



M. Horita · H. Koizumi  
*Editors*



SUR-UT: Library for  
Sustainable Urban Regeneration 6

# Innovations in Collaborative Urban Regeneration

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## **cSUR-UT Series: Library for Sustainable Urban Regeneration**

By the process of urban development in the 20th century, characterized by suburban expansion and urban redevelopment, many huge and sophisticated complexes of urban structures have been erected in developed countries. However, with conventional technologies focused on the construction of structures, it has become difficult to keep urban spaces adaptable to environmental constraints and economic, social and cultural changes. In other words, it has become difficult for conventional technologies to meet social demands for the upgrading of social capital in a sustainable manner and for the regeneration of attractive urban space that is not only safe and highly efficient but also conscious of historical, cultural and local identities to guarantee a high quality of life for all. Therefore, what is needed now is the creation of a new discipline that is able to reorganize the existing social capital and the technologies to implement it.

For this purpose, there is a need to go beyond the boundaries of conventional technologies of construction and structural design and to integrate the following technologies:

- (1) Technology concerned with environmental and risk management
- (2) Technology of conservation and regeneration with due consideration to the local characteristics of existing structures including historical and cultural resources
- (3) Technologies of communication, consensus building, plan making and space management to coordinate and integrate the individual activities initiated by various actors of society

Up to now, architecture, civil engineering, and urban engineering in their respective fields have, while dealing with different time-space scales and structures, accumulated cutting-edge knowledge and contributed to the formation of favorable urban spaces. In the past, when emphasis was put on developing new residential areas and constructing new structures, development and advancement of such specialized disciplines were found to be the most effective.

However, current problems confronting urban development can be highlighted by the fact that a set of optimum solutions drawn from the best practices of each discipline is not necessarily the best solution. This is especially true where there are relationships of trade-offs among such issues as human risk and environmental load. In this way, the integration of the above three disciplines is strongly called for.

In order to create new integrated knowledge for sustainable urban regeneration, the Center for Sustainable Urban Regeneration (cSUR), The University of Tokyo, was established in 2003 as a core organization of one of the 21st Century Centers of Excellence Programs funded by the Ministry of Education and Science, Japan, and cSUR has coordinated international research alliances and collaboratively engages with common issues of sustainable urban regeneration.

The cSUR series are edited and published to present the achievements of our collaborative research and new integrated approaches toward sustainable urban regeneration.

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# Innovations in Collaborative Urban Regeneration



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## Preface

In creating urban space, there is always an exchange of dialogue as to what the space currently *is* and how it ought to exist, by those who live in that place, those who have a stake in its future, and those who sense the need for improvement in its harsh reality. Some of their thoughts materialize in the form of a physical change to the current environment – and urban regeneration is one such form.

This process in which people redefine their living environment and socially reconstruct the meaning and value of a place is all too important in deciding what, if any, change should be introduced in the form of a physical project. Some might argue that this communicative process is indeed the very core or even the definition of urban regeneration rather than a mere condition for instigation. However, it has also been observed that such a communicative process is often difficult to manage, if it happens at all. Social exclusion, power imbalance, conflict, indifference, and lack of communicative social capital are the usual suspects in collective inaction, but it is also true that they are familiar constituents of any urban life.

In some social contexts, little attention has been paid to such complexity. Indeed, even without any communicative process it is possible to implement a physical project with the help of professional planners/designers and policy makers. From the perspective of efficiency and cultural backgrounds, such a traditional approach might be justified, but even many of the historically developmentalist societies are starting to see a change.

As an increasing number of urban regeneration projects have come into view over the last decade in Asian megacities and elsewhere, the diversity in the process of project formation, policy making and implementation has also become apparent. In Japan, for example, recent institutional reforms and the more extensive participation of nonprofit organizations have paved the way for a deliberate approach to planning processes that include less traditional

stakeholders such as non-networked members of local communities from the early stages of projects.

Many attempts have been made to establish new public venues for effective and democratic dialogues that collect wide-ranging views about a particular policy or project both from their proponents, and more importantly, from their opponents. Some examples appear to be more successful than others, but it is yet to be seen what separates success from failure, given the global or regional perspective.

This book is an attempt to establish a collective knowledge base as to how those prior experiences could be contextualized with a geographic focus primarily on the Asian region, where the speed of urbanization is among the most notable in the contemporary world. Cases presented in this book are chosen partly because of their significance and also because of the authors' own involvement in the corresponding projects. Their accounts are, as will be shown in the subsequent chapters, not only inclusive of details known only to those who actually participated in the process, but also sufficiently critical and independent in their reflection.

Because the backgrounds of all the projects differ substantially, there needs to be a conceptual and theoretical framework that provides a contextual link for those cases. The former part of this book is dedicated to providing that framework. It first attempts to set out common questions including what the meaning of and conditions for collaboration are, who would collaborate, why, and when. Then it proposes some answers based on the current planning literature, introducing a navigation map around the related theories and concepts. In the latter part of the book, each chapter reports on a case study while providing answers to the common questions, some with their own theorization. It is left to the readers' judgment whether this collection of answers has settled the questions that were posed, but it is surely the objective of the book to provide more depth to the debate on empirical grounds.

In structuring the whole debate, three domains are introduced in this book: conceptualization and theory; techniques and technologies; and practice, social process, and institutions.

In the first part, on conceptualization and theories related to urban regeneration, the constitutional and normative definition of a well-built environment is discussed as is that of a well-organized process.

Koizumi first discusses the relationship between publicness, urban planning, and regeneration in a Japanese context. He provides a thought-provoking forecast for structural changes in Japanese planning in the near future. Murayama then reviews the development of plan-making methodologies by showing the big picture of planning practices in Asian cities. One of the

implications derived from these practices was that regeneration in matured urban spaces should be accompanied by the intensive participation of various actors. In the subsequent chapter, Harata proposes a newly emerging concept of transportation-oriented urban planning. He also discusses the necessity of consensus building in vision making and the importance of forming a circular process of vision making, implementation, and evaluation.

In the second part, on techniques and technologies, the maturity of civil society is named as one of the necessary conditions for the successful use of information and communication technologies (ICTs) and other participatory tools in policy making.

Horita et al. report on the current situation and the problems with the use of ICTs and other participation methods such as workshops on policy making for urban regeneration. That is followed by Horita's further examination of the possibilities and challenges of the use of Web-based participation systems on making urban policies, using the case of Mitaka City, Tokyo. He sets out conditions for e-democracy to contribute to a more deliberative urban policy-making process. Oomori turns to the transportation sector, examining whether individual behavior might change with access to information on traffic conditions through the Web-based GIS (geographic information systems) activity-travel simulator.

The third part, focusing on practice, social process, and institutions in urban regeneration mainly of Asian cities, through various case studies of the systems of governance in Asian cities, confirms the dynamic transformation of top-down systems to more democratic and collaborative ones.

Oaña reports on a community-based urban regeneration project in Manila, in the Philippines. An important finding is the positive impact of using the planned unit-development approach on the engagement of communities and stakeholders, and its further refinement.

Tanaka then carries out a case study on the city of Komae, which is one of the earliest examples of participatory master planning in Japan. She indicates how voices from civil society were limited in the process of making the master plan, and the necessity of bringing in citizens' groups in the long term.

This is followed by Park's argument that city-making in Korea changed after the declaration of democratization in 1987. City-making in Korea had become more oriented toward residents and focused on improving the living environment with a bottom-up approach. The author calls this approach "making livable cities."

Suzuki then introduces another regional perspective by describing how a small sports-based partnership project called the Urban Fox Programme in Scotland could contribute to social inclusion, especially of youth, in the process of urban regeneration. Sports-based partnership projects may be



necessary for Asian cities where social involvement of younger generations becomes a major social issue.

Finally, Furumai et al. examine the development and use of the water environment quality index in Japan. They argue that the water environment quality index can be a tool for promoting partnerships between nonprofit organizations and governments, generating activities to improve the water environment.

It is easy to see from this range of cases that there is an inherent heterogeneity in their attempts to enhance participation and deliberation in creating better urban space. Yet many of these experiences can also be shared among the common cultural or generational contexts, with some distinct clusters clearly elicited around the geographical regions and sectors. It is the authors' collective hope that this showcase not only informs contemporary practitioners facing similar needs and issues, but also contributes to our global understanding of collaborative urban regeneration – how and when collaboration occurs, how each case differs from the other, why we face the same issues, and what we could do. While appreciating that many comparable efforts are now being made in other parts of the world, this book strives to fill in the missing pieces – even large ones – of the entire puzzle shaping the theoretical and practical frontiers of this discipline.

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**Part I**

**Theories and Methodology  
of Consensus Building and Conflict  
Management in Planning**

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# 1. Historical Development of Planning Theory and the Public Realm of Planning

Hideki Koizumi

## 1.1 Introduction

Currently in Japanese society, what is meant by the term public realm is obscure and ambiguous. In the social science field, public realm is characterized as having many relations with us – ourselves – in various dimensions of our social life (Saito 2000). In the following section, the transformation and the ambiguous meaning of the public realm will be explained. The discussion will continue to the various dimensions and multiple interpretations of the public realm in social science.

Reflecting on the ideas of the multiple public realms or the current public realm, a structural transformation is necessary to adapt from a State-led planning system to a modern and democratic planning system. This chapter will cover recent developments regarding the idea of the public realm in social science and the advancement of this concept in planning theory. Finally, this chapter will explore a new direction for the structural transformation of the Japanese planning system.<sup>1</sup>

## 1.2 Original Definition of the Public Realm and Current State of Planning

As Terao (1999) notes, the word “public” in the American and British context is defined as being open to all people. Thus, the term public realm implies mainly the presence of the public. In contrast to this interpretation,

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<sup>1</sup>The journal *City Planning (Toshi keikaku)* volume 234, December 2001 is valuable for readers with interests in communicative planning.

the word 公 KOU, public in Japanese is almost equivalent to the term State in Japanese. Therefore, the public realm has been mostly an area managed and determined by the central government in Japan. According to the Japanese Dictionary (Shinmura 1991), 公益 KOUEKI, the public interest in Japanese is defined as the interest of the State or social well-being, delineating the distinctive characteristic when used in the Japanese context (Hasegawa 2000).

The idea of the public realm in Japanese planning has been an area that has been dominated by the State, stressing its authority and professional expertise. The ideology of commensurable values, which I will explain in the following section, was not at all the core idea of public realm in Japanese planning. Therefore, the main objectives of planning were to maintain and expand the benefits of the public goods of the State. Japanese planning initially began by focusing on public facility development. Its current state of weak regulatory power on private parcels of land illustrates such a practice (Koizumi 2001a).

In recent years, however, Japanese society and its citizens have grown to acknowledge diverse views. The public realm determined by the State is no longer and a planning system needs to be explored in line with the new public realm.

### **1.3 Current Interpretation of the Public Realm**

In recent years, with the advancements in sociology and philosophy of law, represented by the works of Jurgen Habermas, a new concept of the public realm has emerged. The new concept of the public realm provides valuable insights for explaining the ambiguity of the public realm of Japanese planning. The theories of the public realm will be explained by introducing the works of John Rawls and Habermas in the following paragraphs (Koizumi 2001b).

#### **1.3.1 Authoritative Action of the State and the Public Realm**

Rawls elaborates that the only values the State can override using its authority are commensurable values. The most basic commensurable values are primary goods – things a person is presumed to say is good, such as liberty, opportunity, income and wealth, and bases of self-respect. The other essential role of the State, according to Rawls, is to defend the principle

of equality of opportunity, and to minimize the differences in income among its people. The difference in ability and social status of a person depends much on causeless circumstances. This principle is implicitly criticizing the justice of the market, which legitimizes the presence of the least advantaged people of society, illustrating a need for preparing a safety net by the State (Saito 2000).

### **1.3.2 Pluralistic Values for Defining the Public Realm**

Habermas has provided the concept of communicative rationality. In our modern society, we tend to pursue an achievement-oriented approach for objective rationality. Thus, upon identifying an objective, rationality is determined by efficiency in achieving the objective. In the planning field, after creating a rational city vision, the objective would be to achieve it efficiently. In contrast to this model, the communicative rationality of Habermas seeks rationality through dialogue and agreement. This is referred to as communicative action through communicatively achieved agreement. In an arena of pluralistic values, defining an objective for a city itself can be extremely difficult. Thus, the essentials in planning would be communicatively achieved agreement rather than a vision of the city or rationality for fulfilling the objective.

### **1.3.3 Public Realm of Rawls and Habermas**

If planning is considered as an authoritative social action, in order to frame it in our modern society, we should thoroughly consider Rawls's quote of "commensurable values are necessary for authoritative action."

In order to confirm commensurable values, the idea of consensus building by the majority over agreement by all has developed. From the perspective of the equality in negotiations it is obviously problematic to seek consensus by all as a condition of negotiations. Rather, the important issue would be to understand what conditions are adequate for decision making by the majority. This is not an issue of deciding on the percentage (80% or 60% in agreement); rather it is one of deciding the appropriate method for consensus building and decision making.

Using Habermas's concept of communicative rationality or political public arena in order to achieve rationality of political decisions, we would need to create conditions in which various interests would have

sufficient opportunities for dialogue. In addition, we should take into account that consensus building and political decision-making could fail to occur. In order to reduce chances of fallibility, attentively monitoring the views of disagreements during the process of reaching agreements or decision-making is essential. If necessary, providing more information and incorporating new ideas would be important to continue sufficient dialogue. From this viewpoint, we should acknowledge that consensus building is a process agreed on only by the participants and that agreement is tentative. The authority to enforce the final decision should only arise when the dialogue has failed or when sufficient time for dialogue is not feasible (Goodchild 2001).

In short, regardless of the percentages of participants in agreements for decisions, there will always be variations of good and bad agreements. Thus, in order to reach a good agreement the minimum requirements are as follows: (1) to share information of all interests, (2) to provide sufficient opportunities for dialogue, especially for contentious discussion, utilizing creative methods, (3) to enable situations in which viewpoints of all participants will relatively change. We should acknowledge that the agreement (commensurable value) is one among the participants and that when new interests or groups participate, or over time, the agreement will need to be reviewed.

## **1.4 Characteristics of the Concept of the Current Public Realm**

The characteristics of the concept of the current public realm as explained by Habermas and other related scholars, can be described as follows:

- The public realm is created by coordinating and converging the diverse views of the individual interests (convergence, agreement).
- The form of coordination is dynamic and changes may occur depending on societal needs, interests or emerging issues (dynamic, timing, uncertainty).
- Therefore, the public realm is neither standardized nor definite. The public realm of one group may be different for another group (relativity, pluralistic).

Thus, the characteristics of current public realm are completely different from the one that continued until quite recently, which began when the old City Planning Act was enacted in 1919. The previous public realm was led

by the State, emphasized the knowledge of the expert, and was an absolute public realm. In the near future, the structural transformation of the public realm will result in the adjustments to the Japanese executive, legislative, and judicial structure. With regards to the planning field, the planning system and the technical aspects fundamentally should be transformed. Then, what structural changes are necessary? The method and direction for exploring the theory and practice for structural transformation of planning already developed in the late 1960s. In fact, the transformation was in accordance with the structural transformation of the public realm. In the next sections, I will describe the development of planning theory of the United States and United Kingdom, and will explore the structural transformation that the Japanese planning system may follow.

## **1.5 Theoretical Transformation for a New Planning System**

In the United States and United Kingdom, planning theory has developed since 1960s simultaneous to the theoretical transformation of the public realm in sociology and philosophy of law. The theory of rational comprehensive planning is now known as the classical planning theory. According to this theory, a vision for a city is developed in static form using a comprehensive and technical approach, and the objective is achieving the goal. The characteristics of this theory are comprehensiveness, linearity, objectivity, and absoluteness. However, since the late 1960s, limitations of this methodology became apparent, leading to the transformation of planning theory.

Paul Davidoff, who is famous for his concept of advocacy planning, criticized that participatory processes using simple techniques such as public hearings only determined the decisions. He stated that during the planning process of making official plans, various interests and groups with different values should propose their plans. By taking these steps, he believed the political arena would become more active, and as a result, the produced plan would be rational and reflective of the public interest. In addition, he stated the need for planners to advocate – for him, the role of planners was not only to assist the public sector but also to help various interests and citizen groups (Davidoff 1965).

His belief was based on the thought that planning conducted only by the public sector would not be reflective of the true public interest. He indicated the need to have a public interest that is proposed by various interests.

As background of Davidoff's argument, the living conditions of the minorities were only deteriorating in the face of the social issue of racial discrimination and the planning process of urban renewal programs. However, his indication may be a meaningful approach for the current situation of the Japanese society.

Planning theory that emphasizes political debate and dialogue among various interests and groups is also supported and theorized by John Friedmann's concept of transactive planning (Friedmann 1973) and John Forester's idea of negotiative planning (Forester 1989). Friedmann described the dialogue of citizens and experts, which in previous practice did not always function, as knowledge through learning and knowledge of the expert. Friedmann explained that sharing and providing information among citizens and experts was an educational process necessary for technical purposes. In Forester's book, he described the theoretical and technical negotiation process between developers and the public sector. In 1987, Friend and Hickling provided a strategic choice approach based on choice and uncertainties, and they totally denied the classical planning model of rational comprehensive planning.

In the 1990s, Habermas's rationality in communicative action became the theoretical underpinning for the concept of communicative planning.

Communicative planning enabled alteration of values in planning from an objective achievement approach to an acceptance achievement approach. As Judith Innes describes, individuals in society are not just a general public, but also an agglomeration of various interests and groups, which includes the public sector. Through dialogue between various interests and groups, she explains that plans will inevitably become comprehensive and rational. In this sense, her ideas follow the thoughts of Davidoff's advocacy planning.

Additionally, communicative planning provided insights for overcoming the issue of coordinating diverse interests, which remained a challenge in Davidoff's theory of advocacy planning. With advancements in the fields of consensus building and dispute resolution, represented by Lawrence Susskind, various conditions and models have been provided to adequately assist processes in the planning field. These include conditions such as involving all important stakeholders, providing adequate information in an appropriate form (so normal citizens can understand), and making decisions after a thorough and creative process of discussion considering all assumptions, especially for conflicting opinions, has occurred (Innes and Booher 1999). All conditions described are useful ideas for actual practice in Japan. Japanese scholars are noting that the findings from the advancements in planning theory are also becoming a

necessity in actual practice in Japan and in developing countries (Hosaka 2001; Nishimiya 1986).

## 1.6 Ideal Approach for a New Planning System

The advancements in planning theory, which began in the late 1960s and have continued until now, can be interpreted as reflecting the transformation of the concept of the current public realm. The characteristics of the advancements in planning theory can be described as absolute to relative, linear to cyclical, objective to subjective, expertise to consensus, certain to uncertain; all reflective of the transformation of what is meant by the current public realm. According to communicative planning, which represents current planning theory, comprehensiveness and the public interest can only be determined by the aggregating, adjusting, and coordinating the individual ideas provided by various interests.

Can this concept be applied to Japan? Many readers may have this question in mind. However, the public realm in Japanese planning, which was considered a public realm led by the State, has transformed over time (various generations and groups do not necessarily have the same thoughts about what is meant by the public realm) and cannot be considered absolute. This is illustrated, for example, by the different requirements for plan-making which have changed over time.

Japanese Urban Regeneration Policy focuses on promoting urban redevelopment projects with incentive zoning for creating public open space. The incentive zoning is a method to prioritize the creation of public goods. Since it follows the thoughts of the public realm of the State, this policy could be interpreted as government's approval for producing external diseconomies such as destruction of neighborhoods' living environment and landscapes, allowing a process behind closed doors. Observing that many citizens' opposition movements have indeed occurred, however, the public realm determined in advance by the State did not necessarily reflect the real public realm of local interests. The issue here would be to explore methods and processes for creating the public realm with adjusting and coordinating of various interests and groups.

My thoughts on the ideal approach for Japanese planning reflecting the current public realm would be one that welcomes ideas from various interests and groups, and liveliness of this dialogue would be a prerequisite. The new approach of Japanese planning would be a planning process and system that would reflect the interests and desires of the entire community.

For the realization of such a process and system, the necessary conditions are as follows:<sup>2</sup>

- Encourage ideas from diverse interests and groups. Promote collaboration, coordination, and group formation (creating public spheres, cultivating chances for dialogue)
- Promote consensus building. Make decisions after observing the degree of agreements/disagreements and judge after considering all circumstances (building consensus, understanding viewpoints of others)
- Consider chances of fallibility and uncertainty
- Emphasize change over time and the cyclical nature of change (visualizing and recollecting, experimenting and attempting)

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<sup>2</sup>For more on this approach, see: <http://arklab.sit.ac.jp/~machiky0/>. The authors attempted to reflect these conditions during the planning process of the Fukaya City (Saitama Prefecture) Municipal Master Plan.



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## 2. Toward the Development of Plan-Making Methodology for Urban Regeneration

Akito Murayama

### 2.1 Issues of Urban Regeneration and Expectation Toward Planning

One of the major issues of sustainable urban regeneration is to shape attractive urban space through renovation of existing urban space, thus contributing to the enhancement of people's quality of life. It is expected that in each area there should be a plan for a future vision of urban space that will implement effectively and creatively various measures such as preservation and utilization of historic buildings, reconstruction and repair of old structures, creation of a safe and comfortable pedestrian and bicycle environment, development of parks and open space, creation of a beautiful landscape, supply of community facilities, consideration for the environment and maintenance of safe and clean public spaces. It should be noted here that various actors, including citizens, businesses, government departments and non-profit organizations, take part in planning for and forming urban spaces. Thus, we should develop and apply systems, procedures and techniques to make possible the collaborative and continuous management of urban space by various actors.

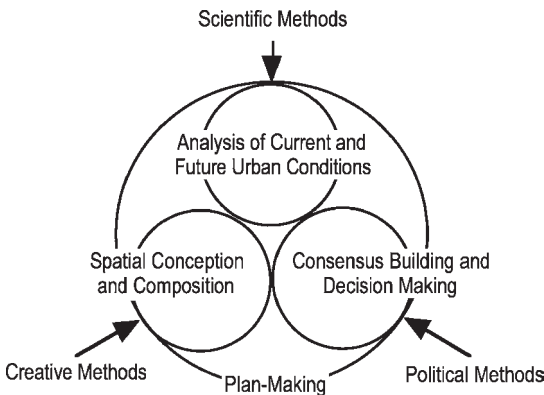
Planning, or plan-making, for urban space in a city is a comprehensive activity to define goals, policies and implementation measures to shape urban space based on the current and the future conditions of the city and the demands of various actors on urban space. Therefore, in order to tackle the issues of urban regeneration, there are high expectations toward plan-making with the participation of various actors.

