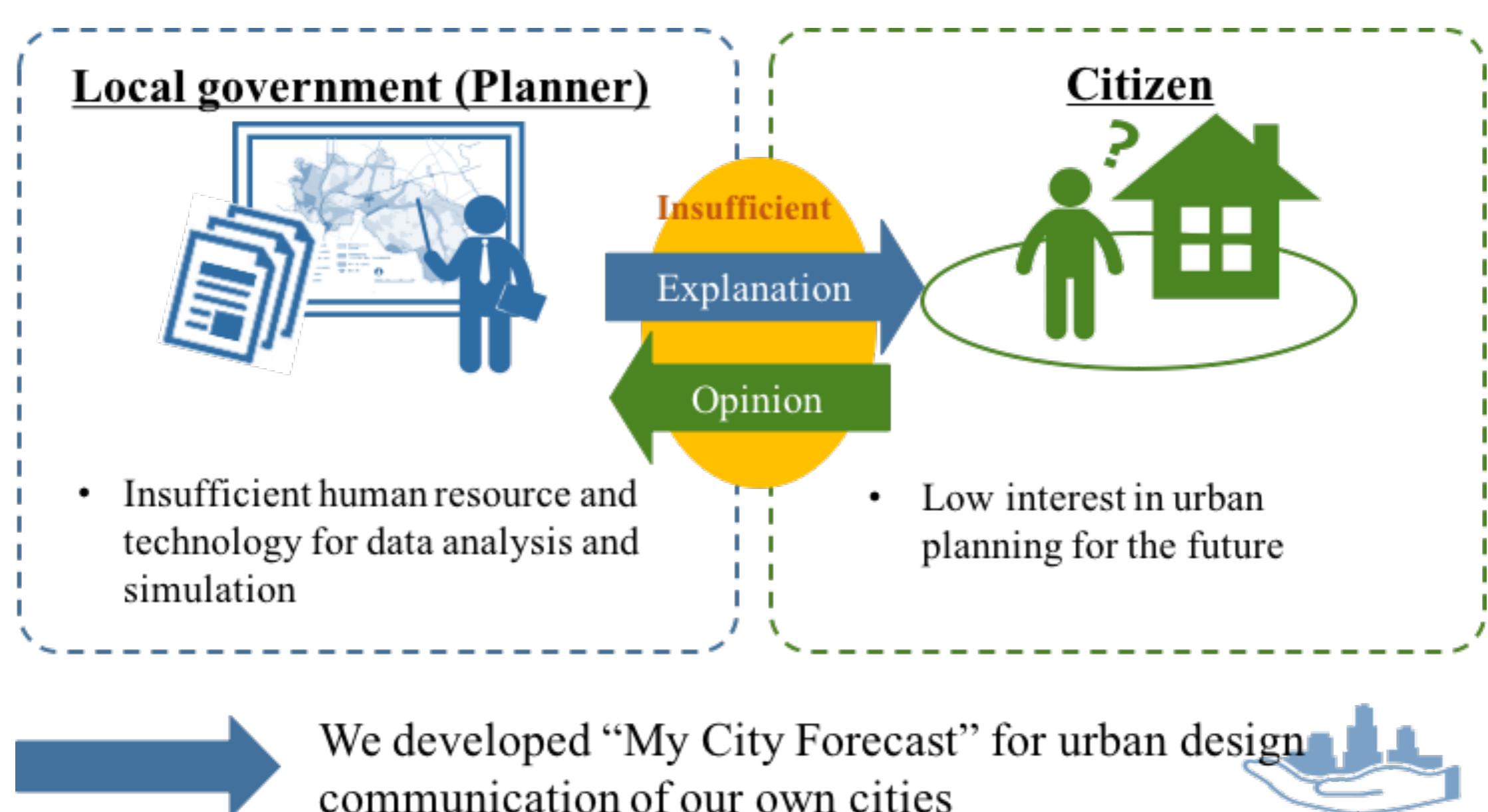
Introduction

In recent years, the optimization of urban management due to the rapid population decline has been one of the major issues in Japan. Future population estimation and related statistical information, such as the location information of the public facility is now available to open.

However, open data utilization in the urban planning field is not advanced in comparison with other countries and big gap between planner and citizen for urban planning in Japanese local government.



