

Past Present &future of Urban Development in JAPAN

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Abstract

During the Japanese feudal period, the Edo government isolated the nation to foreign countries, and feudal clans were not allowed as the basic rule to exchange economic activities and human resources with each other as well. Thus, when the Meiji government opened the country to foreign trade and diplomatic relations, there were not enough infrastructures at all. The government, then, concentrated on constructing ports and railways to keep up with the increasing trade, and took measures to enhance wealth and military strength, and encourage new industries.

After the World War II, with the population merely 72 million, reconstructing devastated land and securing food were the two most urgent national issues. In the 1960s, the booming population and concentration of manufacturers in large metropolitan areas compelled infrastructural development throughout the country. Public appreciated that infrastructures were built wherever possible, rather than prioritizing projects through an appropriate evaluation system. So-called “political engineers” emerged in these years when politicians and engineers worked tightly together. Later on, an extreme shortage of infrastructure brought “constructions engineers” to the center of attention.

As we enter the 21st Century, with aging population and fewer children, under constrained public funding, a shift toward “low-carbon society” became inevitable. Some insist that the fairly developed infrastructures now need maintenance, management, and rehabilitation, rather than building new ones.

Urban development followed the same history, and Public Private Partnership (PPP) has become an important factor lately.

1. Introduction

In the beginning of Meiji-era, there were very limited infrastructural stocks (road, port, river, waterworks and sewerage, gas, electricity, etc) in Japan. They were developed rapidly in the last 150 years.

This paper reviews infrastructural development in Japan, and the roles of engineers and planners played in it as well as how recent urban development projects have been conducted.

2. Before World War II

When the Meiji government opened the country to foreign trade, experts were invited from overseas in various fields. Numerous infrastructural engineers were invited from Germany, the Netherlands, England, the United States, France etc to acquire and disseminate technologies for constructing harbors, rivers, and railroads. For instance, for railroad construction, the government provided technologies, and private sectors funded for projects; a type of Public Private Partnership for railroad.

With the government efforts, railroads have been built in major cities throughout the country by 1912 when interurban railroads were nationalized. Ministry of National Railway was established, and the rest of the network was transferred to private corporations.

3. After World War II : War Devastation

When the war finished in 1945, the national population was 76 million. Following natural disasters such as several massive typhoons and the Fukui Earthquake exacerbated the land. The political priority was given to reconstructing the damages and securing food. In 115 cities, the War Rehabilitation Land Readjustment Projects began and continued by the 1960s.

In 1956, an inspection team led by Ralph J. Watkins of the World Bank to fund the Meishin Expressway, commented “how incredibly bad is the road system” on Japanese road conditions. Given that remark, the government established gasoline tax earmarked exclusively for road construction in order to build national road network as soon as possible. Since any road construction yields sufficient benefits at this stage, politicians were heavily involved in the route selection (political engineers emerged).

Then, in the 1960s, the government initiated the “Doubling National Income Plan,” aiming to double GNP in five years through developing public works such as port, expressway, and bullet train (Shinkansen) for promoting

heavy chemical complex and shipbuilding industry in the Pacific (Taiheiyo) Belt. The Plan, in fact, doubled the GNP by 1965, resulting in the economy enter to the rapid-growth era and flourished until the First Oil Shock.

At the same time, the Plan increased regional disparity between the three large metropolitan areas and the Pacific Belt, and the rest, shifting the government policy to resolve the disparity. The 1st through 4th Comprehensive National Development Plans attempted to disperse industries, mainly manufacturers, throughout the country in terms of their location, consumption area, export/import ports, access transport, etc., leading construction of new infrastructure. Construction engineers were leading the infrastructural development at that time.

4. Urban Development

Population increased 51 million from 76 million in 1945 to 127 million at present; two million/year for a decade immediately after the war, then one million/year for the next 30 years until 2000 when the population started to decrease. Population concentrated in 3 large metropolitan areas first, then, followed by hub-cities, core-cities, and regional centers. During the rapid economic growth era (1965~1975), with motorization of passenger vehicles, city began to sprawl to low-density suburbs.

By 1960, since the War Rehabilitation Land Readjustment Projects were the focus of urban development projects, existing urban areas had been reconstructed. Population increase in urban areas at that time caused private developers sprawl urban areas inadequately. In 1970, the New Town Planning and Zoning Act came into effect, with the purpose of preventing urban sprawl, introducing a new system that delineates urbanization promotion area (including existing urban area and new development area), and urbanization control area (restricting urbanization for 10 years). This New Urban Development Projects became the main stream.

Now in the 21st Century, our society of aging population with fewer children has serious issues for the elderly for their living, welfare, and nursing.

The trend will cause suburban housing unnecessary in the market, thus, land-use management will be critical in urban planning.

5. Shonan C—X Project

This is an urban revitalization project for an area (approx. 25ha) in front of Tsujido Station in Fujisawa City, locating 60km southwest of Central Tokyo.

In 2004, large steel rolling manufactures located there, since before the WWII, decided to move entirely to the Kashima Industrial Area. The City decided to develop the area.

I serve as a chief adviser of this Project.

For the Project, the Advisory Committee and the City consulted to establish the vision for this area:

1. Land-use to liaise the entire Shonan area
2. Securing sustainable growth of the area

In 2004, the area was designated as an Urgent Urban Renaissance Project, then, was validated as the urban planning project in 2005. The land readjustment projects of the started in 2006, and an opening ceremony will be held in May 2009.

In order to maintain the area sustainable, policies in urban design and landscape are essential. A cooperating organization with both the landowner and tenants will be established. Thus, the urban management system was established with public private partnership.

At present, the project costs have been shared by public sector with ¥30 billion, and private sectors with ¥109.3 billion.

6. Conclusion

Historically, in infrastructure development and urban development, engineers and planners have changed as political engineer/planner, development engineer/planner, and then, management engineer/planner in Japan.

In the future, we will need capacity building to foster new type of engineers and planners focusing on management.