In cities in Japan, urban plans are developed in many settings, such as basic policies for municipal urban planning (urban master plan) since 1992 and district plans since 1980 under the City Planning Act, landscape plans

under the Landscape Act of 2005, downtown revitalization plans under the Downtown Revitalization Act of 1998 and 2006, basic schemes and plans for urban development projects (urban redevelopment projects and land readjustment projects), and various plans under municipal ordinances. However, many of them are not based on sufficient analyses of current and future conditions of cities, are not based on the demands of various actors on urban space, or do not comprehensively define goals, policies and implementation measures. There are many deficiencies in urban plans developed in Japan. The reason for this problem, besides the lack of financial resources and time consumed in plan-making, seems to be the underdevelopment of methodology for plan-making.

## 2.2 Need for Plan-Making Methodology Research and Development

Conceptually, tasks in plan-making consist of the following three aspects: “analysis of current and future urban conditions”, “spatial conception and composition”, and “consensus building and decision making”, each supported by distinctive methods (Fig. 2-1). Methods that support “analysis of current and future urban conditions” are scientific methods to analyze and describe the current and future population, economy, society and physical environment. Methods that support “spatial conception and composition” are creative methods to generate spatial solutions based on various demands. Methods that support “consensus building and decision making” are political methods to lead consensus building and decision making. Note that the three-part division is a conceptual categorization of planning methods, and actual tasks and methods may have two or three aspects at the same time.



**Fig. 2-1.** Three aspects and supporting methodology of plan-making tasks

The origin of research and development of plan-making methodology in Japan can be traced back to the efforts of Takayama Research Unit, Department of Urban Engineering, University of Tokyo in the 1960s. The major interest of the research unit was “to clearly define the significance, role and function of an urban general plan that is structured around a physical plan, against the context of various measures to solve local and urban problems” (Takayama 1967). Research on European and American urban planning was conducted, especially referring to Chapin (1957) and Kent (1964), on the process of plan-making tasks and the generation of plans (Doi 1993). In “UR no.2: Urban General Plan” (Takayama Research Unit 1967), where research achievements at that time were put together temporarily, various problems, contents and plan-making procedures of urban general plans were reported. Some researchers of the era continued their research on urban general plans (Kawakami 1971; Morimura 1987; Doi 1993; etc.). Plan-making methodology issues dealt in these research efforts included planning areas and planning units, goal setting and district division, basic surveys, investment distributions and planning processes. Public involvement was not considered much at that time. The methodology then presupposed the increase of population and the expansion of urban areas, and mainly supported the two aspects of “analysis of current and future urban conditions” and “spatial conception and composition” in plan-making. In this process, the participation of various actors was limited.

In the 1970s, the focus of research shifted from urban general plans to residential (district) environment improvement plans. Morimura (1976) states that a residential environmental improvement plan generally takes the form of a district plan that fulfills the principle of residents’ scale, is resident-oriented, includes residents’ participation, has concern for residents’ welfare, and is both realistic and comprehensive. It is said that the planning area should be small enough for the residents to know it very well, that the plan should be developed based on residents’ real living demands, that the plan should be developed with direct participation of residents, that the plan’s goals should be the improvement of the residential environment, that the plan should be comprehensive, and that the plan should be accompanied with implementation programs. After the 1980s, to develop such district plans or smaller-scale facility plans (plans for parks, community centers, etc.), various *machizukuri* (the Japanese word for community development) workshop methods were researched and developed, including the “Machizukuri Workshop” by Nobuyoshi Fujimoto and Isami Kinoshita, the “Design Tool Box for Participation” by Yoshiharu Asanoumi, the “Machizukuri Game” by Shigeru Sato and the “Machizukuri Life Game” by Haruhiko Goto (Itoh 2003). These were the methods to support the aspects

of “spatial conception and composition” and “consensus building and decision making” in developing district plans or facility plans.

After the revision of the City Planning Act in 1992, urban master plans (citywide and sub-area plans) were and continue to be developed in many municipalities through citizen participation processes. However, the methods usually applied are the same methods for developing urban general plans that were researched and developed after the 1960s, or are the various machizukuri methods researched and developed after the 1980s. These methods are not sufficient to develop contemporary urban master plans for cities and their sub-areas that presuppose the regeneration of existing urban areas and the participation of various actors. As mentioned, the former focused on the aspects of “analysis of current and future urban conditions” and “spatial conception and composition” in plan-making in the era of population increase and urban expansion, while the latter focused on the aspects of “spatial conception and composition” and “consensus building and decision making” in developing district plans or facility plans.

Therefore, in order to tackle the issues of urban regeneration in “matured cities” in Japan, we need to promote the development of methods that support the three aspects of plan-making presupposing the participation of various actors. We also need to systematize the methods to establish a new plan-making methodology for urban regeneration. “Matured cities” are defined here as:

the cities that aim for high quality of life based on existing stock through a paradigm shift driven by the rise and the accumulation of intellectual standards of independent individuals, even though physical production and people’s desires for consumption in society and economy come close to fulfillment, and social vitality and economic growth do not necessarily follow the past rising trend, referring to Ichikawa (1998).

### **2.3 Framework for Plan-Making Methodology Research**

In the United States after the 1960s, there was a development in planning theory that explained the stances and the activities of planning. It started as a response to the apparent limitations of rational comprehensive planning. There is no established view on the development process of planning theory (Khakee 1998), and researchers explain it in their own ways (Healey et al. 1983; Taylor 1998; Innes 1995; Fujii et al. 2000).

Here I use the framework of four planning models, based on Innes and Booher (2000) and Brooks (2002). Four planning models, namely the Technical Bureaucratic Model, the Political Influence Model, the Social Movement



Model and the Collaborative Model, are effective in different circumstances categorized by the levels of “diversity” and “interdependency” of actors (Innes and Booher 2000). Each model can also be characterized by the “place” and “activities” of planning (Brooks 2002). The “place” of planning is whether it is centralized (top-down) or decentralized (bottom-up). The “activities” of planning concern whether it involves certain rational activities or it involves various irrational activities on the premise that rational activities are impossible or unrealistic. As shown in Fig. 2-2, nine planning theories can be categorized into the four planning models.

Figure 2-3 shows the evolving process of planning theories, based on a review of relevant literature. First, Rational Comprehensive Planning

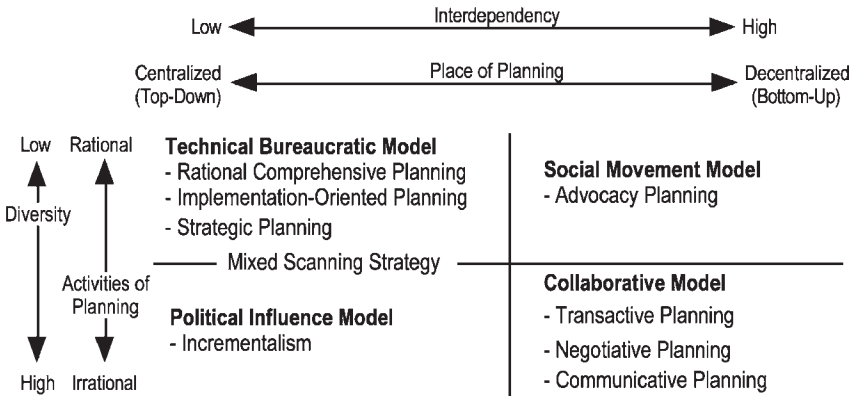


Fig. 2-2. Four planning models and nine planning theories (based on Innes et al. 2002 and Brooks 2002)

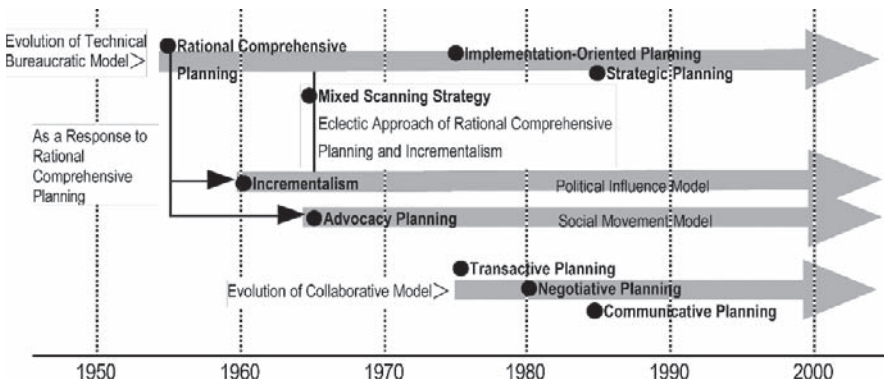


Fig. 2-3. Evolving process of planning theories

appeared in the 1950s. As a response to Rational Comprehensive Planning, two planning theories appeared: Incrementalism appeared from the end of 1950s to the beginning of the 1960s and Advocacy Planning appeared in the mid-1960s. Incrementalism was established as a Political Influence Model and Advocacy Planning was established as a Social Movement Model. The Mixed Scanning Strategy that appeared in the mid-1960s was an eclectic approach of Rational Comprehensive Planning and Incrementalism. The Technical Bureaucratic Model originated from Rational Comprehensive Planning and was developed as Implementation-Oriented Planning in the mid-1970s and as Strategic Planning in the mid-1980s. On the other hand, the Collaborative Model developed through Transactive Planning in the mid-1970s, Negotiative Planning in the 1980s and Communicative Planning since the mid-1980s. The development process of planning theories can be understood as the process of four planning models evolving to co-exist with the appearance of new planning theories. Four planning models and nine planning theories already co-existed in the 1980s when downtown plans were developed in US cities with the participation of various actors.

In practice, elements of the above four planning models are integrated in plan-making processes. Normative plan-making processes such as “Small-Area Planning” by Kaiser et al. (1995), “Downtown Planning: Basic Steps” by Sedway and Thomas (1983) and “Guidelines for Preparing Urban Plans” by Anderson (1995) show procedures for a series of individual tasks: analyzing current and future conditions, defining issues, setting goals and policies, generating alternatives and drafting a final plan. Citizens’ opinions are collected in relevant steps of the procedures. The procedures include the three aspects of plan-making, and prescriptions for individual tasks and the necessary skills of planners are listed. From such normative plan-making processes, we can understand the outline of planning methodology applied in making plans for cities and their sub-areas. But the details of plan-making methodology are not clear, and real plan-making tasks do not necessarily follow the presented normative processes. Therefore, in order to further explore planning methodology, fundamental analyses of the details of individual tasks that compose plan-making, the relationships between individual tasks and the ways various actors participate in individual tasks are needed. So, here I propose the following new analytical framework to grasp the tasks of plan-making more flexibly and in greater detail.

First, the elements related to plan-making are defined as follows and positioned in Fig. 2-4:

- Plan-making: Activity to define goals, policies and implementation measures to shape urban space based on the current and the future

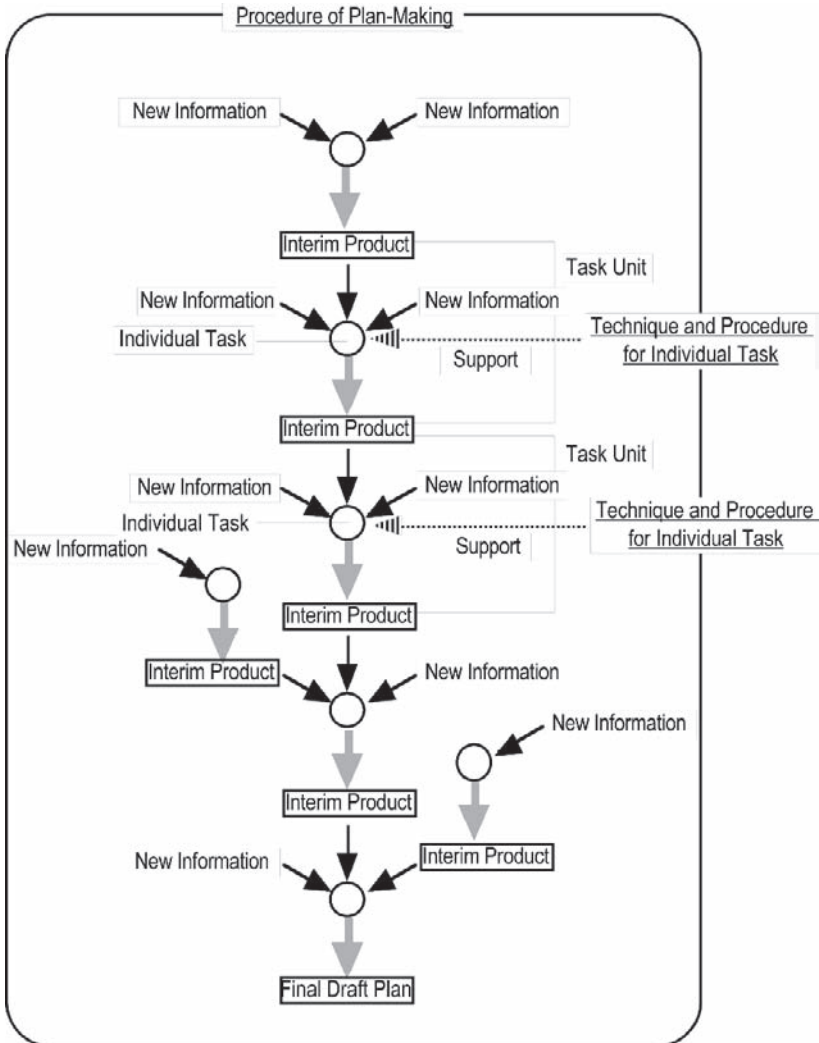


Fig. 2-4. Framework to analyze plan-making

conditions of the city and the demands of various actors on urban spaces. Specifically, plan-making is a series of individual tasks to lead to the “final plan” which includes goals, policies and implementation measures to shape urban space.

- Individual task: Task that compose plan-making process to lead to the final plan. The output of an individual task is combined as an interim product.

- **Interim product:** The output of individual tasks. Specifically, the latest draft plan or report at the moment. The interim product of a certain step or point in the plan-making process is the output of individual task based on the previous interim report and new information. By repeating this task unit, the interim product evolves and finally becomes a final draft plan.
- **Methodology:** A concept that embraces procedure and technique.
- **Procedure:** Generally, ways, means, steps, or planned actions to achieve the objective. In this framework, process or preparation of a series of individual tasks to achieve the objective of plan-making, i.e., to lead to a final draft plan.
- **Technique:** Generally, skills to do things cleverly (efficiently and well). In this framework, skills to conduct individual tasks of plan-making cleverly.

Second, steps to analyze plan-making methodology are proposed:

1. Information gathering, including document collection, interviews and field surveys.
2. Selection of study cases and understanding of their characteristics.
3. Grasp of planning area, period, organization and process.
4. Identification of task units (interim products and individual tasks) through analyses of planning documents (plans and reports) and interviews of municipal employees, architects, urban designers and planners involved in plan-making.
5. Documentation and description of the contents of interim products and individual tasks. Contents of interim products are based on analyses of public documents such as plans and reports, and internal documents such as working reports. Contents of individual tasks are based on internal documents such as working memos and interviews of those involved in plan-making. Unclear parts are inferred from the comparison of interim products before and after.
6. Assembling of points related to plan-making methodology.
7. Identification and systematization of plan-making procedures and techniques.

Watson (2002) points out that a new research approach called “practice movement” has emerged in recent years. This approach involves research on individual planners or planning practices. In other words, the approach is characterized by research that documents and analyzes planners’ various activities, planners’ outputs, interactions and effects. Watson (2002), by using the concepts of “experimental learning” and “cognitive psychology,”

logically showed the significance of “learning from practice,” the objective of “practice movement”. The analytical framework proposed above will contribute to this practice movement by providing an standard methodology to examine plan-making processes in detail.

## **2.4 Learning from Experiences of Downtown Planning in US Cities**

Using the analytical framework explained in the previous section, two cases of downtown planning in US cities, the Portland Central City Plan (1988) and the Land Use and Transportation Plan for Downtown Seattle (1985), were studied to identify the plan-making methodology in each. See Keating and Norman (1991) for background, organization, contents and processes of the two plans, as well as other downtown plans in US cities. Tables 2-1 and 2-2 show a generalized summary of case study results. The details of the case studies are described in Murayama et al. (2003) and Murayama et al. (2004).

As concluded in Murayama (2004), the plan-making procedures of the two cases can be divided in to the three steps shown in Fig. 2-5. In each step, individual tasks that correspond to the three aspects of plan-making (“analysis of current and future urban conditions”, “spatial conception and composition”, and “consensus building and decision making”) are required, and the individual tasks are supported by three kinds of methods (“scientific method”, “creative method” and “political method”).

## **2.5 Prospects of Plan-Making Methodology Development**

Premises of plan-making in matured cities are the regeneration of existing urban space substantially and the intensive participation of various actors. In terms of regeneration, the comprehensive, effective and creative implementation of various measures is important. In terms of participation, opening the contents of plan-making tasks to public is essential for the accountability of a plan and the transparency of consensus building and decision making processes. In order to respond to these demands, the development and the application of plan-making methodology (procedures and techniques) are necessary.

**Table 2-1.** Individual tasks and supporting procedures and techniques in Portland city plan

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**Portland Central City Plan**

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- Task 1: Examination of draft vision, goals and policies based on the results of a design event
- Technique to plan and implement various measures to collect citizen opinions on goals and issues of the planning area
  - Technique to analyze the collected citizen opinions
  - Procedure to examine draft vision, goals and policies, based on citizen opinions
- Task 2: Development and implementation of a research program
- Procedure to supervise the analyses of current and future conditions by multiple actors
  - Techniques to collect and present land use and urban design information
  - Technique to estimate development/redevelopment potential of districts and land use zones
- Task 3: Development of three basic spatial structure models through experts' charrette
- Procedure to develop realistic models from idealistic models
  - Technique to facilitate a charrette
- Task 4: Development of a spatial structure model and five alternative land use plans
- Technique to develop a spatial structure model and five alternative land use plans based on the results of research and draft vision, goals and policies
- Task 5: Reports and recommendations of functional advisory committees
- Technique to compose draft plan parts
- Task 6: Development of a land use concept plan
- Procedure to compose a draft composite plan from draft plan parts (district and functional)
- Task 7: Evaluation and modification of the land use concept plan and development of alternative district plans
- Technique to adjust or modify draft plan parts and the draft composite plan
  - Technique to evaluate the contents (performance) of the draft composite plan
- Task 8: Selection of alternative district plans based on the result of a public review
- Procedure to select alternative district plans
- Task 9: Organization of a final draft plan
- Technique to evaluate the draft plan's impacts on urban form and present the results
  - Technique to compose a comprehensive final draft plan (document)
-

**Table 2-2.** Individual tasks and supporting procedures and techniques in land use and transportation plan for Downtown Seattle

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**Land Use and Transportation Plan for Downtown Seattle**

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Task 1: Implementation of research

- Techniques to analyze existing goals, policies and plans, and extract common goals and themes to start the plan-making process
- Technique to estimate quantity, places and forms of future new developments

Task 2: Collection of citizen opinions on issues and goals

- Technique to plan and implement various measures to collect citizen opinions on goals and issues of the planning area
- Technique to analyze the collected citizen opinions

Task 3: Development of guidelines for alternative plans

- Procedure to develop guidelines for alternative plans based on the result of analyses of current and future urban conditions and citizen opinions

Task 4: Collection of alternative plans

- Procedure to collect alternative plans from individuals and organizations

Task 5: Development of a preferable plan

- Procedure to analyze alternative plans by organizations and individuals
- Technique to analyze the contents of proposed alternatives and define their characteristics
- Technique to compose one preferable draft plan by combining the parts of alternative plans

Task 6: Implementation of a public review and a density/building form research

- Technique to set realistic land use restrictions and development standards

Task 7: Development of a draft land use and transportation plan and a draft environmental impact assessment report

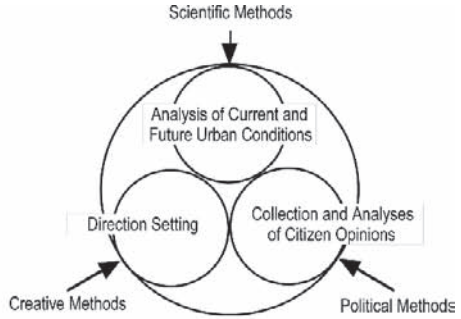
- Procedure to define objects and items of impact assessment and commission parts of impact assessment tasks to multiple actors
- Techniques to evaluate the impacts of alternative plans on land use and development, urban design and landscape, and archaeology and historic conservation, and present the results

Task 8: Development of a mayor's recommended land use and transportation plan and a final environmental impact assessment report

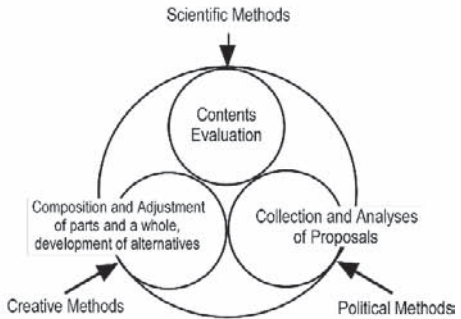
- Procedure to select from alternative plans
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Some prospects of plan-making methodology research development in the future are as follows. Regarding the aspect of “analysis of current and future urban conditions”, the development of techniques to collect and accumulate more various and accurate spatial information, to better estimate future development, to evaluate plan contents and impacts, and

**Step 1: Setting the direction of a draft plan based on objective information and subjective information**  
 A step to set the direction of a draft plan based on objective information obtained from the analyses of current and future conditions and subjective information obtained from the collection and the analyses of citizens' opinions.



**Step 2: Composition and coordination of parts and whole of the draft plan**  
 A step to compose a whole draft plan from the parts of the draft plan (sub-area plans or functional or thematic plans), modify or coordinate the whole draft plan and the parts of the draft plan through an evaluation of the draft plan, and generate options of the draft plan



**Step 3: Selection of the draft plan options based on objective information and subjective information**  
 A step to select draft plan options based on objective information obtained from the impact assessment of the draft plan and subjective information obtained from the collection and the analysis of citizens' opinion on the draft plan and its impact assessment.



Fig. 2-5. Downtown planning procedures



to present things graphically are needed. Regarding the aspect of “spatial conception and composition”, research and organization of charrette facilitation techniques accumulated through practice and the detailed study of planners’ reasoning processes, sensibilities and creativity are the challenges. In the aspect of “consensus building and decision making”, research and organization of measures to collect and analyze more various opinions effectively and efficiently and the development of a technique to analyze alternative plans are needed.