Image of compact city (From Ministry of Land, Infrastructure, Transport and Tourism)

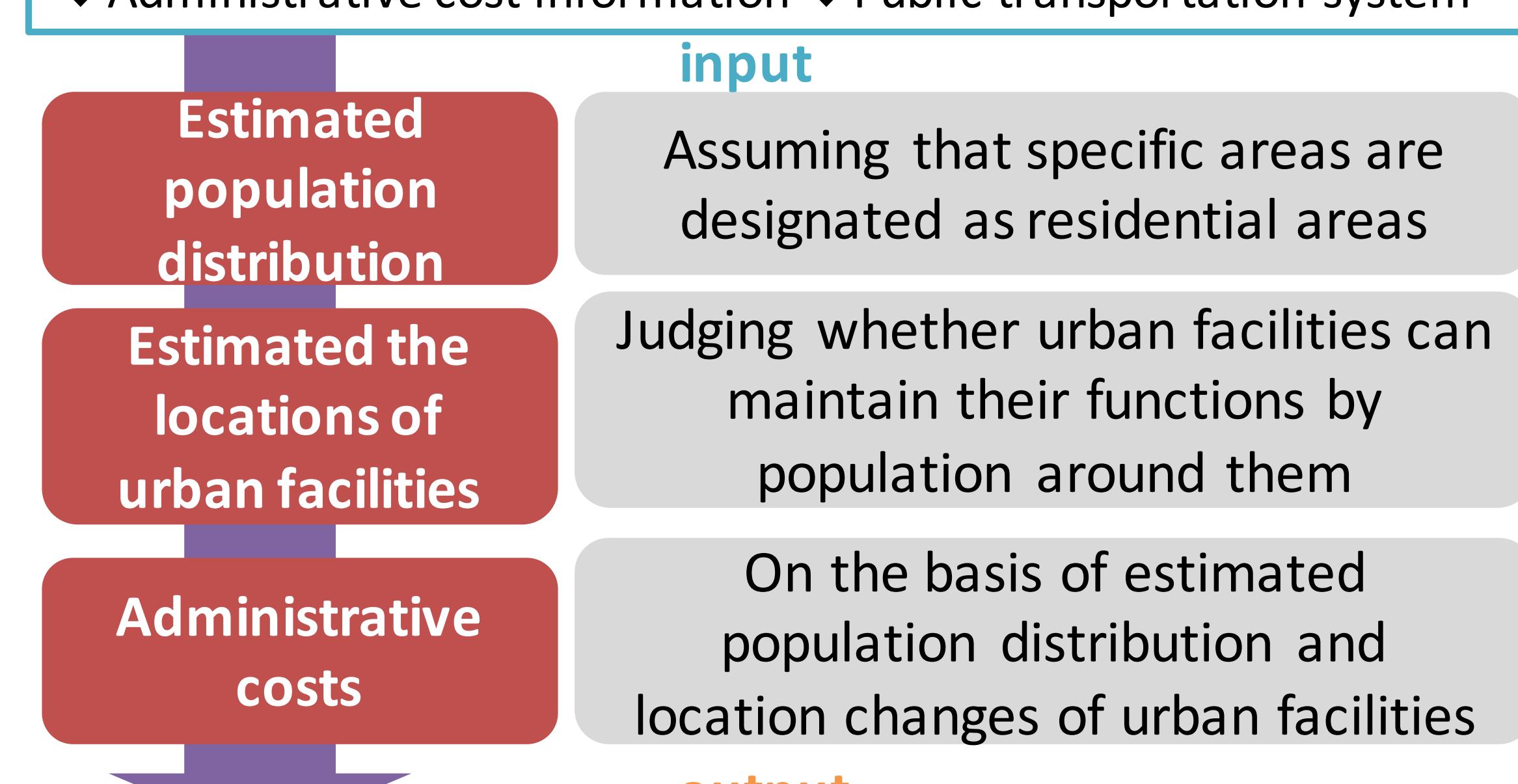


MyCityForecast (MCF)

We constructed the Web system using FOSS4G that citizens can be the future image of the city to operate on their own. The collected data calculated in advance, and the default mode for displaying a simulation result in the 500m mesh unit.