Finally, in order for plan-making methodology (procedures and techniques) to be applied in urban regeneration practices in Japan, the following three points must be overcome. First is the training or education of professionals (government officials and consultants) to make the best use of plan-making procedures and techniques. Second is the security of sufficient financial resources. Third is the establishment of planning system centered on comprehensive plans of different spatial scales (region, citywide, area, district, etc.) which has not yet realized in Japan. If there is no planning system to implement restrictions, incentives, projects and consultation measures based on plans, there is no significance to the plans themselves or in making efforts to research and develop plan-making methodology.

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## 3. Fundamentals of “Transportation-Oriented Urban Planning”

Noboru Harata

### 3.1 What Is “Transportation-Oriented Urban Planning?”

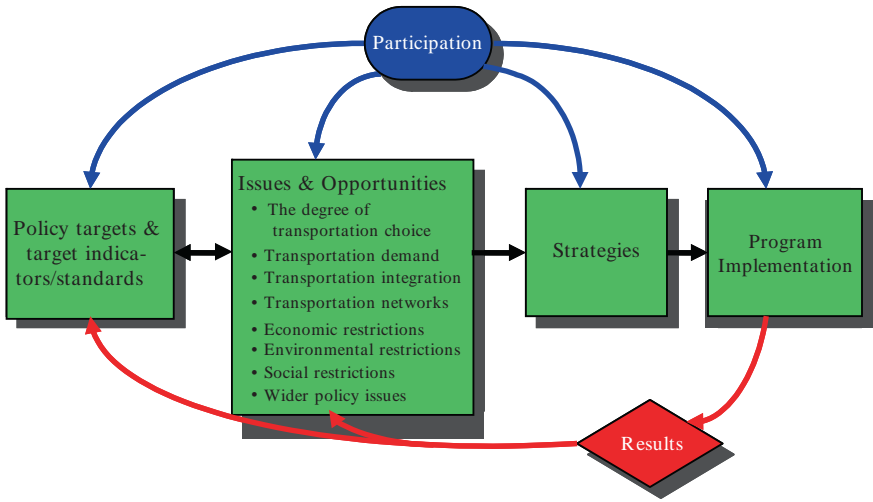
This essay will emphasize the importance and usefulness of shifting from the current transportation planning situation, where the main preoccupation tends to be on more immediate issues, in favor of “transportation planning that contributes to the achievement of urban planning goals” such as improving quality of life and regenerating towns.

“Transportation-oriented urban planning” is a new idea for promoting this shift.

In this essay, “transportation-oriented urban planning” is defined as “a process involving the repeated implementation of plan formulation, policy development, inspections, evaluations, revisions and improvements of transportation planning that contributes to urban planning goals” (Fig. 3-1).

In order to illustrate scenarios that will solve regional issues such as the deterioration of central urban districts, the decline of public transportation services and social exclusion, transportation planning that contributes to the achievement of policy objectives is vital. Without the formulation and execution of such planning, we will be unable to pave the way for regional regeneration.

Currently, an increasing number of local governments are drawing up and starting to work towards the realization of transportation plans that focus on contributing to urban planning goals. Matsuyama, Kanazawa, Toyonaka, Nagoya, Toyota and Sapporo are some examples of cities where this is occurring. With the RACDA at the head of the list, a large number of citizen groups are aiming for and playing an active role in the renewal or improvement of transportation such as LRT and buses. In Yokkaichi, Toyota, Kyoto and other cities, some community bus services are run by citizen groups.



**Fig. 3-1.** The “transportation-oriented urban planning” process  
 NB: This figure is based on a diagram that is shown in (DET 2000). The author has made some revisions and additions

Institutional reform that facilitates new trials such as deregulation and “special zones for urban regeneration” is also moving forward.

In order to provide an understanding of the special features of transportation-oriented urban planning, I will briefly explain two points: (1) how it differs from past transportation planning and (2) what we can expect.

### 3.2 “Transportation-Oriented Urban Planning”: Special Features

“Transportation-oriented urban planning” is a new wave of transportation planning that has some features that were absent from transportation planning in the past. Here, in particular, I will discuss three points: (1) how the objectives are viewed, (2) the players and (3) the process.

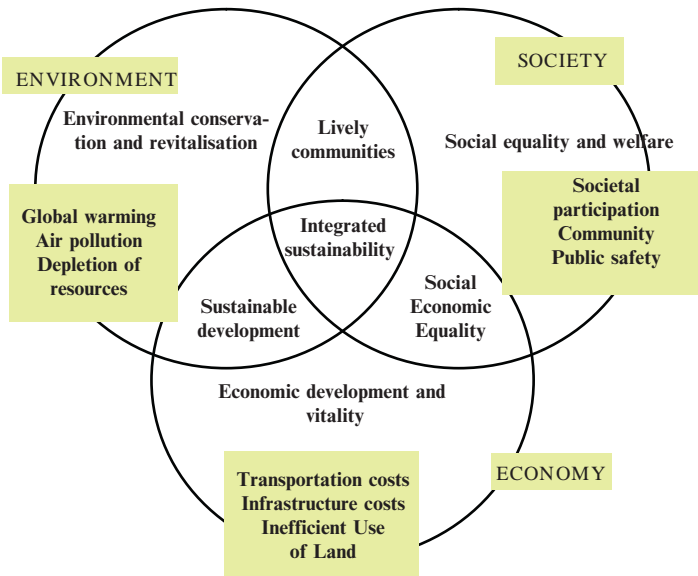
#### 3.2.1 How the Objectives Are Viewed

In the past, in order to keep pace with motorization and the ever-growing demand for transportation, road construction, road maintenance and the building of parking lots were prioritized. The objective was to mitigate

the unbalance between the supply and demand of transportation that caused traffic congestion and motor accidents. Meanwhile, behind the scenes, there was a common awareness that enhancing mobility and accessibility and thereby supporting economic growth was desirable.

Pollution problems such as noise and vibration were the first reasons why people began to doubt this shared view. These issues were tackled by, among other means, the installation of roadside barriers. Eventually, however, some of the problematic points of car-dependent societies such as air pollution, global warming and social exclusion became well known and a new way of thinking came to the fore. This view was that desirable transportation strategies do not merely meet the demand for transportation, they also keep environmental and other kinds of impacts within a tolerable range, are financially feasible, and are practical in the sense that a consensus may be reached.

This paradigmatic shift is reflected by policy goals that aim not only to support economic activity, but also to mitigate environmental and social problems. It is intertwined with the necessity of coming up with transportation strategies that achieve these objectives in a well-balanced manner. Actually, in the midst of demands for sustainable mobility, the importance of the “3Es” (Economy, Environment and Society) was upheld (Fig. 3-2).



**Fig. 3-2.** Sustainable mobility and policy goals (3Es)

NB: This figure is based on a diagram that is shown in CST (2002). The author has made some revisions and additions

### 3.2.2 The Players

All over Japan, urban planning activities by residents are underway in order to build, improve and protect towns and regions that are pleasant to live and work in (“From Wakkanai to...” 2005).

The number of people who are aware of the following is growing:

Changes in demographics and living environments have become clearly apparent in the form of the problems that surround residents. These problems must be dealt with and urban and regional planning must be based on ideas and values that are different to those that were held by people in the past. Furthermore, this is not, as it has been in the past, a job to be left up to the government. Rather, as people who are directly involved in the communities, it is our own responsibility (“From Wakkanai to...” 2005).

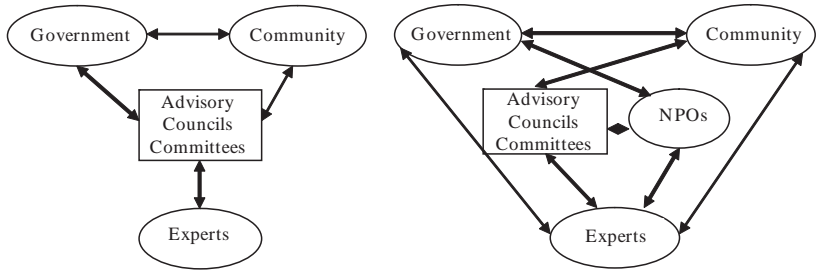
The transition to a car-dependent society, which is associated with urban expansion and income growth, continues to go hand in hand with the deterioration of central urban districts and the social exclusion of senior citizens. These things continue to cast a shadow on pleasant urban life.

There exists an unfocused yet ever-present sense of crisis that “if things remain as they are, our towns have no future.”

Due to the popularization of the internet, information about the circumstances in cities around the world is able to be transmitted in moments and the growing number of people who actually visit and experience those cities means that the amount of information held not only by experts but also by normal citizens is increasing. As a result, the simple question, “Why, in our city, are we unable to do (what people in foreign cities do)?” and the conviction that “we will definitely be able to do it if we try” have spread, and they spur on people in charge of “transportation-oriented urban planning.” In many cases, while the responsible persons in government enumerated reasons why such things were impossible, citizens took the initiative and pressed forward one step at a time and, in the face of failure, succeeded due to their repeated efforts.

The negative view that citizens are simply overly demanding is probably rooted in the antagonistic relationship between citizens and the government. It has been pointed out, however, that “the slack system where citizens are not provided with necessary information and shoulder the burden of fluctuating standards of service makes it only natural for residents to be demanding,” and that therefore, a new changeover to “shared governance” is required (Fig. 3-3) (Okamoto 2003).





a. The Former Process	Key		b. The New Process
		Relevant body	
		Plan formulation body	
		Mutual relationship (large)	
		Mutual relationship (medium)	
		Mutual relationship (small)	

**Fig. 3-3.** Changes in the role played by experts when formulating transportation plans (Ota 1999)

Thus, in this era when increased participation by citizens is discussed, transportation policy decision-makers are required to provide information with not only the government but also citizens and citizen groups in mind. Transportation planners and engineers must continue to be aware of these new needs and endeavor to provide easy-to-understand, scientific and objective information to decision-making entities, including citizens.

A further dimension of this issue is the fact that citizens are the customers of government services. The customer perspective elicits “issues of management such as the problematic relationship between burdens and benefits, the assurance of efficiency in the provision of services, the evaluation problem of results, and, furthermore, systems of providing services by privatization and NPOs.”

### 3.2.3 The Process

When putting into practice “transportation-oriented urban planning” so as to contribute towards the achievement of urban planning goals, the basic process of transportation planning should be followed.

In concrete terms, this means hands-on, repeated setting of targets and indicators, understanding the current circumstances and recognizing opportunities for improvement, formulating plans and comparing those plans with alternative transportation strategies, executing selected strategies and monitoring processes (refer to Fig. 3-1).

This way of thinking, exemplified by the Strategic Choice Approach, is relatively well known. As for long-term planning, where uncertainty is unavoidable, “the perfect planning draft that holds a fixed image of the future” was debunked as being unrealistic in the 1970s. At the present time, a change to a more strategic approach is underway. With this change, planning content and future images are continually revised simultaneously with the plan’s progress. Japan is late on the scene in terms of the popularization of this type of plan. Currently, we need to develop processes that involve the repeated implementation of highly transparent procedures for responding strategically to policy targets.

One feature of this process is the need to place importance not only on plan formulation, but also on the planning process that leads up to the plan’s implementation. One might see this as a reflection of the fact that this is an era where a transition from plans to planning is necessary. Furthermore, another feature is management concepts of the area of management. Policy objectives will be attainable only through the planning process of formulation, implementation and revision. This is consistent with the trend of applying to the area of planning the managerial notions of PDS (Plan, Do, See) and PDCA (Plan, Do, Check, Act) cycles.

### **3.3 “Transportation-Oriented Urban Planning”: Expectations**

“Transportation-oriented urban planning” will produce results that the former model of transportation planning will not. Firstly, through the construction of urban planning visions, consensus related to transportation strategies will be formed in relation to “What kind of town do we want to build?” and, “In order to build it, what kinds of transportation strategies are required?” Without consensus, it will be impossible to implement with any clear direction strategic transportation plans that span the mid-to-long-term. Secondly, by repeating the “transportation-oriented urban planning” process, we will become aware of the previous planning system’s limitations and, therefore, concrete proposals on how to improve the planning system may be expected.

### 3.3.1 “Consensus” Related to Transportation Strategies and Vision Building

In prefectures and cities, serious discussion and presentation of unique urban planning visions that are based on the special features of prefectures or towns is rare. What exists is “please-everyone politics.” The result is often nothing more than cookie-cutter plans with identical content. On the other hand, against a backdrop of the decentralization of power from central government to local jurisdictions, there is a growing need to create unique urban planning visions and formulate and implement planning strategies for their realization so that towns with sufficient appeal to beat the competition may be built.

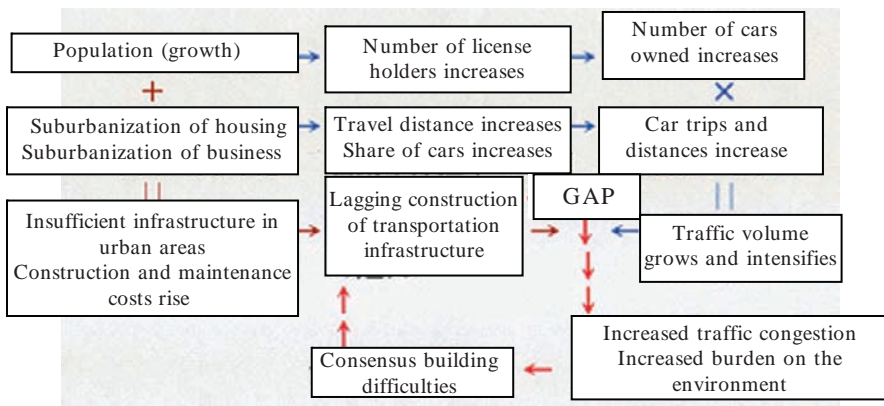
The promotion of “transportation-oriented urban planning” means that urban planning targets will be discussed and opportunities to compare how transportation planning will contribute to the achievement of those targets will increase. This is intertwined with the creation of unique urban planning visions. It is hoped that in order for the government to carry out its responsibility of explaining whether or not limited resources are being utilized effectively, policy development will take on a clear direction that is based on consensus-based urban planning visions.

Even in the case of Japan, there have been times when manifestos that were issued and contested as campaign promises in mayoral elections were, through the election of mayoral candidates, agreed upon. In the Sapporo mayoral election, when urban planning projects, which included creating a Sousei River underpass and an underground footway beneath the main street away from the station, became a major point of contention, even though these projects had been already decided officially. The candidate who promised to gather opinions from citizens and conduct a second investigation using those opinions as a reference was elected. The subsequent measures that were taken included holding a workshop that was attended by 1,000 people (Ishizuka 2004). In this case, various transportation visions for the central urban district were presented concurrently and the suitability of the fundamental planning objectives was debated. Then, independent investigations for the projects were performed. Furthermore, citizen participation was manipulated in a clear sequence of events where a panel of experts presented the Diet with the results of their investigations – results which included opinions gathered at the workshop – and a resolution was passed. This is an example of how technical inspection results were used in a workshop and by a panel of experts and how proper efforts were made to provide the information needed to support a decision-making process that culminated in a Diet resolution against an issue raised by a mayor.

### 3.3.2 Reforming the Planning System

One contemporary issue that is related to Japanese urban and transportation planning is that of reforming our car-dependent society that has developed due to an accumulation of factors. Historically, the effects of motorization have had a snowball effect: car ownership causes car utilization to increase and amenity locations that are dependent on car transportation appear so that a car-dependant lifestyle is established. However, the proliferation of cars that initially progressed in parallel with population growth was associated with urban expansion. Therefore, the number of cars owned was made to increase at a higher rate than the population grew and the number of kilometers driven per car owned grew faster than the rate of car ownership. Consequently, the establishment of amenities that assumed the proliferation of cars progressed so that car transportation-dependent amenities and a car-dependent lifestyle that assumed car proliferation were established (Fig. 3-4).

In this way, funding systems and restrictions on land usage support the establishment of amenities that depend on car transportation and a lifestyle that assumes increased car usage. However, if one considers that, from the point of view of sustainability, car usage must be suppressed, it is necessary to investigate whether there are aspects of our urban planning system that allow the negative aspects of our car-dependent society to grow. It is also necessary to provide decision-makers with objective information related to how these changes will impact the achievement of policy objectives. For example, if trends such as the suburban relocation of prefectural offices,



**Fig. 3-4.** Historical reasons for the growing gap between the demand and supply of transportation

city halls and general hospitals continue, it is important to show the burdens of the relocations. In the same way, we should investigate the beneficial effects if LRT construction funding is approved or if land usage is regulated in a way that facilitates the invigoration of central urban districts.

Public transport companies are falling deeper and deeper into debt and becoming less and less motivated to improve their services. In consideration of the role that they play in providing public transportation services, perhaps it would be possible to introduce a scheme whereby the companies that are able to provide transportation services that satisfy the conditions put forward by local governments most cost-effectively are awarded tender “contracts” and would receive local government subsidies. This “contract” system could be a mechanism for properly assessing work behavior and ability, which could, in turn, be reflected in remuneration. If it functioned effectively, this system could provide incentives to bus companies to improve their services and would probably lead to the improvement of public transportation services that are better suited to special regional characteristics.

Furthermore, the authority of local governments must be increased so that they are independently able to build up funds and break free from the current situation where they tend to rely on outwardly focused development conducted by the national government in favor of development that is focused on internal metropolitan considerations. For example, if governors and mayors were able to promote policies that were suited to the special characteristics of their own region and local consensus was reached, or it became possible to create or revise a regional tax, it would certainly stimulate a large number of policy recommendations for those regions.

If “transportation-oriented urban planning” is developed in each region, a great clamor of voices of people convinced that “if we change the system, we can make our town so great!” could be expected and this would become a major driving force behind changing the system.

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**Part II**  
**Information and Communication**  
**Technologies for Collaborative**  
**Urban Regeneration**

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## 4. Role of Information and Communication Technologies in Urban Regeneration\*

Masahide Horita, Hideki Koizumi, Rikutarō Manabe, Kazuhisa Sugisaki, and Daisuke Nagayama

Information and communication technologies (ICTs) are multi-faceted. In urban planning, a process where people with a wide range of opinions and perceptions convene to make decisions about their own residential environments, the modes of communication and the technologies used are diverse. Usually, these technologies are roughly divided into soft technologies such as heuristic or tacit knowledge for facilitating communication, and hard technologies in telecommunication such as phones and the internet. In this chapter, an overview is made of both soft and hard technologies that have been or could readily be applied to the context of urban regeneration, accompanied by examples in Japan and elsewhere.

### 4.1 Workshops: Soft Technologies for Communication in Urban Planning

It can safely be said that in Japan, communication technologies and techniques for consensus building in the field of urban planning have developed around workshops. Workshops or associated techniques for consensus building and collaborative decision making had already been introduced and practiced in Japan by the 1970s.

One example is the approach taken in the field of rural planning. In the 1970s, “Environmental Inspection Mapping”, a self-inspection and investigation project, was implemented by local residents. Later, in village settlement planning, Fujimoto employed the workshop method, set forth by L. Halprin’s “collective creative workshop process”.

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\* An earlier version of this chapter was published in Japanese in ToshiKeikaku (Urban Planning), 2004, Vol. 53(3), pp. 55–58.

Some of the communication technologies that support workshops are as listed below.

- *Mapping technique:* Beginning with “Environmental Inspection Mapping” in the 1970s and evolving into various names such as “Disaster Prevention Diagnosis Map”, “Hiyari (Incident) Map” and “Barrier-free Inspection Map” according to their themes, the mapping technique has functioned to create a “clinical record” of a community by recording on maps the local information recognized by inhabitants. As a result, regional problems can be shared among inhabitants and the local administration. In some cases of urban planning, mapping techniques are combined with fieldworks such as “Machi-aruki (city watching)” and “Machikado-Orienteering (Street Corner Orienteering)” in order to “re-discover” shared information through the utilization of fieldworks. Other techniques such as the “Gulliver Map”, a technique in which residential maps are used as a medium for virtual experience of city watching, have also proved useful.
- *Problem structuring methods:* The “KJ Method”, an idea structuring technique proposed by the social anthropologist JiroKawakita, has become a typical technique in urban planning workshops of Japan. According to Kinoshita, the KJ Method was first adopted in settlement planning in the early 1980s. Today, it is often used together with brainstorming as a problem visualization method. Similar techniques exist, such as the “Facilitation Graphic”, in which text and figures are used concurrently with workshop discussions. There are many cases overseas in which problem structuring methods were used as assistance for communicative planning, such as Community Operational Research (Community OR) in the UK which assists bottom-up decision making.
- *Design game and gaming simulation:* This technique was advocated by H. Sanoff as “a participation method for planning and designing of parks and architecture, in which items such as cards are used in a game-like model”. It is a tool characterized by its method in which iconized cards are used to discuss facility planning, allowing citizens to participate in the planning and design process – a process once entrusted solely to specialists. Goto has developed and practiced a similar technique, the “City Planning Game of Life”. Other games make use of models, allowing discussions based on an actual image of the future.

## 4.2 From Workshops to Outreach, and to Process Design

Though the use of workshops has been widely tested, problems have also surfaced in which there was difficulty in achieving fair and democratic decision making solely through them. Many municipalities practiced citizen participation during planning processes in the 1992 introduction of the urban planning master plan, and workshops were utilized to discuss among citizens and the local administration. However, the percentage of those citizens who either can or wish to participate in such workshops is usually less than 1% of the population.

It has been reconfirmed through practice that the workshop technique, effective in park planning and district planning, plays only a very limited role when it comes to stakeholder management in the planning process of master plans. Koizumi has pointed out that a technique for managing wide-ranging issues and large number of stakeholders in the planning processes requires not only the workshop technique, but a combination with the what is called “public outreach” technique. It assures dissemination and gathering of interests from subjects who cannot physically participate on-site. For example, in order to utilize public outreach effectively and efficiently, it is important to conduct a stakeholder analysis, and hold a workshop with all of the main stakeholders involved. Yamanaka et al. have applied this stakeholder analysis in urban planning, which mirrors the Project Cycle Management (PCM) technique developed in the field of international development.

In recent years, public involvement has become institutionalized in civil infrastructure projects such as in the road or river sectors, and various techniques have been introduced and implemented for this purpose (see Table 4-1). Various pursuits are made in order to propose measures in which these institutions can be operated fairly and functionally in decision making processes.

## 4.3 Hard Technologies in Communication

Basic (hard) technologies used for communication in urban planning vary according to the types of information exchanged. Since most urban planning involves spatial decision making, spatial information technologies, or Geographical Information Systems to be more specific, are often named as typical information technologies. In recent years, communication infrastructures to exchange or distribute digital information that is collected and managed using GIS have been serviced, leading to active development and application of Web GIS.

**Table 4-1.** Communication techniques introduced in “Public involvement handbook – road planning based on citizen participation”

<b>Purpose</b>	<b>Technique</b>
Preliminary understanding of situations	Key-person interview Stakeholder analysis survey
Opinion survey	Questionnaire survey Group interview Focus group survey
Promotion for participation	Event (symposium, on-site observation meeting, fair) Mailing list Corporate identity formulation
Official and unofficial dialogue	Briefing Open hearing
Unofficial dialogue	Open house Workshop Taskforce Briefing
Dissemination, understanding of opinions	Public relations documents (brochures, fact sheets, public relation papers) FAX, hotlines, comment cards Website Media (TV, radio, newspapers) Information center

Shiffer is a pioneer in the online disclosure and use of spatial information for urban planning. Through the use of this system, users can understand the changes that will occur to the landscape and soundscape when various urban planning proposals are adopted. Inhabitants will be able to confirm in what way the city will change as a result of facility construction. Systems developed after Shiffer have added communication functions to this simulation function, allowing discussion and negotiation of alternative solutions through the use of the system. Some examples such as Virtual London make use of virtual reality technologies to allow users to communicate in an artificial environment.

Communication support systems for urban planning can be further divided into two groups. The first is a normative system in which data about people’s opinions and preferences are collected quantitatively and “desirable” choices are presented to the users. The other is a discussion medium system which places an emphasis on the “visibility and usability” of information that represents the structure of a problem. An example of the former is the VD-miSP (see Fig. 4-1), developed by a research team at the University of Leeds, and an example of the latter is HERMES, which displays the structure



**Fig. 4-1.** VD-MiSP, a spatial decision support system using multidimensional decision making techniques

of a discussion on a map. The two approaches differ in their goals but are not mutually exclusive. In recent years, systems uniting the two approaches have also been developed. The challenge in decision making will be to utilize both systems complementarily in order to avoid a black box that cannot be understood by general citizens, as well as make use of the analytical strongpoint of normative systems.

#### 4.4 Use of Online Communication Technologies in Japan

Teleconference system is a classic example of online communication technologies. Early descriptions of the use of teleconference systems in the urban planning field can be seen in Kobayashi et al., and many findings have been accumulated regarding their functions and management. Two perspectives according to the operational and functional aspects of teleconference systems as a communication technology are explained below.

In Fujisawa City Citizenry Teleconference (Fujisawa Conference, hereon after), the “facilitator” plays the role, and in Mie Prefecture E-Demo Conference, the “Editor” plays the role as facilitator of the teleconference.

In text-based teleconference communication, there are cases in which “participants experience unpleasantness because the discussions are held in a non face-to-face environment ... in which emotional words caused by a slip of the tongue may be exchanged.” The facilitator’s function is to prevent such situations and provide topics that are relevant to the theme of the conference. Policies regarding specification and disclosure of speakers vary depending on the case. In many teleconferences operated by municipalities, users can browse the content unrestrictedly, but in order to make a comment, the user usually needs to register. Fujisawa Conference prohibits anonymous speakers in the City Office Area Conference, but Mie Prefecture E-Demo Conference takes a different approach in which users register their name and email address, but only their nicknames are disclosed in the conference in order to guarantee free exchange of opinions, protected by the internet’s anonymity and unrestricted from social pressure.

Policies regarding reflection of discussion content to municipal administration are regulated for each case. For example, in Fujisawa Conference, the steering committee can propose to the mayor the matters discussed in the City Hall Area Conference, established by the municipality. The steering committee has often submitted proposed schemes to the mayor, and the municipality has answered in the form of reply letters. All of these documents are disclosed online.

From a functional aspect, devising to facilitate communication can be seen in each case. In “Dokodemo (Wherever) Community” of Yamato City, “functions have been added to secure the opportunity for citizens without internet connection to participate and retrieve information through conventional medias such as phone, FAX and mobile web service.” Moreover, teleconference systems are characterized not only by text but by uploading of various multimedia files containing photos, movies or sound. Using this advantage and combining it with special information technologies, a multimedia teleconference system using maps can be created.

In Yamato City, an experiment using “Kakiko-Map”, developed by Manabe with the purpose of informationalization of the above-mentioned “Gulliver Map”, has been implemented with the name “Koko! Demo Community”. In this experiment, the possibility of online communication with the use of geographical maps is examined. Fujisawa City also began demonstration experiments of “Minna de Sodateru Fujisawa Denen Map” (A Make-and-raise-together Electric Affinity Map of Fujisawa). The Mie Prefecture E-Demo Conference system restarted as “E-Demo + Map” in April 2004 after installation of map-coordinated functions to the existing system. Here, a mechanism is prepared in which information from each field, collected from each conference room, is gathered and displayed on a single map.

It would be worthwhile to evaluate whether or not discussions from each field developed into a comprehensive discussion through the use of “Maps and Places”.

## 4.5 Advancement of Communication Technology and Urban Planning Theory

When communication technologies such as those introduced above, there is a social background that calls for such technology. Koizumi, upon organizing the transition of urban planning theories, points out as follows. From the perspective of recent planning ideologies, represented by communicative community planning, the legitimacy of urban planning or urban planning processes is not something to be predetermined by administrative entities, but to be secured only through deliberations among diverse subjects. Diversification of participants in decision making has been pointed out in Japan for a long time. In addition to conventional interest groups such as parliament, judiciary, administration, corporations, citizens and inhabitants, a new stratum of participants such as non-profit organizations are noteworthy. We are in an era in which technologies and systems of urban planning should be reexamined with a premise on the ideas and activities of diverse subjects who are able to play a “partial” but “public” role, and the communication and decision making among these subjects.

The “soft” and “hard” technologies that support this process form the foundation for new social communication in urban planning, and there is a strong need to collect knowledge from related fields such as social systems, policy process, social psychology and Information Communication Technologies and build a compound framework for research and development.

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## 5. When an Electronic Citizen Forum Works and When Not: An Organisational Analysis of the Mitaka Master Plan Process\*

Masahide Horita

### 5.1 Introduction

Electronic democracy (e-democracy) is generally understood as the concept that captures those attempts by governments to facilitate, broaden and deepen public participation through the provision of both electronic and conventional communication media (Waller et al. 2001). In their most typical form e-democracy projects are implemented as part of central or local governments' web sites for disseminating policy-related documents and gathering public views of proposed policies.

Among those classic capabilities, the electronic consultation (e-consultation) approach has increasingly been employed by the governments in order to involve the public who cannot attend real meetings due to spatial or physical constraints. There are already well-structured information resources such as publications, portal sites and mailing lists introducing a number of previous and on-going projects (e.g., Publicus.Net by Clift 2002). The objective of this paper is to report on our own experience of a recent e-consultation project in Tokyo and to discuss if and what way such e-consultation projects can have meaningfully positive impacts on policy processes.

In the City of Mitaka, Tokyo, the revision process of its Master Plan has been completed in March, 2005. In the course of the process the City Council decided to launch an e-democracy project in collaboration with a group of academics (including the author) and an IT firm. This paper focuses on one of the two entities of the project, namely e-symposium. The rest of the paper is structured as follows. In Sect. 5.2 a brief review of

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\*An earlier version of this chapter was presented in CUPUM05, UCL, London, 2005.

the existing literature on e-democracy is made to set out research questions. Section 5.3 outlines the revision process of Mitaka Master Plan and the background of the e-symposium. Section 5.4 summarises the development of an information system, including required capabilities and socio-political conditions. In Sect. 5.5 the outcome of the e-symposium is reported on, followed by a discussion. An analysis is made about our experience with emphasis on what impact e-symposium has had on the entire process of consensus building over the revised Master Plan. The last section provides a conclusion and implications for future research.

## 5.2 Issues on E-Democracy

There have been a number of points made about what e-democracy projects can and cannot do. Though it is not the objective of the present paper to extend the current theoretical debate through new empirical grounds, it is nevertheless useful to highlight some issues that are particularly relevant to the implementation of the Mitaka project. Below four questions about possible use and impact of e-democracy projects are set out.

*Question A Does e-democracy application lead to more politically engaged citizens?*

The hypothesis that an e-democracy application increases the number of citizens who would actively participate in the policy process or broaden the range of such participants has been tested by other authors. Collective results of prior studies appear to balance towards a rather reserved view of the potential of e-democracy. A critique by Coleman (2002) below quite fairly represents such views:

For a handful of enthusiasts it provided an outlet for ill-informed opinion, prejudice and abuse. For most users, it held out the promise of interaction with Government, but proved to be a one-way street leading nowhere (Coleman 2002).

One implication of this commentary is that the problem with e-democracy is not necessarily technological immaturity, but rather lack of organisational and institutional arrangements with which people find it legitimate and sound political arena. More substantial efforts might as well been made for designing implementation process than technicality and functionality of software. In a more recent paper Coleman (2004) makes a related point that parliamentarians and citizens each must acquire new types of communication skills.

This paper shall contribute to the debate by illustrating another course of events that took place in our project. The case, which is described in the

subsequent sections, introduces what kind of effort has been made and what consequences they led to.

*Question B Does e-democracy project better inform the citizens of the policy at issue?*

It has been argued that the policy-related information exists in so fragmented ways that it is generally difficult to collect the information for each citizen's own reconstruction of the problem, even though the vast amount of information is already disclosed in various forms (Prokopiadou et al. 2004). To counter this problem a good e-democracy application would naturally be required to have the capability of representing the available information effectively and efficiently according to the public needs.

How such a capability of representing political information should be evaluated, however, is an awkward issue. There is substantial literature on framing effects of political information, while its claimed extent and significance vary among the authors (e.g., Druckman 2001; Joslyn and Haider-Markel 2002). Though it is not the intention of the paper to measure framing effects, a critical examination is made as to whether the information about the proposed Master Plan has been provided in any more informative way with e-symposium application than otherwise.

*Question C Could or should e-democracy replace representative democracy?*

There are proponents of e-democracy who believe that e-democracy will technologically enable the general public to make judgement on virtually every political issue as it provides them with sufficient amount of information and universally accessible voting facilities. Others believe that such a state will or should never materialise. Mahrer and Krimmer (2005), for example, report on an empirical study in which the majority of Austrian parliamentarians interviewed strongly resisted the concept of e-democracy as replacement of representative democracy, while the same parliamentarians on average expressed considerable support for e-government or e-administration. Those arguments against the status of e-democracy as an alternative to representative democracy appear to maintain that the advantage of representation, as opposed to complete direct democracy, has little changed since John Stuart Mill (1861) put forward his classic arguments.

In our case study it is discussed if there is any way that an e-democracy application of the Mitaka project might have been considered an alternative, rather than supplement, to the policy-making and legislative process that actually happened.

*Question D Can e-democracy achieve procedural justice through more open and transparent policy processes?*

This question is closely linked with the Question A of how many citizens have actually been involved, but can be separated by rephrasing the question

such like: “if and to what extent the citizens could readily participate in a dialogue or check the entire process”. In order to answer the re-addressed question, it is possible to ask whether the level of information disclosure and provision satisfies all quantitative and qualitative requirements from a viewpoint of procedural justice and accountable government.

With these four questions that have just been posed, a case study is reported, in which an e-democracy application has been introduced into the real policy-making process.

### **5.3 Revision Process of the Mitaka Master Plan**

Mitaka is a city located in West Tokyo, about 18 km from the Tokyo central area, with a population of 170,000. The city is generally perceived as a classic residential area with good living environment and public services. The City regularly updates its Master Plan and in the 2004/2005 fiscal year the Third Mitaka Master Plan, which was enacted in November 2001, has been revised. Mitaka has also been known for the use of information and communication technologies as tools for facilitating public participation. On this occasion, an attempt has been made to collect citizens' views about what policy goals should be set within the new Master Plan. Thus the project titled e-forum has been launched.

E-forum involves several components. Prior to e-forum, the City formally set out the revision process in February 2004. Various public meetings and questionnaire surveys have since been held in order to identify principal issues and concerns that the citizens have had. These results were incorporated into the Documents for Deliberation, endorsed by the City Council in June 2004. The Documents for Deliberation have identified four principal policy goals as follows:

1. Community safety with emphasis on measures against crimes on children
2. Community care for the elderly people
3. Education reform such as creating new schools that combine primary and secondary education
4. Mitaka Networking University, connecting existing universities to promote business relations

As part of e-forum, first symposia have been held to explore possible arguments on three (Items 1–3) of the four subjects above. In each symposium the main speaker made a presentation on the corresponding topic at the beginning. Panellists have then been invited from the city office, community

organisations and academics to discuss how the Master Plan should tackle the issues. The minutes of the symposia, including questions and responses from participants in the floor were published on the Internet so that those citizens who could not attend the symposium but were interested in the subject could see the content of discussion and make comments if they wish. It is at this stage when an application has been developed to accommodate the needs for these virtual symposia. This part of the project has been named e-symposium, the main focus of the present paper.

There is another subcomponent of e-forum, which is named e-community carte. E-community carte is aimed at collecting on-site information of the city by using mobile geographical information systems (GIS). Participants in the workshop are provided with mobile phones with Global Positioning Systems (GPS) and a small camera. In the workshop they walked around their community and took pictures of whatever might be of relevance to urban policy, such as dangerous crossings and ill-maintained infrastructure. The use of the GPS capability enables them to link their photos with a geographical map. Thus a map has been created in which they could discuss what was needed to be looked into in the policy process. Details of e-community carte is reported in another paper (Manabe et al. 2005).

All these views and information that was collected through e-forum were examined by policy-makers, who attempted to incorporate these responses into the final revised Master Plan. Through subsequent consultation and legislation procedures, the revision has been finally endorsed by the City Council in March 2005.

## **5.4 E-Symposium**

E-symposium is aimed at representing the structure of arguments on each policy issue and the way these arguments are substantiated. Differences and disagreements are highlighted not as an obstacle to the policy process but rather as important driving force to promote pluralistic and open deliberation. An information system has been developed to realise such objectives by a research group involving the author of the present paper. The system is based on CRANES (Coordinator for Rational Arguments through NEsted Substantiation), developed in prior research and since implemented in several other projects (e.g., Horita 2000; Horita and Iwahashi 2003).

One of the functional characteristics of CRANES is to visualise relevant but fragmented pieces of policy information in the form of an argument tree as if such arguments have actually taken place. Then based on the structure of the argument tree, indices are defined to evaluate which issue has attracted special

attention, which line of argument is particularly supported/challenged, etc. In the case of e-symposium, the views raised by the panellists and audience of the symposia are linked to views raised by other users of e-symposium. Therefore collective argument trees look as if all those participants did actually discuss the same issue in a virtual symposium.

The hardware structure of e-symposium is shown in Fig. 5-1. It consists of a database server and a streaming server that broadcasts the video clip of the real symposia. These servers provide functions such as structuring arguments in the tree form, measuring the balance of arguments, and receiving user inputs in the form of response to existing arguments.

The user interface of e-symposium is shown in Fig. 5-2. In this system a user can browse the contents of discussion in two forms: through a video clip or through an argument tree based on the minutes of the symposium. The main panel of the web page shows the argument tree that was actually created for one of the three symposia. The tree structure was formed in the same way as conventional “threads” of Bulletin Board Systems (BBS): i.e., any response to a certain statement is linked with an indentation. Detail of each statement appears in the panel just below the argument tree.

Each line of the argument tree shows a single unit of statement, describing who made the statement, followed by its summary. The system implemented the anonymous policy that users could use their handle name (or nickname), but first needed to register themselves with an effective email account.

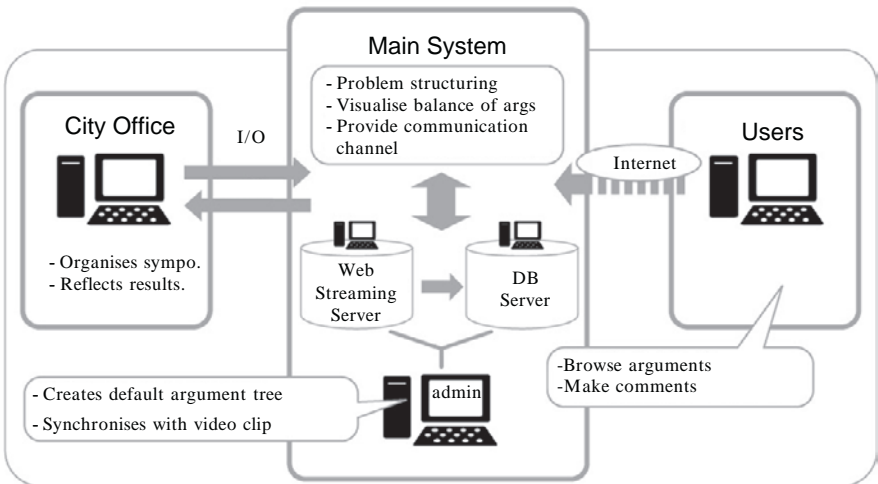


Fig. 5-1. Hardware structure of e-symposium



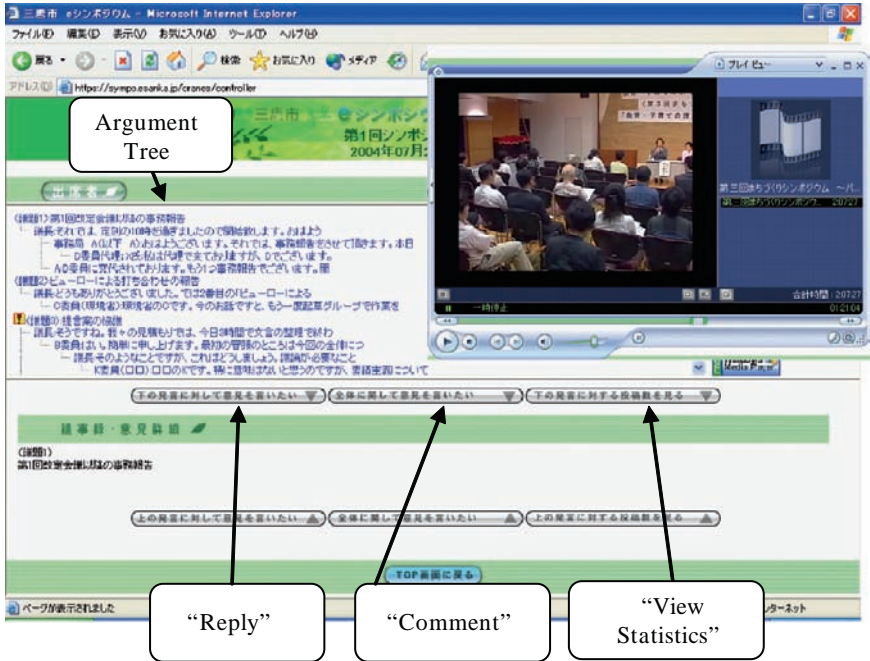


Fig. 5-2. User interface of e-symposium

If they wish to be contacted regarding their comments or questions, members of the City Office could do so through that email account or any other contact provided. When users make comments, the system asks the user to classify their statement: whether their response is providing support, challenge, question or other types of comments. This classification is used for automated calculation of the balance of arguments.

Indices used for calculating the balance of arguments in e-symposium is twofold: one representing how much attention (or responses) a statement has attracted; and the other representing how much support they have received. Each argument has its attributes corresponding to these two indices. The system can set a threshold for these indices, and if an argument exceeds this threshold, the system adds this information by putting an icon to the corresponding line of the argument tree. Visually this means that within an argument tree, a set of arguments are designated as particularly “steering” (with the icon “!”) or “supported” (with the icon “Y”). This capability can also be used as a kind of summarisation tool as users can use this information in deciding which statement is worth elaborating.

## 5.5 Outcome and Analysis

### 5.5.1 Summary of Results

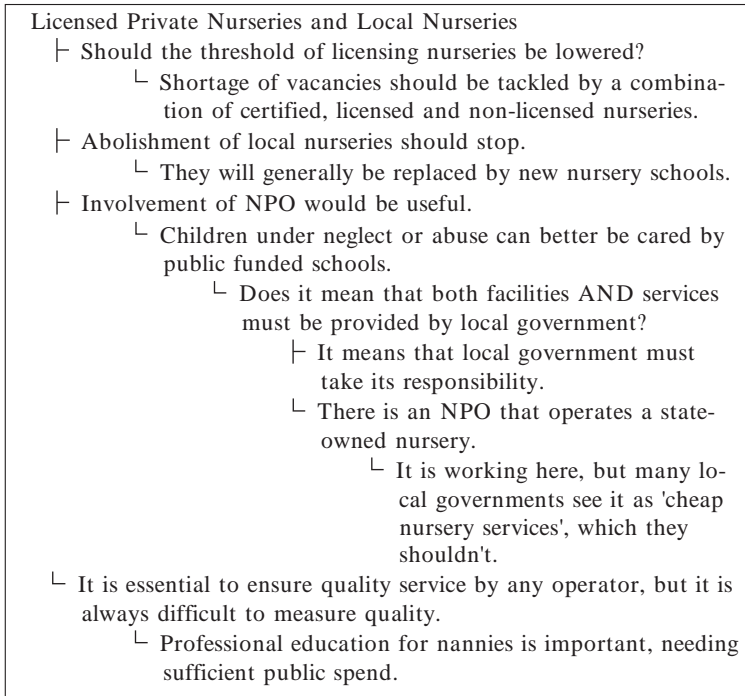
This section summarises main results of e-symposium. During the implementation period from August to December 2004, the total number of access amounts to 5,389. Naturally the access has peaked when each of the three symposia was uploaded to the homepage. The variance of access among the months can most probably be attributed to which of these three symposia the users were interested. This possibility is grounded by the number of user contributions to discussion over the same period, which is clearly correlated to access. The relatively small number of user contributions itself is of academic interest, which is discussed in subsequent part of the section. The summary of access and contributions are shown in Tables 5-1 and 5-2.