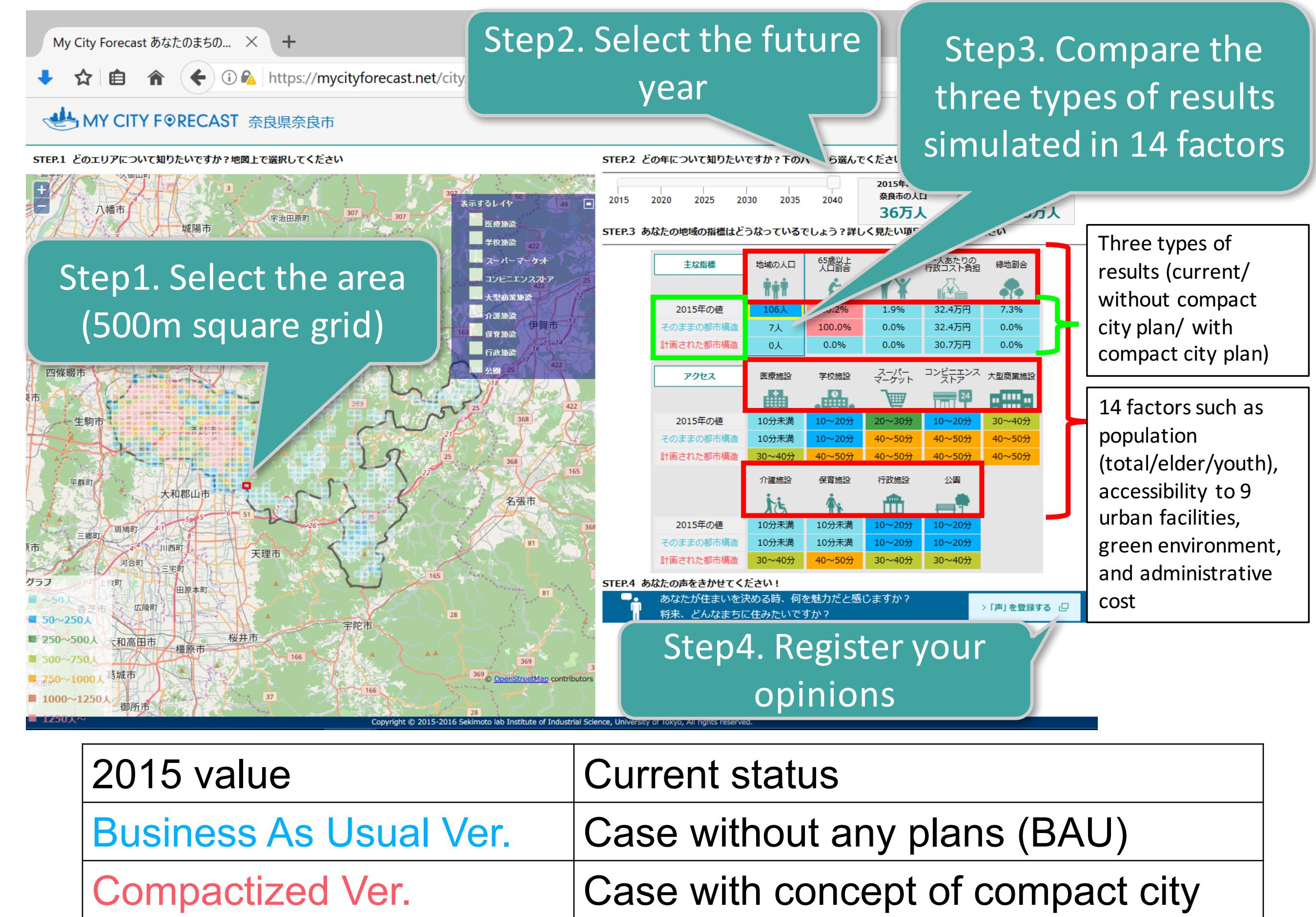
* We are developed and opened 1,670 local governments; 97% of all Japanese cities.