**Table 5-1.** Summary of access

<b>Month</b>	<b>Access</b>
August	2,037
September	867
October	1,583
November	532
December	370
<i>Total</i>	5,389

**Table 5-2.** Summary of user contributions

<b>Topic of the symposium</b>	<b># contributions</b>	<b># users who contributed</b>
Community safety (presentation, 17 July)	4	2
Community safety (panel discussion, 17 July)	4	2
Community care for the elderly people (presentation, 1 August)	7	4
Community care for the elderly people (panel discussion, 1 August)	0	0
Education reform (panel discussion, 17 September)	21	7



**Fig. 5-3.** Part of argument tree on education reform

A typical dialogue in the tree form, which combines discussions during the symposium and electronic consultation, can be found in Fig. 5-3. This is an extract from the symposium on education reform, which resulted in most user contributions and perhaps most constructive policy discourse of all the three symposia.

Those opinions and proposals gathered through e-symposium have then been considered for possible inclusion in the revised Master Plan. The City Office classified the all opinions into five categories:

1. We include the suggested point in the revised Master Plan.
2. We reflect the opinion in the revised Master Plan.
3. It is difficult to incorporate the point into the revised Master Plan.
4. We will consider the point during policy/project implementation.
5. Others.

All results of the classification were published in the homepage as well as the City Office's response to each opinion (Mitaka City Office 2005). Among 344 points made by the citizens, 21 points were through e-symposium. Reflecting the balance of arguments in e-symposium, the proposal of less

regulated “community schooling” has been incorporated into the revised Master Plan as an added policy item. Others include: use of community centres as a base for the elderly care; and development of more short time nurseries.

### **5.5.2 Discussion**

It is one thing to claim that the e-symposium application has been implemented and that many points have been included in the revised Master Plan, for it demonstrates the physical, organisational and political feasibility of this particular e-democracy project. It is quite another, however, to claim for its use in terms of the more analytical questions that have been set out in Sect. 5.2. Indeed many questions have been raised about a degree of success and significance by those who were involved in the process. This section provides a self-reflective account of what this project was and what it did (not) do.

First, with regard to Question A (“Does e-democracy application lead to more politically engaged citizens?”), the objective of inviting previously non-engaged citizens to express their views has little been achieved. The number of user contributions in the form of opinion posting has remained low throughout, even lower than contributions made through the traditional media such as questionnaire forms. Those users of e-symposium who did contribute to the discussion are the citizens who have already been active in various community activities. Most of them in fact volunteered to post their opinions to the system because members of the City Office directly prompted them to! Though quite a few of less engaged citizens have newly visited the e-symposium site to browse the policy discourse, the level of participation did not go as far as it makes them active discussants.

There are number of possible reasons. The software might have been better designed for less technical users. Many may not have been aware of the very fact that e-symposium, or even the revision of the Master Plan, was taking place at all. For those who are not tied into current community networks, the only way they could know of this policy process is through a city gazette, which itself is not probably read by the majority of them.

However, a more essential problem in the author’s view is that to those less engaged citizens, the Master Plan – let alone its revision – is considered to be of very little importance. The Master Plan is a set of policy goals that define how more substantive policies or projects should be formulated under a coherent strategy and political value. This at the same time means that traditionally less active citizens can find little incentive to participate

while it is not clear how the Master Plan materialises in the way that affect their lives individually or collectively.

On reflection it might be argued that the topic of e-symposium should have been designed to make a better link between the Master Plan and their lives. Examining the minutes of the symposia, most time is found to have been spent on reportage of what activity each panellist or the organisation they represent have been engaged in. On one of the symposia, only a few minutes out of 90 min were left for discussion when all the individual presentations by panellists were over. Although all these presentations were sufficiently informative of the current activities, participants were left wondering what they could possibly discuss in relation to the Master Plan. On this particular occasion there were no single questions or comments either from the web or from the audience of the symposium.

It is susceptible whether this outcome is only attributed to the capability of the panellists or the chairpersons, or whether it is completely matter of luck. Sceptics may even suspect if such arrangements were made intentionally to limit the extent of public participation. From the viewpoint of the City Office, which was responsible for the whole revision process including implementation arrangements for the e-symposium, it might well present them with quite a dilemma. They generally wish to broaden the range of participants, which would produce a more acceptable plan and consensus, but may not have wanted too wide a split of opinions or controversy, since that would hamper the carefully planned legislation schedule. There is no evidence suggesting that the topics of e-symposium were intentionally chosen from relatively uncontroversial policy items by the City Office. Whatever the judgement of the organiser was, however, the nature of resulting discussion in the symposia seems to have affected the degree to which potential participants were interested in the process.

Second, an answer to Question B (“Does e-democracy project better inform the citizens of the policy at issue?”) can be provided from a similar perspective. The symposia were arranged to inform the citizens of the current situation and similar policies implemented elsewhere. In this educational sense, the claim that e-symposium has served its purpose is justifiable. Due to the generality of the Master Plan and the symposia, however, what policy option would result in what consequences has not been adequately elaborated. There was no sign of dialectical discussion through which citizens could understand advantages and disadvantages of each option they could collectively choose. This may also be attributed to the fact that there were no policy proposals which they could argue for or against. Indeed there were few real proposals in which any dialectical thinking could play a role.

One of the positive aspects that came out, on the other hand, is that members of the City Office were very engaging, and they made every effort to answer all the questions the citizens asked throughout e-symposium. Their answers have cleared certain ambiguity over implications of the Master Plan and contributed to a better understanding of the proposed policy. This attitude may also have contributed to the citizens' view that their concerns and opinions are dealt with fairly and the policy was not just made in the black-box by the urban elites.

Third, there have been no symptoms from which one could infer that "e-democracy could or should replace representative democracy" (Question C). Obviously the settings of e-symposium or e-forum were by no means best suited to test this claim: the condition of implementation here is far from the ideal that is envisaged in the arguments for replacing representative democracy. There was no electronic voting or formal decision-making. Access to WWW has not yet reached all households. Nevertheless, it is useful to draw attention to what actually happened to a sort of deliberation for political decision-making by electronic medium in Mitaka.

It is worthwhile to note that drafting of the Master Plan, issue settings, organisation of consultation and consensus building are all done by the City Office referred to by the Mayor. At times the City Council debated temporal drafts of the revised Master Plan, but their main function is to check them for or against endorsement – not to redraft them on their own responsibility. This has produced a curious configuration. All debate texts of the council are fully disclosed by its own web site, and substantial amount of discussion were made about the detail of the Master Plan throughout the revision period. None of these information resources, however, was linked with the discussion within e-symposium. Many tend to assume that, when e-democracy application is introduced into a process for political decision-making that would be either a replacement of or complement to a parliamentary process rather than administrative one. What actually turns out is that this whole e-democracy project has most primarily served to facilitate the policy-making process that is overseen by the administrative section of local government. It is out of scope of the present paper to explore why, but it can at least be said that division of power between parliaments and administration, which varies according to place and time, may quite affect possible consequences of e-democracy projects.

Forth, the Question D "Can e-democracy achieve procedural justice through more open and transparent policy processes?" could be answered only indicatively. Though the question is not empirically examinable within this study, there are a few points indicating improved technical transparency in the whole policy process. Since the City Office has published on line a

table that describes how citizens' opinions have been incorporated into the revised Master Plan, it is made possible to check, in theory, a complete relation between the discourse and the resulting Plan. More information was disclosed and made readily accessible by e-forum and more traditional media than any previous enactment of a Master Plan.

Solely from these results could we not conclude whether or how much this project has in any way altered the citizens' perception on procedural justice. Nevertheless it is probably arguable that the degree of technical transparency can be checked more easily with use of electronic media than otherwise. Such technical transparency, however, becomes meaningful only when it is coupled with organisational efforts to open the policy process itself as much as the public could maximally benefit, which in the author's view Mitaka City has exemplified.

## 5.6 Conclusion

This paper has provided an anecdotal account of what may be termed an e-democracy project as action research. An analysis has been made in response to some of the current debates in the e-democracy literature. It is no intention of the present paper to make any generalisations of what happened to this particular project in Tokyo; indeed it would make a coherent future study to analyse all the uniqueness of the observed outcomes from a socio-cultural viewpoint. For the present, it is worth drawing attention to the variety of e-democracy projects around the world in terms of both technical approaches employed and social consequences of use.

In conclusion, the experience in Mitaka is an invaluable asset in future design of policy process in post information society. At least the case has reminded us of not only what e-democracy may be able to achieve, but also what it cannot do without considering the "big picture" of a broader governance structure. More work needs to be done for depicting such a picture, but then will it become possible to contemplate about real implications of an alternative medium for important socio-political decisions.

## Acknowledgements

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## 6. Technologies in Transportation Planning and Management

Nobuaki Ohmori

### 6.1 Introduction

As part of achieving sustainable cities, reducing car use has been a main target in transportation planning and policy. Transportation demand management (TDM) measures such as Park and Ride participation and carpooling have been introduced in the last two decades. However, these measures do not work effectively unless travelers themselves identify their car use as an impediment to achieving sustainable cities. In this context, encouragement of travelers to become involved in environmentally friendly travel patterns is a promisingly effective policy measure to reduce car use. Jones (2003) called such approaches “soft measures” in mobility management. The effectiveness of this method has been demonstrated by previous research in, for example, Individualized Marketing (Brög 1998), Travel Smart (Department of Transport, Western Australia 2000), Travel Blending (Rose and Ampt 2001) and the Travel Feedback Program (TFP) (Taniguchi et al. 2003). These behavior modification programs are referred to as *travel feedback programs* (Fujii and Taniguchi 2005). In these programs, the first step is obtaining information on travel diaries from participants to diagnose their travel patterns. The programs then provide the participants with information on the CO<sub>2</sub> emissions they produced, and on public transport as an alternative mode, and/or advise people how to reduce car use based on their current travel patterns. Some programs ask the participants to make behavioral plans (Fujii and Taniguchi 2005). Existing research in Western countries reports that aggregate car use of the participants reduced by about 10–20% after participation in the programs (Fujii and Taniguchi 2006).

In Japan, interest in these programs has been increasing. In particular, the Travel Feedback Program has been implemented in many cities (Japan Society of Civil Engineers 2005; Fujii and Taniguchi 2006).

However, the programs spend huge human and financial resources at each stage of the process, such as collecting participants' travel diaries using paper-based questionnaire sheets, analyzing them and advising the participants to use their cars in a more environmentally friendly way. Data accuracy of travel diaries collected using paper-based questionnaire sheets has been a problem. It takes much time and money to generate and provide individualized alternative activity-travel patterns of more environmentally friendly strategies for each participant. Daito et al. (2005) developed the Travel Feedback Program system using Web technologies (WebTFP), which collects travel diaries from participants on a Web browser. This system alleviates spatial constraints for program managers to implement the program and for participants to participate in the program. It has been applied especially to the workplace-based travel feedback program. For example, more than 700 employees in one company, working at 13 offices located in several parts of Japan, participated in one WebTFP process (Ozawa et al. 2006). However, the WebTFP system does not collect spatial information on travel patterns and cannot provide the participants with it on a Web browser. Not only temporal information of travel patterns, but also spatial information of them is very useful for individuals to understand and investigate their current and alternative travel patterns in urban space (e.g., Jones 1982; Jones et al. 1983; Ohmori et al. 2005). For collecting more accurate and detailed information on individual travel patterns, positioning technologies such as global positioning systems (GPS) and global systems for mobile communications (GSM) can be applied (e.g., Murakami and Wagner 1999; Ohmori et al. 2000; Wermuth et al. 2003; Asakura and Hato 2004). In addition, geographic information systems (GIS) are very effective tools for the management, analysis and representation of spatial elements of the transportation network and individual travel patterns. There has been some research to explore the possibility of developing integrated models of activity-travel patterns with GIS (e.g., Golledge et al. 1994; Kwan 1997) and collecting data on activity scheduling behavior using GIS (e.g., Lee and McNally 2001).

The author and his colleagues have been developing GIS-based activity-travel simulators, which can generate alternative activity-travel patterns and represent them on a GIS (Ohmori et al. 2003, 2005). The simulators have been used in order to understand travel behavior of elderly households, to help students understand travel behavior under space-time constraints, and to investigate activity scheduling behavior of tourists' leisure activities. Moreover, the author and his colleagues have developed a survey system for collecting

activity-diaries using GPS-equipped mobile phones. There is a possibility now to integrate those systems into a new tool and apply it to travel feedback programs as a communication tool for interactive diagnosis of individual/household activity-travel patterns. This chapter describes the development of *iSMAP* (Internet-based Simulation Model for Activity Planning), an integrated system for data collection, analysis, representation and evaluation of individual activity-travel patterns using GPS mobile phones and Web-GIS technologies, and its application to the travel feedback programs.

## **6.2 Development of the System**

### **6.2.1 GPS Mobile Phone-Based Travel Diary Survey System**

Usually in travel feedback programs, paper-based questionnaire sheets or Web-based questionnaires have been used to collect participants' travel diaries. In this study, a GPS mobile phone-based travel diary survey system was developed to collect information on individual travel patterns, based on the author's previous study (Ohmori et al. 2006). The advantages of this system are as follows:

- Directly collects electronic data on travel diaries and transmits the data through a wireless network (GSM network and the Internet)
- Automatically collects positional data at a regular time interval to specify origins/destinations and travel routes
- Reduces the survey costs of time and money both for distribution and collection of survey materials, and for transmitting, editing and inputting the collected data

The software programmed in Java language works on GPS mobile phone devices of "au" by KDDI Corporation, for entering information on travel diaries. The "au" employs the "gpsOne" technology called the Assisted GPS (A-GPS) (see KDDI website). The A-GPS calculates the current position of the phone, using not only GPS, but also signals received from multiple base stations to which the mobile phone device is connected. Therefore, positional data can be collected even if GPS is not available (in places such as urban canyons, inside public transport and buildings, etc.) or if it is carried in a coat, jacket pocket or a bag. The software is downloaded via the wireless network and installed in the mobile phone. Positional data (longitude and latitude) are automatically collected at regular time intervals. Travel diaries and GPS tracking data are transmitted to a server computer.

Participants just carry the GPS mobile phone, and push some buttons whenever they leave origins and arrive at destinations. They can enter information on trip purposes (commute, business, going home, private business, shopping/eating out, pick-up/drop-off, and other) and travel modes (main and access/egress) into the GPS mobile phone-based survey system. The data collection system was designed to impose the minimum respondent burden on the participants.

## **6.2.2 Internet GIS-Based Interactive Travel Feedback System**

MapInfo MapXtreme software was used for the Internet GIS-based interactive activity-travel simulator (*iSMAP*). By using the Web GIS software, it is very easy to manage GIS data and represent spatial information in the Web environment (see Aono et al. 2004, 2007). Programs of data management and representation on the Web browser are written in VBScript. When this research project was launched, the author considered that it would be better for the participants to access the program website from their home or office once a day. The system consists of the following two parts:

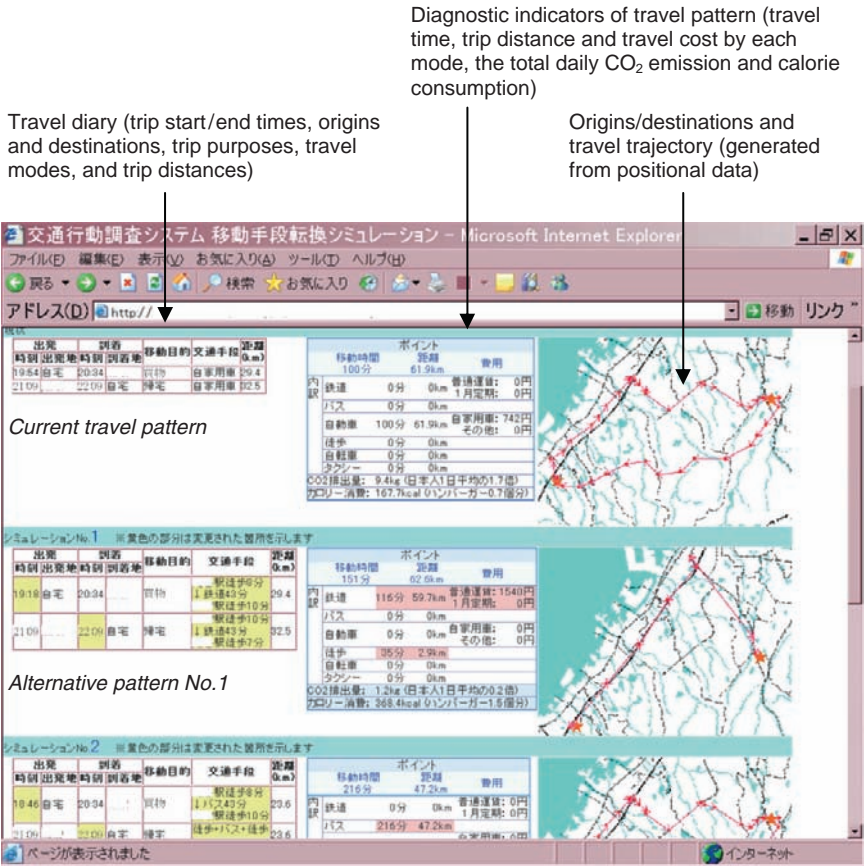
- Completing the travel diaries and spatial information on travel patterns
- Simulating alternative travel patterns of different travel modes

### **6.2.2.1 Completing Travel Diaries and Spatial Information on Travel Patterns**

On the Web browser, the daily travel diary and the travel trajectory collected by the GPS mobile phone system are represented in spatial and temporal dimensions (see “the current travel pattern” of Fig. 6-1). Color raster maps of Osaka area were used to identify urban space and individual spatial travel patterns. Also, several diagnostic indicators about the day’s travel pattern, such as travel times, travel distances, travel costs by each travel mode (fuel costs for car, fares for public transport), the total daily CO<sub>2</sub> emissions and the total daily calorie consumption are calculated using the travel data and represented on the Web browser.<sup>1</sup> The participants can reflect on their current travel patterns that day by investigating the represented information.

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<sup>1</sup>CO<sub>2</sub> emissions and calorie consumption by travel mode were calculated using the following values per travel time (minute) referring to a guidebook (Japan Society of Civil Engineers, 2005). CO<sub>2</sub>: 0.094 kg min<sup>-1</sup> for car, 0.01 kg min<sup>-1</sup> for train, 0.05 kg min<sup>-1</sup> for bus, 0.02 kg min<sup>-1</sup> for motorcycle, and 0.0 kg min<sup>-1</sup> for bicycle and walk. Calorie: 1.683 kcal min<sup>-1</sup> for car, 2.18 kcal min<sup>-1</sup> for train, 2.18 kcal min<sup>-1</sup> for bus, 1.68 kcal min<sup>-1</sup> for motorcycle, 3.82 kcal min<sup>-1</sup> for bicycle and 3.30 kcal min<sup>-1</sup> for walk.



**Fig. 6-1.** Snapshot of iSMAP (representation of current and alternative activity-travel patterns) (Ohmori 2008)

The names of origins and destinations can be directly entered on the Web browser. When the participants did not enter information on trip purposes and travel modes or entered incorrect information into the GPS mobile phone-based survey system, they can enter or correct the information on the Web browser. Some trips might be missed or incorrectly represented in the travel diary section of the Web browser, because participants forgot to push buttons of the GPS mobile phone when leaving origins and/or arriving at destinations. The travel diary can be modified by deleting and adding trips on the Web browser. Spatial information on origins and destinations can be also easily modified on the Web GIS.

### **6.2.2.2 *Simulating Alternative Travel Patterns***

Alternative travel patterns of different travel modes are generated on the condition that locations and start times of daily out-of-home activities are fixed. The participants can change the travel modes of the current travel patterns to alternative ones. Alternative main travel modes are train, bus, car, taxi, bicycle, and walking. A GIS database of the railway network in Kansai area, including 1,419 railway stations on 21 railway companies, was used to calculate travel times and travel routes by train. Travel time by train between an origin and a destination is based on the route of the minimum travel time using the nearest railway stations from the origin/destination. A database of travel fees by train was originally prepared. However, bus network data were not prepared.<sup>2</sup> If the participants choose train or bus as a main travel mode, they also choose access/egress modes. Available access/egress modes to/from the train stations are bus, car, taxi, bicycle, and walking. Travel routes of alternative patterns are represented on the GIS map. When the alternative mode is train, the travel route is represented by polylines connected with intermediate stations. When the alternative mode is not the train, the travel route is assumed the same as the current trip. In “the alternative travel pattern No. 1” section of Fig. 6-1, a change in travel routes of some trips from car to subway is represented. The information on alternative travel patterns is then added below the current travel pattern on the Web browser. Participants can compare the current travel pattern with alternative ones, investigate the spatial movements and diagnostic indicators of the travel patterns, and are asked which pattern they prefer. In the last stage, the system asks the participants which diagnostic indicators such as travel times, travel costs, CO<sub>2</sub> emissions, and calorie consumption affected their preference, and what the constraints of their trips are.

## **6.3 Application of the System to the Travel Feedback Program**

A pilot study was conducted for the participants working in the Department of Civil Engineering of the Osaka Prefectural Government in November and December 2005 to investigate how well the system can work as a communication tool of the travel feedback program and to identify problems occurring in its practical use. As a rule, the office prohibits its employees to

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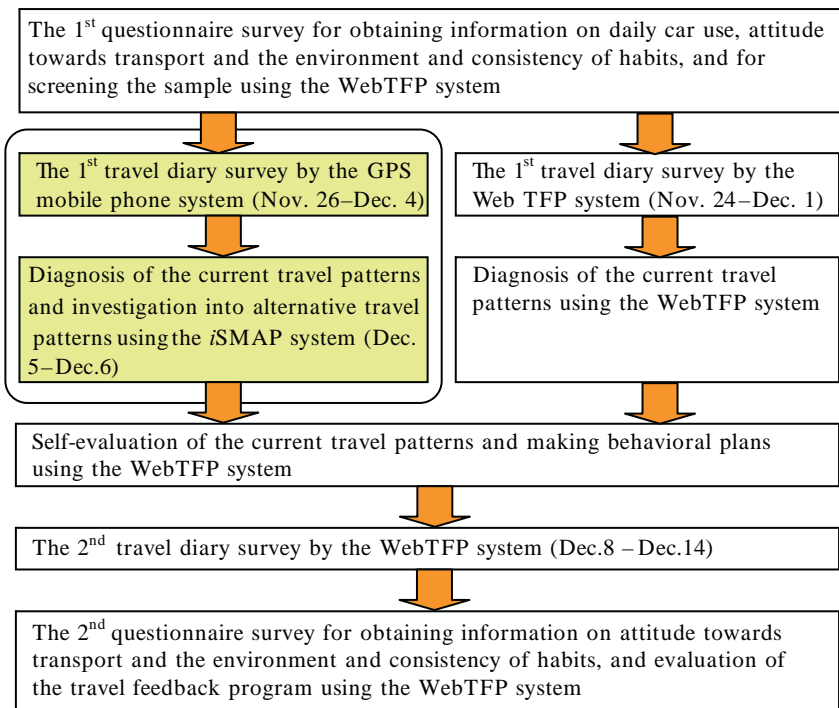
<sup>2</sup>Bus network data was not prepared in this program for the following reasons: the number of participants using bus was expected to be very small, as shown in Table 6-1, GIS data on bus network did not exist and making it by ourselves would consume much time.

commute by car. Figure 6-2 shows a flowchart of the travel feedback program. The program was basically implemented using the WebTFP system (Daito et al. 2005). For the first travel diary and the diagnosis stage, a total of 20 persons participated in the program using *i*SMAP.