- ❖ Population distribution ❖ Land use plans
- ❖ Green land distribution ❖ Urban facility distribution
- ❖ Administrative cost information ❖ Public transportation system



The simulation model of MyCityForecast

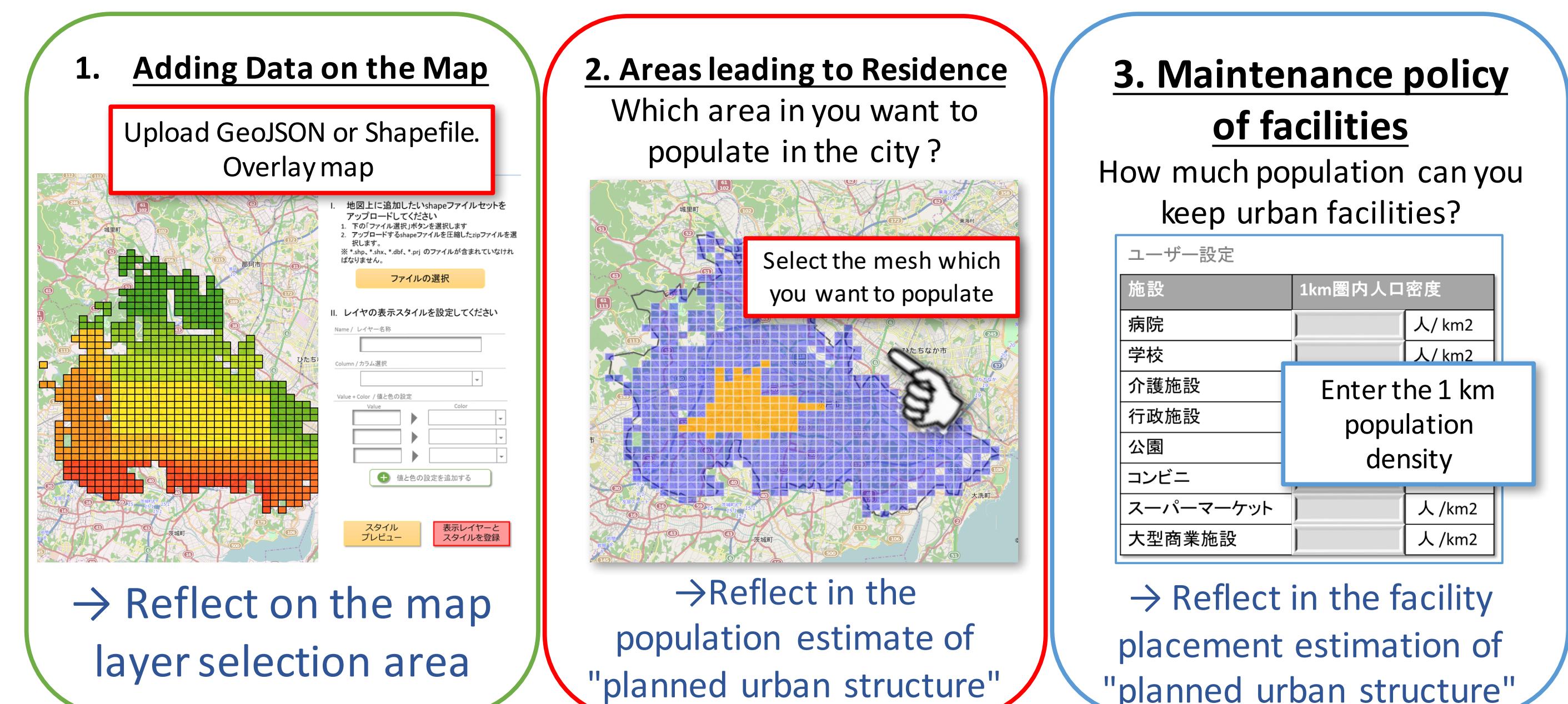
Main Framework	Library (JavaScript)
Php 5.5	OpenLayers.js
Mono 5.0.1	D3.js
PostgresSQL 9.3	Geocolor.js
- Postgis 2.0	Geo_tools.js
- pgRouting 2.0	Codemirror.js
gdal/ogr 2.2.0	Jquery (Jqplot)



The basic web interface of MyCityForecast

MCF Customize Version

"customization" allows the user to tailor the system to local (geographic) areas and conditions. In particular, the "residential advancement district" has different ideas in various peoples situation, and re-simulation is necessary.



Summary of MyCityForecast Customize Version

MCF Workshop with Citizens

We held a workshop with the administration - citizens in three areas this year (Okayama, Shimane and Toyama). In particular, the simulation customizing the residential guidance area creates an important discussion for future planning. It is expected to be used in the policy of aging, disaster prevention, child rearing.