In the first stage of the program, a questionnaire survey was conducted on the Web to obtain information on daily car use, attitude toward transport and the environment, and consistency of habits. The sample was then screened. Questions about attitude toward transport and the environment used a five-point scale for the following five questions:

- Do you think car use is bad for your health?
- Do you think car use is bad for the environment?
- Do you think it is better to reduce car use?
- Do you think reducing your car use is difficult?
- Do you think you will try to reduce your car use?

The question about consistency of habits was “Which travel mode do you use when traveling for a total of ten trip purposes: e.g., for visiting friend’s house, for business, for going to convenience stores, for shopping clothes?”



**Fig. 6-2.** Flowchart of the Osaka Prefectural Government travel feedback program

As shown in Fig. 6-2, two different systems (the *i*SMAP and the WebTFP) were used as communication tools in the diagnosis step. The WebTFP system required participants to record two weekend days' travel diaries (trip start/end times, destinations, trip purposes, and travel times by each travel mode) on the Web browser, because the employees were not expected to use cars on weekdays when commuting by car was prohibited. The WebTFP system showed diagnostic indicators of the current travel pattern such as total travel time, percentage of car use, fuel consumption, CO<sub>2</sub> emissions, and calorie consumption. Seventy employees, who had a driving license and used a car daily, were recruited as participants in the program. Twenty of them participated in the program using *i*SMAP and the rest participated in the program using the WebTFP system. All the participants were males and 30–50 years old.

GPS mobile phones pre-installed with the software for travel diary data collection were distributed to the participants of the *i*SMAP group. Ten of them received face-to-face explanations from the instructor on how to use the mobile phone in the first travel diary survey. The participants were asked to carry the mobile phone and record travel diaries on a total of four weekend days between Saturday, November 26 and Sunday, December 4, 2005. They were asked to charge the battery of the mobile phone while at home and at the office. They were asked to turn on the mobile phone and push buttons when they started trips, and enter information on trip purposes and travel modes if possible. Positional information on longitude and latitude was collected every 2 min. When arriving at a destination, they were asked to push buttons and turn off the phone. This process saved the battery consumption of the mobile phone.

Immediately after the first travel diary survey on December 5 or 6, the participants of the *i*SMAP group participated in a face-to-face interview with the instructors using the *i*SMAP at the office of the Department of Civil Engineers in the Osaka Prefectural Government. Two laptop computers with Internet access were prepared for the interviewing survey. At the beginning, the author had intended to use the system as a self-operating system. However, since this was the first trial to apply it to the travel feedback program, problems might possibly have occurred. Therefore, the instructor helped participants operate the system during the face-to-face interviews for the diagnostic stage of the feedback program.

First, the instructor inputted the participant's ID number and password, and selected one out of the four weekend days. Then that day's travel diaries and travel route on GIS map appeared. The participants entered the names of trip start/end locations on the Web browser. As for the trips of which they did not enter all the information, the participants were asked to enter the rest of the information into the Web browser. Diagnostic indicators calculated based on the travel diary were represented: travel times, travel distances,



travel costs by travel mode, and the total CO<sub>2</sub> emissions as an indicator of environment, and the total calorie consumption as an indicator of individual health for that particular day. The interviewer then asked the participant, “Could you have changed travel modes for any trips?” The system showed information on an alternative travel pattern on the Web browser below the current pattern, if there was in fact an alternative travel mode. The participant identified the changes in the spatial pattern and the differences in diagnostic indicators before and after the mode change. This process was repeated until the participant considered that there were no other alternative patterns. Finally, the participant was asked, “Which travel pattern do you prefer, the current travel pattern or one of the alternative patterns?” and “Which diagnostic indicators affected your preference?” If he preferred the current travel pattern, he was asked to choose the reasons why he did not prefer the alternative travel pattern from a list, e.g., problems in access/egress travel mode, frequency of public transport, luggage, weather.

After the interview, the second travel diary survey was conducted using the WebTFP system for weekend days between December 8 and December 14. Lastly, the second questionnaire survey was conducted for obtaining information on attitudes towards transport and the environment to investigate changes in attitudes, and their evaluation of the travel feedback program.

## **6.4 Results of the Application**

### **6.4.1 Completing Travel Diaries**

A total of 30 daily travel diaries from the 20 participants were confirmed in the interview. About 20% of the participants did not enter the information on trip purposes and travel modes in the GPS mobile phone-based survey system. Some trips were not recorded correctly. For 13 trips, the participants forgot to push buttons on the mobile phone when leaving origins and/or arriving at destinations. On the contrary, six trips were recorded by mistake when participants did not make trips. The battery of mobile phones run out when participants were traveling for a total of 11 person-days. Multiple trips were sometimes consolidated into one trip. In advance of the interview for investigating travel patterns, the surveyor pre-checked these trips for incomplete information. In the face-to-face interview, it took nearly 30 min on average to modify the trip

information and to complete 2-day travel diaries for each participant. Another reason for taking much time was that the laptop PCs with the Internet access by PHS (Personal Handyphone System) had relatively slow transmission speeds.

### **6.4.2 Simulation of Alternative Travel Patterns**

Alternative travel patterns were investigated for a total of 24 daily travel patterns of 17 participants. Three participants were not able to use travel modes other than car, because their trip destinations were closer to their homes than railway stations. Seventeen of the 24 simulated travel patterns were changes from car to train. The alternative travel patterns were preferred to the current pattern in seven of the 17 patterns. The rest of the simulated patterns were changes in travel mode from car to bicycle, car to bicycle and taxi, bicycle to walk, etc. It took less than 5 min to investigate 2-day travel patterns for each participant.

### **6.4.3 Changes in Attitudes Before and After the Travel Feedback Program**

In this section, changes in attitudes before and after participating in the travel feedback program are summarized and compared between the *i*SMAP group and the WebTFP group. The analysis used the data collected in the first and second questionnaire surveys to ask about attitudes and consistency of habits of both groups. Complete datasets were obtained from 12 participants in the *i*SMAP group and from 49 in the WebTFP group.

As for consistency of habits, the percentage that the participants answered that they would use car for a total of ten trip purposes decreased at almost the same rate in both groups. In both groups, attitudes toward transport and the environment improved to the direction of environmentally friendly and the score to the question, "Do you think you will try to reduce your car use?", significantly improved in both groups. In particular, the score to the question, "Do you think reducing your car use is difficult?", improved significantly only in the *i*SMAP group. This result suggests that the participants were able to identify the changes of travel patterns between the current and alternative pattern(s) more concretely and realistically using the *i*SMAP system.

#### 6.4.4 Changes in Travel Behavior Before and After the Travel Feedback Program

Complete datasets were obtained from 13 participants in the *i*SMAP group and from 50 in the WebTFP group. Table 6-1 shows changes in travel time by mode and CO<sub>2</sub> emissions for the two groups. In both groups, the number of trips, the number of car trips (25% decrease in the *i*SMAP, 16% in the WebTFP), total travel time, and car travel time (36% decrease in the *i*SMAP, 17% in the WebTFP) decreased. Additionally, the number of train trips and travel time by train increased and the number of walk trips and travel time by walk decreased. CO<sub>2</sub> emissions (32% decrease in the *i*SMAP, 15% in the WebTFP) and calorie consumption (32% decrease in the *i*SMAP, 22% in the WebTFP) decreased in both groups.

This result indicates that both programs contributed to reducing car-use and the *i*SMAP system contributed relatively more to reducing travel time per car trip. Next, the relationships between individual characteristics (distance between their home and railway stations, preference for simulated alternative patterns, etc.) and changes in travel behavior were analyzed. However, no significant relationships were found in these analyses.

**Table 6-1.** Changes in travel time, CO<sub>2</sub> emissions, and calorie consumption

	<i>i</i> SMAP group ( <i>N</i> = 13)			WebTFP group ( <i>N</i> = 50)		
	1st survey	2nd survey	<i>t</i> -value	1st survey	2nd survey	<i>t</i> -value
Travel time (min/day/person)	133.5	92.5	1.62	114.7	97.3	1.88
Car	100.4	64.2	1.13	73.9	61.3	1.20
Train	11.5	18.1	0.77	14.6	14.2	0.07
Bus	1.4	5.8	0.73	0.7	2.3	1.72
Bicycle	2.9	1.5	0.58	13.2	8.1	1.26
Walk	12.7	1.2	1.57	11.1	6.3	2.02*
Other	4.6	1.7	0.59	1.3	5.3	1.13
CO <sub>2</sub> emissions (kg/day/person)	9.7	6.6	1.12	7.1	6.0	1.10
Calorie consumption (kcal/day/person)	253	172	1.77	245	192	2.27*

\**p* < 0.05

### 6.4.5 Participants' Evaluation of the System

This section describes the participants' evaluation of the system based on the analysis of the data collected in the second questionnaire survey after the feedback program. As for the GPS mobile phone-based travel diary survey system, 54% of the participants answered that they imposed (a small) burden. However, all of the participants answered that operating the mobile phone was (relatively) easy. As for the *iSMAP* system, more than 70% of the participants answered that it was easy to understand the spatial elements (e.g., origin/destination, travel route) of their travel patterns on a map. Some participants gave opinions such as "It took a long time to represent spatial travel patterns on a map", "I wanted to change the scale of the map", and "I wanted to participate in the diagnosis process on my own PC." Most participants answered that the simulation process (77%) and diagnostic indicators (64%) were easy to understand. However, one participant answered, "I wanted to see information not only on environmental issues but also on economic issues" and "I wanted to compare travel route, cost, and time between the current and alternative travel patterns". These answers indicate that they did not correctly understand the information on the Web browser and that the browser needs improvement in how it represents the data. Another participant answered, "I need information on alternative routes of less travel time reflecting congestion."

## 6.5 Conclusion

This paper described the development of an integrated system for data collection, analysis, representation and evaluation of individual activity-travel patterns: the Web GIS-based activity-travel simulator, *iSMAP*. Information on travel diaries was collected using the Java application working in GPS mobile phones and which could also be modified in the Web browser. The system generated alternative travel patterns with diagnostic indicators representing the travel pattern. It was applied to the travel feedback program for employees working in the Osaka Prefectural Government as a pilot study. The feedback program with *iSMAP* contributed to improving the participants' attitudes towards reducing car use. Travel time by car and CO<sub>2</sub> emissions decreased in both *iSMAP* and WebTFP groups after participating in the travel feedback program. In particular, the modal share of car travel decreased more and that of public transport increased more in the *iSMAP* group than in the WebTFP group. This could be due to the function that the participants could

interactively investigate individualized alternative travel patterns with spatial information and diagnostic indicators.

For future research, the process of completing travel diaries should be improved because it took much time to modify and complete the travel diaries collected with the GPS mobile phone-based survey system in the pilot study. The *iSMAP* can be used by participants living in any city where a GIS database of transport network is available. In this study, the system was applied to weekend days' travel patterns, because the participants were prohibited from commuting by car during the week. I am planning to apply the system to car commuters and to examine the possibilities of behavioral change to environmentally friendly travel modes. At present, since generated alternative activity-travel patterns are conditioned with fixed locations and start times of the current activities, only changes in travel modes are examined. I will try to improve the system to generate more flexible alternative travel patterns, incorporating not only travel modes but also locations, time of day and the sequence of the activities. Other diagnostic indicators such as the volume of environmental exposure to air pollution such as nitrogen oxide ( $\text{NO}_x$ ) and particulate matter (PM) would be useful for self-diagnosis of travel patterns. Internet-based systems for communication tool in the travel feedback programs can be used only by people who can use the Internet. The appropriate combination of Internet-based systems, conventional paper-based materials and face-to-face communications should be examined for more effective programs.

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**Part III**  
**Practices in Collaborative  
Urban Regeneration**

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# **7. The Planned Unit Development Approach in the New Land Use Plan of Manila: Facilitating Community-Based Governance in Sustainable Urban Regeneration**

Joel R. Oaña

## **7.1 Introduction**

In the continuing effort to develop knowledge for empowering communities, particularly regarding the sustainable urban regeneration of the inner core of Manila, this paper discusses a community-based theoretical framework and its correlation to the urban development strategy of the recently approved Comprehensive Development Plan of Manila and the resulting Land Use Plan and Zoning Ordinance. This paper highlights the Planned Unit Development (PUD) Approach that was introduced and defines its objectives, nature and the processes developed for its implementation. An important concern of this paper is the positive impact of this planning tool on the engagement of communities and stakeholders, and its further refinement. The output of a Barangay Development Planning initiative in the Hidalgo Area serves as a case study in the initial implementation of the Manila PUD System. This paper aims to contribute to the mainstreaming of the community in the planning and management of their area and to the facilitation of community governance that can be a building block for sustainable urban regeneration.

## 7.2 A Community-Based Triangulation Development Framework for Sustainable Urban Regeneration

There are three realities that are currently observed in development. First is the reality of *urbanization*. The convergence of people into concentrated and compact settlements is continuing unabated such that this new century is already dubbed the First Urban Century where more than half of the people of the world are huddled in cities (UNCHS, 1993). Second is the reality of *globalization*. The integration of the world system is coming into place facilitated by the information and communication technologies (ICT) and international policies such as those of the WTO and the GATT. The third is *localization*, wherein local government authorities and communities are being recognized as the most effective vehicles of development, particularly in the urban environment (Hamdi & Goethert, 1997; Foldvary, 1994; Henton et al., 1997; Wagner et al., 1995). It is noted that in social, economic, environmental and governmental terms, the world is “globalizing” and “localizing” at the same time. International bodies are becoming more and more active in setting broad developmental objectives and defining issues. Continental and regional area groups such as the EU and ASEAN are binding together to articulate and address their common grounds and concerns. Local authorities and communities are increasingly assuming their role as primary providers of services and programs. As Kenichi Ohmae argues, the era of nation-state as the primary locus of decision-making is now being supplanted by a new system.

Based on the experiences of past and recent urban regeneration efforts, the success and sustainability of urban interventions are anchored to the level of engagement and participation of the affected community in the project’s inception, planning and implementation (Moser, 1989). The more engaged the community, the more sustainable the project will be. The more involved the community is in setting its vision and planning its future, the more it will share its time and resources to make them a reality (Agrawal, 1997).

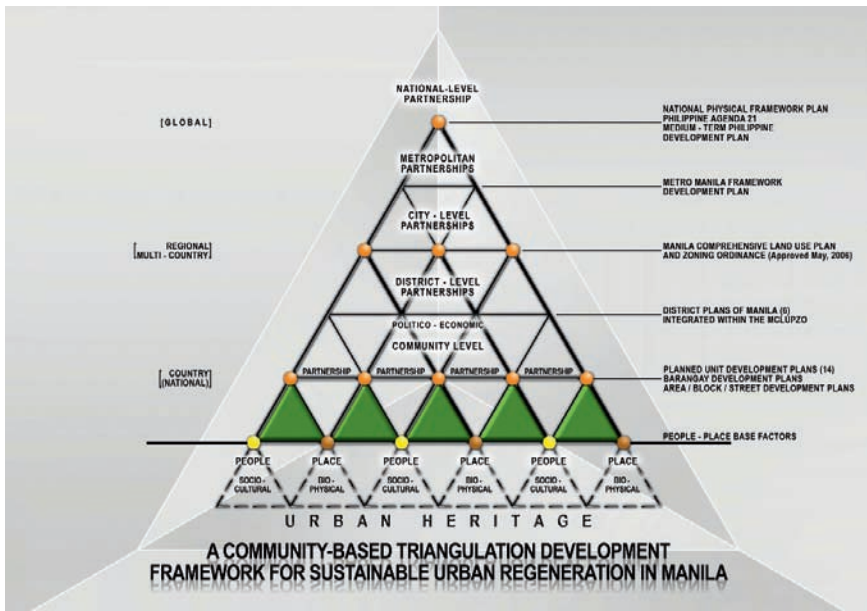
In the difficult field of urban regeneration, where planners and communities have to balance development between preserving its past heritage and realizing its future aspirations, diverse interests and agencies have to work together and explore community-based planning processes and methodologies that can sustainably renew, revitalize and regenerate the biophysical (place); the socio-cultural (people) and the politico-economic assets (partnerships) of an urban area (Oaña, 2000, 2007).

The crucial role of the community in sustainable development is emphasized by the following statement from the 1987 Report of the World Commission on Environment and Development (WCED) and also echoed by the Philippine Council for Sustainable Development (1999):

Sustainability requires the enforcement of wider responsibilities for the impacts of decisions. This requires changes in the legal and institutional frameworks that will enforce the common interest. It principally needs community knowledge and support, which entails greater public participation in decisions that affect the environment. This is best secured by decentralizing the management of resources upon which local communities depend, and giving these communities an effective say over the use of these resources. It will also require promoting citizens' initiatives, empowering people's organizations, and strengthening local democracy.

With the purpose of synthesizing and integrating the above realities and concepts, a conceptual community-based development framework for sustainable urban regeneration as conceived by the author is evolving (Fig. 7-1). It is anchored on three essential elements of urban regeneration, particularly focused in the inner city: place, people and partnership. These elements broadly define the dimensions of the environment which are vital for sustainable urban regeneration.

The first element, *place*, defines the *bio-physical* aspect of the urban environment. This refers to the natural character of the area: land, water, air, flora and fauna (Guzman & Guzman, 2000). Part of this element is made up of man-made physical interventions such as buildings, utilities and other



**Fig. 7-1.** The people-place-partnership planning and development framework as applied to the city of Manila

infrastructure. The second element is *people*, which refers to the *socio-cultural* dimension of the urban environment. It deals with the social and cultural character of a people in a given area. It also depicts the conditions due to their interaction with each other and other forces. The third and the most crucial element for sustainability is *partnership*, which is primarily concerned with institutional arrangements, instruments and processes in which people and entities share and exchange goods and ideas. This constitutes the *politico-economic* realm of the urban environment.

The elements of place and people can be considered as the foundation of the development framework as they are the base factors that give an area its unique identity and character, its urban heritage. Partnerships, on the other hand, are generally adapting and changing through time as varying sets of stakeholders are engaged in the regeneration of an urban area in response to internal and external challenges.

The smallest unit of the place–people–partnership triangulation network can be a street community. From this, it can expand to cover a block and then a *barangay*. The *barangay* is the basic political unit in the Philippines. They are designed as a mechanism for citizens to respond to public issues affecting communities. Technically defined, a *barangay* consists of less than a thousand residents of a city or a municipality. It is headed by a *barangay* chairperson, or *punong barangay*, who is elected by the community every 3 years. Under the Local Government Code, the *barangay* serves as the primary planning and implementing unit for government programs, projects and activities. It is also a venue for government decision-making. As of 2005, there were 41,995 *barangays* in the Philippines, comprising the 1,501 municipalities or towns and 117 cities of the country (Manila, 2005).

The development framework serves as a network reference of the triangulation linkages between the three essential elements of people, place and partnerships in the context of sustainable urban regeneration. Their triangulation can be related to the various development plans of the country at different levels identifying the planning units in place. The framework can also be applied in the context of global development, with countries as base units into which other applicable development factors can be inserted.

### **7.3 The PUD Overlay Zone: The Community-Based Dimension of the New Manila Comprehensive Land Use Plan and Zoning Ordinance**

The Manila Comprehensive Land Use Plan and Zoning Ordinance (MCLUPZO) was passed as Ordinance No. 8119 by the City Council of Manila in March 2006 and approved by the Mayor in June 2006. It replaced the Manila Land

Use Plan of 1981 made by the then Metro Manila Commission (MMDA, 1996). The development of the new land use plan was prodded by the implementation of the decentralization policy of the national government under the Local Government Code of 1991. The MCLUPZO is being implemented by the City Planning and Development Office (Manila, 1999, 2004).

The development strategy for Manila in its new Comprehensive Land Use Plan essentially applies the community-based triangulation framework. The strategy aims to transform the existing Manila urban structure from a single-core concentration to a dispersal of multi-cores that are rich in distinctiveness and host well-balanced mixes of land uses (CPDO & Palafox, 2005). It focuses on the community at a neighborhood scale as a basic unit of development. A unit community can be composed of three to five neighborhoods, which is about the size of a *barangay*, defined by the Local Government Code as having a population from 2,000 to 5,000 persons.

For the purposes of the strategy, an urban core in Manila was identified where the major light rail transit lines converge and which serves as the major activity node of the city. This core will be linked to sub-centers which were identified by their distinct capability to generate business opportunities and address urban development challenges. They serve as traffic and activity nodes within a 600-m radial distance, with complementary and interdependent linkages with each other (Fig. 7-2).

### 7.3.1 The PUD Technique

Consistent with the development strategy, the PUD zoning tool was introduced in the New Manila Comprehensive Land Use Plan. The Plan identified 14 PUD areas spread out in all the six districts of Manila as overlay zones. An overlay zone is a district which is both mapped and included in the ordinance text and becomes a set of mandatory requirements over and above the basic zone requirements. Each district has at least one PUD overlay zone, which can serve as a catalyst in the urban regeneration of the city as a whole (Campaner, 2007).

PUD is a device which allows a development to be planned and built as a unit and which, as a result, permits variations in many of the traditional controls related to density, land use, setbacks, open space, and other design elements, and the timing and sequencing of the development (Meshenberg 1976). PUD combines all the tools under a single regulatory umbrella that offers greater flexibility while retaining the necessary controls. It was introduced in American planning practice in the 1960s (Listokin, 1974).

PUDs permit the planning of a site in an integrated fashion rather than parcel by parcel as required by typical zoning. Usually this zoning classi-

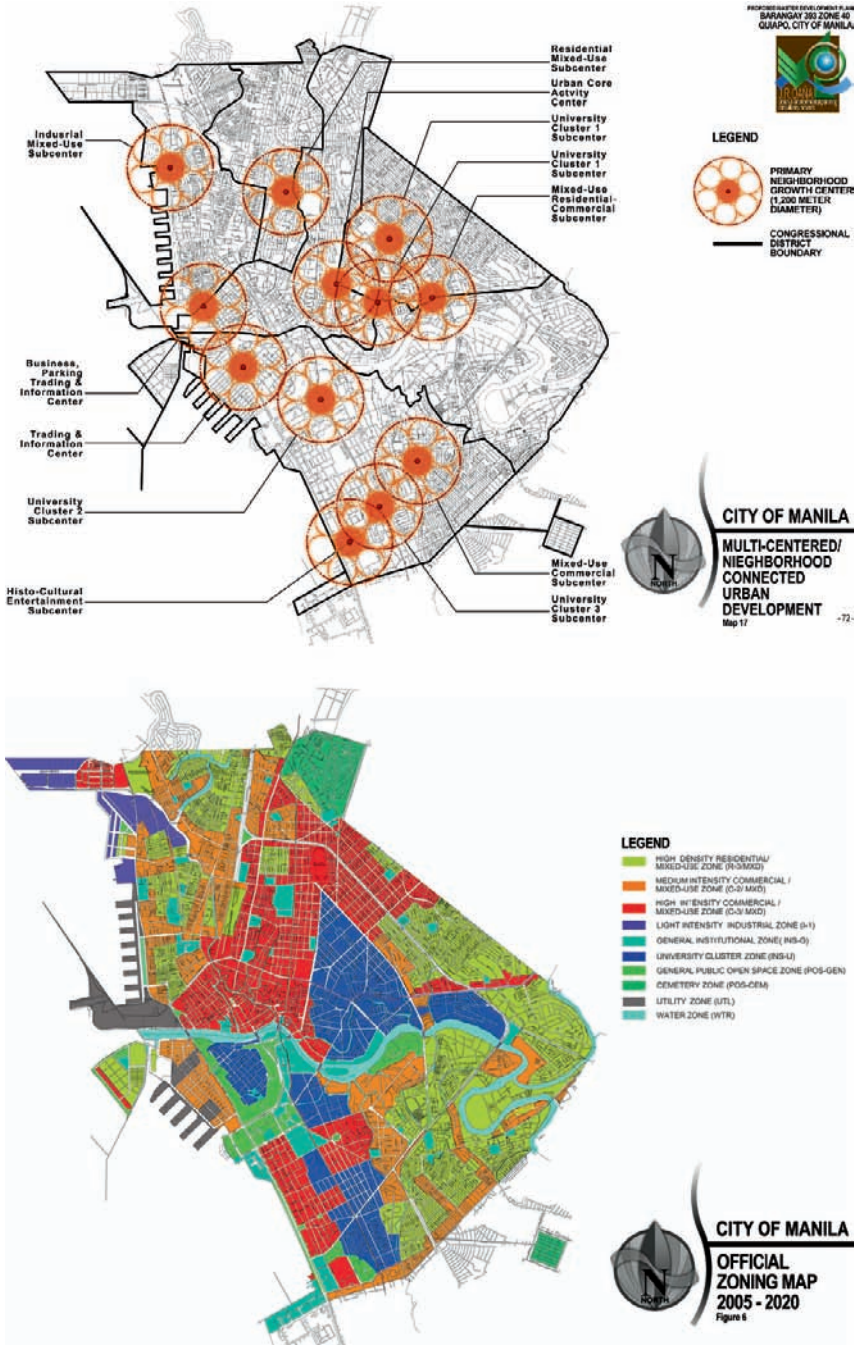


Fig. 7-2. The Manila urban development strategy and the new Manila land use plan



fication also allows a variety of compatible uses to come together in one designated area. The idea is to create a neighborhood or an integrated area atmosphere where residential, commercial, service, and cultural uses come together to form a new community (Kone 1994).

The key ingredient in PUDs is not size, but the willingness of communities to grant developers the flexibility and freedom in design, building and usually staging that make the project most profitable for the developer while keeping in line with public objectives. Many PUD regulations grant a bonus of density above that of the underlying district if the developer meets such stated objectives as preserving certain natural features, covering or buffering parking areas, reserving more open space, and building certain preferred housing types such as multi-family or lower-income housing. In this way, communities can obtain from developers desired amenities they could not otherwise require (Kone 1994).

The PUD is officially defined in the MCLUPZO as a land development scheme wherein the project site is comprehensively planned as an entity via a unitary site plan (Campaner, 2007). This permits flexibility in planning/design, building siting, complementarity in building types and land uses, usable open spaces and the preservation of significant land features (Fig. 7-3).

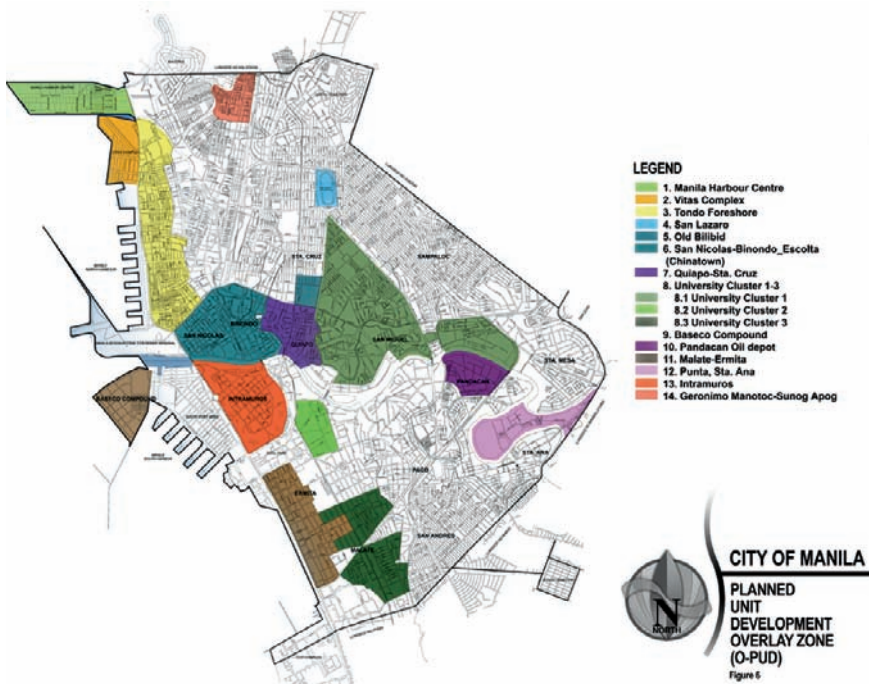


Fig. 7-3. The Manila planned unit development (PUD) areas

### 7.3.2 The Manila PUD Planning Methodology

The Manila PUD Planning Methodology, as laid out in the Implementing Rules and Regulations (IRR) being developed by the CPDO, (Campaner, 2007) states the following:

1. The purpose of the PUD Overlay Zone shall be to encourage a diversity of compatible land uses, which may include a mixture of residential, office, retail, recreational, light industrial, and other miscellaneous uses.
2. Development shall be guided by an approved master plan as guided by the IRR on its preparation, review, evaluation and approval process.
3. The provisions of this PUD overlay zoning regulations shall be intended to do the following:
  - (a) Help create major new residential mixed use areas in planned locations at appropriate densities, heights and mixture of uses.
  - (b) Encourage the preservation and rehabilitation of structures with historic or architectural merit within the PUD.
  - (c) Encourage areas devoted primarily to pedestrians by separating pedestrian and vehicular circulation patterns and by requiring off-street parking spaces and parking structures/buildings in accordance with this objective and the objectives of the specific area plans.
  - (d) Encourage flexibility in architectural design and building bulk; provided that the designs and building bulk shall be harmonious and compatible with adjoining development over the PUD Overlay Zone.
  - (e) Make open space and recreation areas more accessible to the residents and visitors.
  - (f) In a variety of ways, create environments conducive to a higher quality of life and environment for residents, businesses, employees, and institutions.
  - (g) O-PUD shall be applied to certain geographic areas where a mixture of uses and building densities are intended to carry out elements of the city's development plans, including goals in employment, population, transportation, housing, public facilities, and environmental quality.
  - (h) In certain areas, as designated now or in the future by public plans and policies, a mixture of uses and densities shall be intended to promote and protect the public health and general welfare of the community as best accomplished by the O-PUD.

The guidelines also itemized the area study and review considerations for the PUDs and the concerns and responsibilities of stakeholders for area planning and management purposes.

The coverage of the PUD planning areas is delineated as follows:

1. The entire area covered by each identified O-PUD Zone shall always be the subject of the study in the preparation of the proposed Master Plan. The O-PUD Master Plan shall have two classifications according to the extent of planning area jurisdictions: (a) PUD Master Development Plan (PMDP); (b) *Barangay* Master Development Plan (BMDP).
2. The *PUD Master Development Plan*, which will have a 10-year planning horizon, shall cover the entire jurisdiction of each O-PUD and/or area sections of the O-PUD having four or more *barangays*.
3. In cases where the proponents of the Master Plan cannot cover the entire area of the specific O-PUD Zone, the component area of which may be allowed, provided that the entire jurisdiction of the *barangays* within the subject Zone are covered by the Master Plan. Thus, the smallest master planning area shall be referred to as the *Barangay Master Development Plan* covering one, two or three *barangays*. The BMDP of the subject *barangays*, which will cover a 5-year planning horizon shall have the following components:
  - (a) *O-PUD development framework* – The entire PUD area or the major sections of which, where the subject *barangay* is located, shall be studied to come up with a proposed land use and zoning development framework for the area. The proposed framework must be consistent with the objectives of the 2006 Manila Comprehensive Land Use Plan and Zoning Regulations and other related plans affecting the area under study. The aim of this framework is primarily to preserve and enhance the character of the area and harness its urban resources to complement with other areas in its environs. It generally contains potential land uses and development densities of the area under consideration highlighting the general development objectives envisioned for the area.

The Manila PUD Planning Methodology puts into operation the People–Place–Partnership Triangulation Approach. It is generally divided into these three components wherein applicable theories, concepts and methodologies are correlated and utilized (Oaña & Manalo, 2001). These components are directly linked to the three elements or factors of local area development as presented earlier.

### 7.3.2.1 Area Resource and Situation Assessment

This is the sensible evaluation of the current condition of the barangay area as a resource. In this component, challenges, and opportunities, which are actually optimistic perceptions of problems, can be identified. For the area being planned, the physical, visual, economic and socio-cultural resources shall be surveyed. Various survey methodologies shall be applied for this purpose, namely:

- *Baseline data gathering and literature review.* Archival research shall be undertaken to gather secondary data regarding the area under study such as its origin and development through time including the encompassing architectural character and background of the area. Area history and morphology shall be the focus of this methodology.
- *Urban and architectural character survey.* This is a foot and windshield survey that focuses on the physical character of the *barangay* under study. It shall involve the assessment of the character of the structures fronting the street in terms of their form and function; how they relate to each other; and how they contribute to the collective urban character of the *barangay*. The survey shall also deal with the legibility and imageability of the area: its access and views/vista in the urban fabric.
- *Barangay establishments and land use survey.* This entails the ocular survey and inventory of the strategic establishments and institutions within the *barangay*. They shall be characterized according to the different functions they perform as they contribute to the economic and social vitality of the *barangay* under study. They shall also be categorized according to whether they are commercial, residential or mixed use and whether they are public or private. The anchor business enterprises, including the products and services they offer, shall also be surveyed. A small area land use survey based on the location of establishments and institutions along the major streets in the *barangay* shall also be undertaken. Likewise, area economic and social support infrastructure shall be undertaken. Movement patterns shall also be documented. Thus, this shall include the following: Area Actual Land Use and Building Density; *Barangay* Establishments; Economic and Social Support Infrastructure; and Pedestrian Movement and Activity Nodes.
- *Barangay urban infrastructure, utilities, and services survey.* This survey shall focus on the infrastructure, utilities and support services available or lacking in the area under study. This shall focus on the area transport, drainage and sewerage system, solid waste management, water supply, power, and communication.

- *Urban hazards survey.* This survey shall document urban hazards present in the area such as flood, fire and pollution prone areas, and seismic hazards.
- *Barangay area function analysis.* This is a general assessment of the area under study and its function relative to the whole City of Manila. This survey shall include details on how the area contributes to the general economic and socio-cultural vitality of Manila and the larger metropolitan area. It will also observe how the specific PUD area as a node of activity, through the street, links with other nodes in the context of the larger city area.

### **7.3.2.2 Area Stakeholders Assessment**

This is concerned with characterization of individuals, groups, and entities that form the urban community residing or located in the barangay under study. This is designed to identify their interests, concerns, motivations and perceptions of the area where they live and work. These greatly influence the socio-economic and physical network of a given urban area. The methodologies that may be utilized in this component of the study include:

- *Area stakeholders and users profiling.* This is a consolidation of inputs from the prior surveys that characterize the people in the area. These are from archival and documents review, key informant interviews and non-participant observation.
- *Area activity pattern survey.* This is a way of better understanding people's behavior in a given environment. A behavior setting data sheet shall be developed for the study. This shall be used to organize and record information about the users of the urban area. A participant inventory listing will show the people who use the space while the behavior mechanism rating and action pattern rating describe the users' activity according to several classifications.
- *Key informant interview.* Interviews shall be undertaken with influential area stakeholders. They shall be asked about their perceptions and visions of the area.

### **7.3.2.3 Barangay Physical Development Master Plan: Urban Design and Streetscape Studies**

Based on the data generated from the above-cited components of the plan, preliminary urban design concepts shall be generated by the proponent together with the team of urban planners, designers and architects involved in the *barangay* development planning. These preliminary concepts, if necessary, shall be presented to the stakeholders for refinement. The concepts are

meant to tie together all the elements of the street such as buildings, storefront windows, building facades, weather protection, setbacks and entrances, sidewalk locations, opportunities for sidewalk activities, crosswalk arrangements, roadway widths, left turn bays, parking trees and street furniture, so that they work together as a whole. This will serve as the physical component of the *Barangay* Master Development Plan. It will include the Master physical layout plan that includes the existing and prospective development in the area that delineates the use mix earmarked for the *barangay* area as well as its proposed infrastructure/utility networks and open space and greening system, consistent with existing technical guidelines and legislations. Appropriate maps and drawings and their content descriptions will be part of this component. This can also serve as basis for design development guidelines that can be developed for the entire PUD area in the future.

#### **7.3.2.4 *Barangay Development Partnerships***

The concerns of this development plan component serve as the foundation for the viability of the potential *barangay* development initiatives, as they will make the funding and implementation of the projects possible. The proposed partnership arrangements shall be further validated through direct consultation and roundtable/focused group discussions with major decision-makers wherein group interests and concerns are addressed with the end view of reaching consensus.

Other concerns of the Manila PUD Planning Methodology are enumerated as follows:

- The BMDP shall specify Land Use Intensity Control (LUIC) provisions limited to the subject *barangay*, which shall be adopted and implemented only after their approval by the Manila Zoning Board of Adjustments and Appeals (MZBAA). The O-PUD Development Framework included in the BDP shall serve as a working document that can be further developed by other stakeholders in the O-PUD Zone. Likewise, this framework shall be utilized to come up with policies that will harness and manage the urban resources and environmental effects arising from developments in the area.
- The above-mentioned components of the BMDP shall also be the coverage in preparing the PMDP. This component of *Barangay* Development Partnerships shall not be required in PMDP, but shall be highly encouraged.
- In case the BMDP/PMDP recommends new land use and zoning, and/or a new list of allowable uses not mentioned in City Ordinance No. 8119, the zoning ordinance provisions on re-zoning shall apply.

- Amendments may only be made after the following prescribed period: PMDP – 2 years upon its approval; BMDP – 1 year upon its approval. Proposed amendments shall be subjected to the approval of MZBAA.
- Repeal within the period of the stipulated respective planning horizons of the approved PMDP and BMDP shall be subjected to the approval of the Sangguniang Panglungsod (City Council).
- Upon the culmination of the prescribed planning horizon, another PMDP/BMDP of the subject area may be proposed and this shall be subjected to the hereto-discussed regulations, procedures and guidelines.

The eligible PUD Master Planning proponents and participants are as follows:

*Proponents:* *Barangay* officials and residents, organizations, institutions, developers, investors and the CPDO. Eligible proponents should engage a registered Environmental Planner (EnP) who would spearhead the preparation of the Master Plan and officially endorse it.

*Participants:* Community and area stakeholders shall be the eligible participants in the preparation of PMDP/BMDP. A Tripartite Planning Network shall take lead in the formulation of PMDP/BMDP. This Network shall be composed of the following participants: (1) Environmental Planner of the PMDP/BMDP Proponent; (2) *Barangay* Council/Sangguniang *Barangay* of the planning area; (3) CPDO stakeholders' active participation in the planning process is a must (Fig. 7-4).

### **7.3.3 Implementation Concerns: The Manila PUD Approval Process**

A key feature in the application of the PUD planning tool in Manila is the integration of the *Barangay* Master Development Plan (BMDP). This can facilitate the groundwork for the development of a sustainable public–private partnership on a community level.

On the part of the private developer, a BMDP can foster Corporate Social Responsibility (CSR) by forcing private developers to consider the larger impact of their projects on the immediate community within the jurisdiction of the basic political unit of the government and including the larger public community objectives. This can also mitigate the exclusivist gentrification tendencies of PUDs as observed in the American experience. Furthermore, non-government organizations that have a direct stake in the area can take part in the planning of the PUD which can balance the profit objective with those of public community welfare.

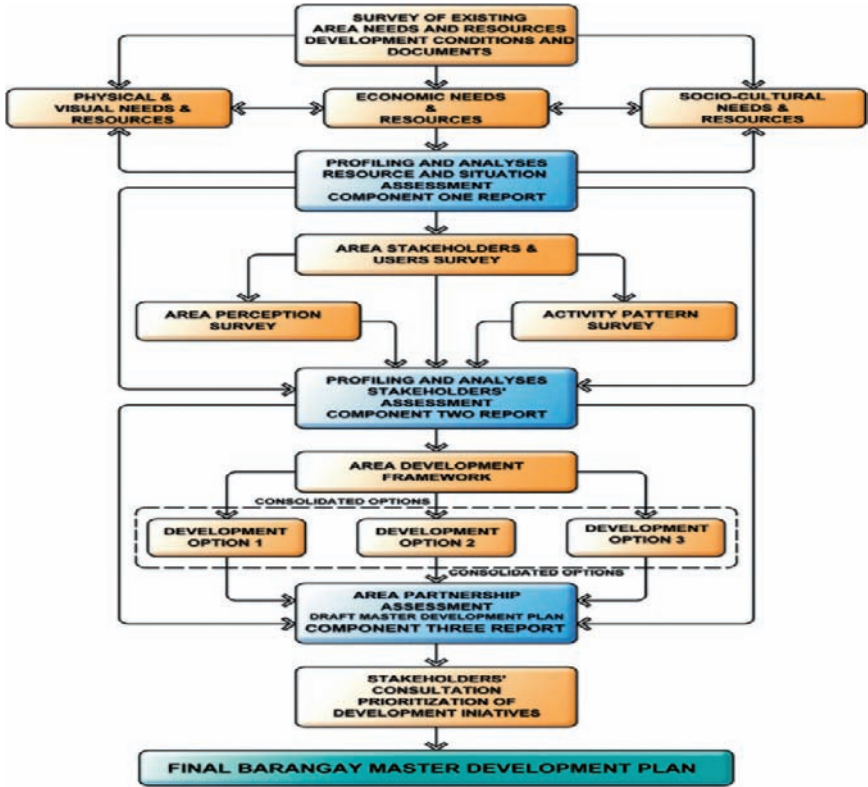


Fig. 7-4. The Manila PUD planning methodology system

The public sector, on the other hand, through the *Barangay* and the City Planning and Development Office (CPDO) can avail of quality professional planning and management services which are normally beyond their resources, but can be accessed by the private sector stakeholders. Furthermore, primary area baseline data can be generated in the course of the area resource assessment. These can update the information database of the city.

The procedural steps for the integrated PUD-*Barangay* Master Development Planning (Campaner, 2007) are as follows:

1. Pre-Application Conference through informal meetings with the BMDP Proponents, *Barangay* Officials, Major Stakeholders and CPDO shall be conducted.
2. The BMDP Proponents shall formally file for the O-PUD permit.
3. A Tripartite Planning Network shall be created to take lead in the formulation of PMDP/BMDP. This Network shall be composed



- of the following: (1) Environmental Planner of PMDP/BMDP Proponent; (2) *Barangay* Council/Sangguniang *Barangay* of the planning area; (3) CPDO.
4. Survey Forms shall be prepared by BMDP Proponents' Team together with the CPDO which will be distributed by *Barangay* Officials in their respective jurisdictions.
  5. After data collection of *Barangay* Officials, data processing shall take place. The collected data shall be translated by CPDO, *Barangay* Chairman, BMDP Proponents and EnP of the Proponent into Vision–Mission–Goals (V–M–G) Statements.
  6. The BMDP Proponents' Team shall prepare the BMDP Preliminary Development Plan.
  7. The BMDP Preliminary Development Plan shall be submitted to CPDO for comments and recommendations.
  8. Upon integrating of CPDO's comments in the Preliminary Development Plan, the BMDP Proponents' Team shall present V–M–G and development options (as Preliminary Development Plan) to First Community and Stakeholders Meeting with the major stakeholders, *Barangay* Council and CPDO. The BMDP Proponents' Planning Team shall solicit comments and recommendations.
  9. The BMDP Proponents' Team shall prepare Final Development Plan.
  10. The BMDP Final Development Plan shall be submitted to CPDO for comments and recommendations.
  11. Upon integrating of CPDO's comments, The BMDP Proponents' Team shall present the Final Development Plan to the Second Community and Stakeholders Meeting with the major stakeholders, *Barangay* Council and CPDO. The BMDP Proponents' Planning Team shall solicit comments and recommendations.
  12. In the second Stakeholders Meeting, the BMDP shall be adopted by the stakeholders and endorsed to the *Barangay* Council for approval through a resolution. A minimum of two Community and Stakeholders Meetings shall be required. However, the BMDP Proponents may conduct more than what is required if deemed necessary.
  13. Duly signed and sealed by the engaged Professional Environmental Planner, the Final Report BMDP together with the Stakeholders' Assessment and Endorsement and the *Barangay* Resolution shall be submitted to the CPDO for final review, evaluation and formal endorsement to MZBAA.

## 7.4 The University Cluster 1 PUD Zone Implementation Experience: Focus on the *Barangay* Development Planning of the R. Hidalgo Street Area

The University Cluster 1 Overlay Planned Unit Development Zone (O-PUDUC1) is one of the three PUDs clustering the areas occupied by universities and colleges where 23 of these are covered. These higher education institutions were recognized as major contributors to the development of the city. The PUDUC1 is further delineated into three sections by location (North, South, Central) by the City Planning and Development Office of Manila, the agency tasked to develop the Planned Unit Development Guidelines of the different designated areas in the new land use plan. The *Barangay* Development Plan will have to consider areas beyond its jurisdictional boundaries, as they have to be planned in the context of a larger setting.

*Barangay* 393, Zone 40 and its immediate area are located at the southern part of the University Cluster Zone 1 and is host to five major higher education institutions, namely Manuel L. Quezon University, Technological Institute of the Philippines, National Teachers College, San Sebastian College, St. Rita College and the Guzman Institute of Technology. This area is bounded in the east by Plaza del Carmen and the Bilibid Viejo Street; in the south by Pasaje del Carmen and Estero de San Sebastian and in the west and north by Estero de Quiapo. Included also in the *Barangay* planning area is a part of the eastern portion of the Quiapo-Sta. Cruz PUD that is bounded by Escaldo, Quiapo Boulevard and Hidalgo Street. The *Barangay* covers a total area of 6.96 hectares (Manila, 2005).

This section of Hidalgo Street and its immediate area can be considered as the “Heart of Manila”. It lies at the center of the city that became a hub of gentility and culture during the turn of the last century. It is a vital component of the urban heritage of the City. The vista of the street to the neo-gothic spires of the San Sebastian Church used to be Manila’s “most beautiful street,” according to an 1875 travel guide (Zialcita, 2006). But now after a century and three decades, the street has become a dreary and greasy illegal jeepney terminal with a row of dilapidated mansions and blighted buildings traversed by a polluted creek with unsightly informal settlers along its banks. Though mired in this state of urban degradation, the area remains a place of landmarks as it is bounded by major landmark structures representing the cultural heritage and diversity of the City and the nation. These are the Quiapo Basilica, the San Sebastian Church, the Ocampo Pagoda and the Golden Mosque. At the core of this area lies *Barangay* 393, Zone 40 of the City of Manila.

Faced with developmental challenges but also possessing some urban heritage assets, it is an opportune time for the *Barangay* to develop its

*Barangay* Development Plan and trigger the urban regeneration of the area. The plan was made possible through the support of a developer who is also a stakeholder in the area. It is part of their corporate social responsibility to help preserve the heritage value of the area and regenerate its social and economic vitality.

The study assessed the area development potential of the *Barangay* and identified proposed development projects in the area that can serve as “urban catalysts” (Attoe & Logan, 1994) in the context of heritage conservation and applicable planning, development and environmental parameters.

The First Community Stakeholders Meeting, dubbed “Panibaguhin ang Hidalgo (Regenerate Hidalgo)” was conducted on May 19, 2007, Saturday at the *Barangay* Hall, which and was attended by stakeholders from different sectors. In that activity, surveyed data were validated and recommendations were solicited. Likewise, keywords and statements were formulated for the *Barangay’s* Vision–Mission–Goals (V–M–G). The Second Community Stakeholders Meeting was conducted on June 9, 2007, Saturday at the *Barangay* Hall to validate the formulated V–M–G and to discuss the identified plans, programs and projects.

The *Barangay* came up with their area vision, mission and goals, as follows:



The Tripartite Planning Cluster Team with Stakeholders



The Development Density Plan for the Hidalgo Area

*Barangay Vision:*

A clean, peaceful, orderly and secure community united to be good stewards in the progressive preservation, renewal and modernization of its distinct heritage resources and potential.

*Barangay Mission:*

Strengthen the commitment and involvement of the community to know and understand the value of the place and to facilitate their patient and persistent cooperation for its development open to adapt to any change

*Barangay Goals:*

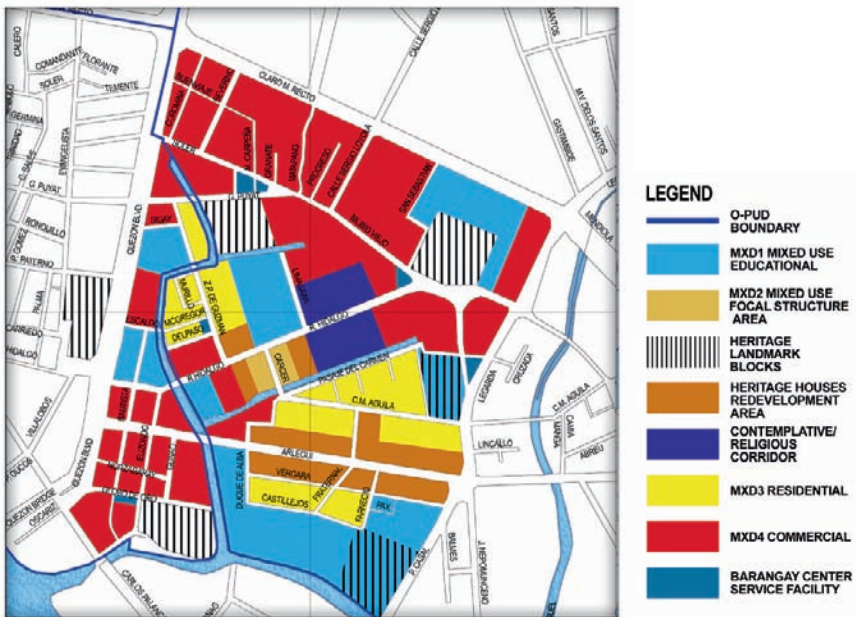
- To blend into viable developmental pursuits the urban heritage assets of the area for economic and socio-cultural development
- To recover the vitality of the area anchored on the revitalization of Hidalgo street as the hub of cultural, social, and economic activities
- To create opportunities for growth through the proper stewardship of urban heritage and area resources thereby improving the quality of life of the *Barangay*

Based on the observation and analysis of the Planning Team, the area possesses attributes wherein the following urban renewal features can be harnessed:

- *Presence of heritage landmarks that serve as boundary markers and cultural artifacts.* The *Barangay* is bounded by four major cultural heritage landmarks that exemplify the rich cultural diversity of the place. On its east side is the neo-gothic spires of San Sebastian Church. Then the East Asian inspired Ocampo Pagoda structure is on its north side. The neoclassical Quiapo Church bounds it on the west side while the Golden Mosque serves as the southern marker. The presence of these structures gives a distinct multicultural character to the place which can be enhanced by creating vistas and viewing points in selected focal areas.
- *Revitalization of the urban heritage section.* The portion of Hidalgo street which used to be a “high street” during the turn of the century where stately mansions were laid out still possesses this characteristic, particularly its west side. The street can be revitalized and the character preserved and enhanced.
- *Potential for pedestrian-friendly environment.* The area and the community can potentially be walkable and venue for interaction to mitigate social polarization between Christian and Muslim communities. A section of Hidalgo Street and parts of adjoining

streets within the area of study can be turned into more pedestrian dominated “street parks”. These streets can serve as “socio-cultural heritage convergence areas” surrounded by the heritage mansions adaptively reused and the general character of the street can be preserved.

- *Compact mixed-use development.* The closeness of the different uses of land and spaces are inherent in the area and can complement existing dominant land use functions. The area can serve both the educational and business function of the area enhanced by its urban heritage character. This compact development allows more efficient utilization of infrastructure and can allow more use of open space.



Hidalgo Area Indicative Structure Plan

To further contextualize the *Barangay* to the urban development trend within the PUD Zone, an indicative structure plan was formulated in consultation with the City Planning and Development Office and the *Barangay*. It is only indicative, as it is not yet an official document, but a working document that will be further developed by the other stakeholders in the Zone. A structure plan is a tool that can be made available to the area development council

to harness and manage the urban resources and environmental effects arising from development in the area.

Based on the SWOT Analysis undertaken for a section of the Zone, some of the urban development objectives can be identified with priority to the area under study. These are:

1. *Rationalization of the jeepney routes and terminal along Hidalgo street.* The appreciation and revitalization of the urban heritage section along Hidalgo Street has been marred by the location of a jeepney terminal along the street.
2. *Harnessing the educational, business, and urban heritage components in the area.* The diversity of uses in the area complemented by the presence of heritage houses that can serve as points of attraction can be developed to serve or complement the existing and projected socio-economic activities. This entails incentives to develop appropriate and viable businesses in the area.
3. *Encouragement of the strategic location of high-density compact mixed use structures that have views of heritage landmarks.* Strategically located high-density developments such as mixed use condominiums should be encouraged for the area and can serve as public viewing area for the heritage landmarks considering economic, social and environmental concerns and facilitating the revitalization of the area.
4. *Minimization of crime.* Most crimes are committed in the dark and in places with few people. Encouraging businesses in the area to spread out and creating walkable and interesting open spaces where people can converge will help achieve this objective.

In consultation with the City Planning and Development Office, the Floor Area Ratio (FAR) for the PUD UC1 Zone South was proposed based on the development objectives. High Density Residential and Commercial Development (R3/C3 MXD) with FAR 15 will be located in strategic focal and peripheral areas to highlight heritage landmarks while the other commercial and institutional land use areas follow the general FAR 4 allocated to them. These Land Use Intensity Controls serve as a guide to the development in the PUD for the moment until the official PUD Master Plan is finalized and approved.

Based on the considerations assessed in the study, the Planning Team came up with strategic priority programs and projects in the Barangay Master Development Plan that can spark urban renewal and community-based partnerships in the area. The initiatives are focused on the creation and improvement of public spaces, as these are common areas of the stakeholders,

and the establishment of an Urban Heritage Corridor that can spur local economic development (LED) and area regeneration. The physical renewal and development of these areas can foster a “spirit of place” in the area and can open opportunities for partnership, as these are shared spaces. The following are the priority programs and projects identified:

1. *Pedestrian Park Streets Development Program*

Restructuring of Selected Segments of the Streets of Hidalgo, Z.P. de Guzman

This program serves as the anchor urban renewal initiative that can incrementally and physically preserve and enhance the urban heritage character of the area. Its primary objective is to transform the vehicular-oriented function of strategic streets in the area into a people-oriented activity, movement and interaction area. The streets can serve as facilitating systems for community member and stakeholder interaction that can increase the business viability of the area. The program will also spread out pedestrian movement and people interaction in the area. Furthermore, pedestrians can appreciate the old heritage mansions that line Hidalgo Street.

2. *Rationalization of Jeepney Routes and Terminal*

Rerouting and relocation of the terminal of the jeepneys along Hidalgo Street

This program is essential in the urban regeneration of the area. It is observed that the indiscriminate and disorderly utilization of the western portion of Hidalgo Street as a jeepney terminal has largely exacerbated the degradation of the area. It has blocked off the appreciation and economic utilization of the heritage houses for viable business ventures. The street has turned into a vehicular garage that pedestrians find inconvenient to walk through, much less to linger in. The opening up of the street and its transformation to a pedestrian park can trigger the revitalization of the area.

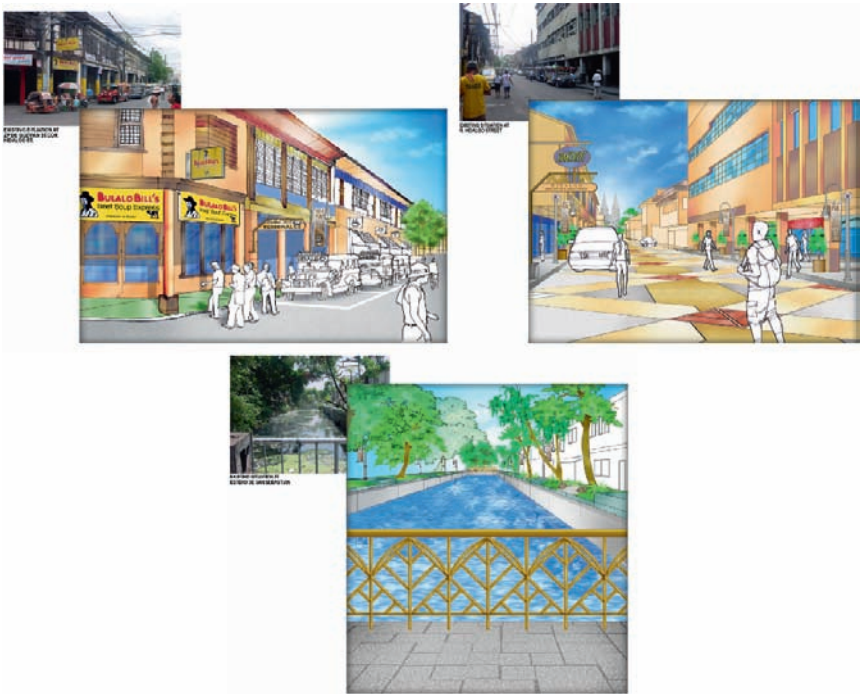
3. *The Hidalgo Urban Heritage Business Corridor and the Corridor of Contemplation*

Hidalgo Street can be considered the “main street” or “high street” of area where the east section from Plaza del Carmen to Carcer can be a religious/spiritual section, while the western portion up to the bridge can be a business/commercial section. With the evolution of use in the area, Hidalgo Street now straddles the burgeoning commercial area near Quezon Boulevard and the Lacson Underpass as well as the spiritual/educational side leading to San Sebastian Church. Despite the changes, some of the residents still want to stay there. The creation of a “corridor of contemplation” on the east side and a business corridor on the west side can encourage people to work, pray and still live in the area. Thus, the area can be converted to a mixed-use business and contemplative corridor.

#### 4. *The Estero Cleaning and Rehabilitation Program*

The *Barangay* is surrounded by the Estero de Quiapo on its west and north side, and Estero de San Sebastian on the south. Thus, the environmental condition of these water bodies is important to the health of the community. This priority program should be given much attention and effort. The project can be linked or complemented to the national level project for the rehabilitation of the Pasig River. Proper care of the estero can elevate the quality of life in the area.

It is hoped that the recommended programs and projects in this study will be adopted by the *Barangay* and can muster enough political will as a community in partnership with the stakeholders in the area to implement them. They can serve as “urban catalysts” in the regeneration of the *Barangay* and its larger area.



Images of the *Barangay* urban regeneration partnership projects



## **7.5 Community-Based Planning and Governance: A Key in the Sustainable Urban Regeneration of Inner Manila**

Studies on development sustainability have concluded that stakeholder relationship at the planning stage is the key and the essence of a true participatory project (Badshah, 1999; Chapman, 1996; Davies & Herbert, 1993; Garvin, 1996). Without stakeholder participation, projects have repeatedly been wasteful in resources and administration and have offered little benefit to the community (ADB, 1995). It is further noted that participation does matter at the planning stage. It is also contended that sustainability is strongly linked to “ownership,” both on the part of the responsible administering agency and intended beneficiaries (Hamdi & Goethert, 1997; PCSD, 1997). This can be achieved through the project monitoring process and through the inclusion of beneficiary representatives on the project management and coordination committees (Lopez & Cordero, 1981; Moser, 1989).

The City of Manila has recognized these concerns by introducing the PUD approach in its new Land Use and Zoning Ordinance. Systems and processes anchored on the people–place–partnership framework have been put in place to facilitate the engagement of the community in sustainable urban regeneration, which are now in the initial stages of implementation.

Based on the planning experience of this author, stakeholders respond more to specific programs and projects rather than a general plan. Thus, alongside planning, doable or actionable projects should be simultaneously put in place. To facilitate this, there is a need to emphasize the importance of identifying “championing stakeholders” who are willing and able to commit to the regeneration of an area for the long haul. Henton et al. (1997) termed them “civic entrepreneurs”: catalysts who can build relationships between the economy and the community. They provide the leadership that brings people and institutions together across sectors and jurisdictions to work on the long-term development of their area. These are the kind of people or entities that can forge sustainable urban partnerships to regenerate places continuously. This is also the focus of the Community-based Urban Regeneration Advocacy Group for Manila (URGEManila), which aims to empower and equip civic entrepreneurs for sustainable urban regeneration through collaborative partnerships. It is hoped that the Asian network developed through the Center for Sustainable Urban Regeneration at the University of Tokyo will continue to support and assist professionals and researchers in this aspect of urban development.

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## 8. First Attempt with Participatory Planning: Case of the Komae City Municipal Master Plan

Makiko Takahashi Tanaka

### 8.1 Introduction

The main interest of this chapter lies in public participation during the planning process of land use plans in Japan. *Public participation* in this chapter is defined as the participation forums sponsored by local governments aimed at eliciting input from and sharing power with a broad public representation in order to make plans reflective of the needs and desires of a community's citizens.

In Japan, municipalities (cities, towns, and villages) are responsible for producing land use plans called *Municipal Master Plans*. This requirement came into effect when the City Planning Act was revised in 1992. Additionally, the revision of the Act introduced a new emphasis on public participation for land use planning policy in Japan. That is, public participation became a requirement in the planning process of making Municipal Master Plans.

This was a big departure from the previous practice, in which governments traditionally implemented planning activities with very little public involvement. The introduction of public participation in the development of Municipal Master Plans is regarded as the beginning of participatory planning in Japan. Compared with the public participation in the United States, however, public participation in Japan is still in its early stages, and there is much to improve to make public participation more meaningful.

In this chapter, I will illuminate one of the first attempts of participatory planning in Japan by portraying the case of one municipality, Komae City, in Tokyo. The planning process of the Komae City Municipal Master Plan began officially in December of 1997 and was finished for approval in February of 2001.

The goal of this chapter is to analyze how citizens and community organizations were involved in the planning process of the Komae City Municipal

Master Plan. I mention *community organizations* because such entities can be the basis for effective public participation. Typically, concerned citizens form or join community organizations to exercise some influence on the directions of future growth and change in their communities.

In the United States, community organizations have been actively involved in the process of making land use plans dating back at least to the 1960s. It might not be an overstatement to say that land use planning in the United States could not be successful without the involvement of community organizations. Community organizations in Japan, however, are relatively a new development compared to those in the United States. How they are involved in the process of making Municipal Master Plans should constitute one of the major conditions for successful public participation.

This chapter begins with a brief discussion on the background of city planning to further the readers' understanding of Japanese planning and participatory planning. The next section reviews the actual case study of Komae City – planning process, content, and community organizations. The following section analyzes the ways citizens and community groups were involved in the planning process in Komae City. The final section concludes with a brief discussion of possible directions for improving public participation in Komae City and Japan.

## **8.2 Background on City Planning in Japan**

### **8.2.1 Framework of City Planning**

In Japan, *city planning* usually means the physical, environmental planning of urban areas including the planning of land use, land use regulation, facility improvement projects, and urban development projects. In this chapter, the terms *land use planning* and *plan making* are used interchangeably, and are defined as preparing, making, and adopting of plans to govern a specific geographic area, and are activities conducted primarily by governmental organizations.

In Japan, although there is currently a movement towards decentralization of governmental authorities and functions, the central government still plays an influential role in city planning. The Ministry of Land, Infrastructure, and Transport (MLIT), established in 2001 through a consolidation of the Ministry of Construction, the Ministry of Transport, the Land Planning Agency, and the Hokkaido Development Agency, formulates major planning policies in Japan.

Local governments in Japan are divided into two tiers, prefectures (somewhat akin to US counties) and municipalities (cities, towns, and villages). There are 47 prefectures and approximately 2,000 municipalities as of August 2005.<sup>1</sup>

The three levels of government have their respective roles in city planning. Although the influence of the central government is still dominant, the roles of the respective governments have changed since 1999. In particular, city planning became a function conducted by the local governments, but the agreement of the central government or prefectural governments is still required in many situations.

In Japan, the central government, including politicians and central government bureaucracies, has been working closely with major corporations to formulate city planning policies that would spur rapid economic growth, especially during the expansion periods of the 1950s through the mid 1980s.<sup>2</sup> Currently, in addition to the public sector and major corporations, small and medium-sized private companies, as well as nongovernmental groups (typically called the nonprofit organizations in Japan), are primary stakeholders that attempt to influence city planning and land use planning.

Among the three types of stakeholders (public sector, private sector, and nonprofit organizations), nonprofit organizations have not earned a status parallel to their equivalents in the United States. At the national level, no organization such as the Sierra Club in the United States reached any prominence in Japan until the late 1990s (Sorensen 2005, p. 251). The situation, however, is starting to change in Japan at the local level. The enactment of the Nonprofit Organization Act in 1998 is becoming the catalyst for such change by providing nonprofit organizations with legal rights.

## **8.2.2 Participatory Planning in Japan**

### ***8.2.2.1 A Turning Point from Non-Participatory to Participatory Planning***

Until the 1990s, the Japanese central government had long maintained its dominance in determining planning policies in Japan. The main objective of planning policies has been to maximize the potential of economic growth in the respective regions of the nation. To pursue such an objective, land use planning Japan has been heavily in favor of land development for commercial and industrial purposes.

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<sup>1</sup>Data from homepage of Ministry of Internal Affairs and Communications (2005).

<sup>2</sup>Referring to Chalmers Johnson's theory of the "triangle" of Liberal Democratic Party, bureaucracy, and business, as conveyed in Sorensen (2002, p. 208).

In such circumstances, the main stream of planning culture in Japan has put an emphasis on the obligation of people to serve the government, and not the reverse (Sorensen 2005, p. 224). In such a society, a high value was placed on sacrifice by citizens, and in fact the Japanese people have been willing to devote their time and energies to the work for the companies and organizations to which they belong. This characteristic of Japanese society resulted in citizens having little time left over and little interest in the affairs of their local communities.

Although there were attempts to implement public participation in 1968 when the new City Planning Act was enacted, public participation did not spread to any real extent until the 1990s. In the early 1990s, this situation started to change with the burst of the bubble economy, and the subsequent long-lasting depression. In order to stabilize the economy, the central government took measures to decentralize government and provide financial independence to local governments. This approach has become the new direction for Japan. In this movement, one of the areas in which local governments sought independence from the central government was city planning (Sorensen 2002, p. 298). As a result, this has promoted public participation in planning policy formation.

Another incident, government's inability to handle the national crisis of the Kobe Earthquake of 1995, resulted in the realization of the importance of the voluntary sector. Both the central and local governments failed to respond effectively. In contrast with the inability of governmental organizations, neighborhood groups and volunteers from around the nation played vital roles in reviving from the damages of the earthquake (Sorensen 2002, p. 296). The recognition of the importance of the voluntary activities soon led to the enactment of the Nonprofit Organization Act in 1998. Since its enactment, the law has helped to promote and strengthen voluntary and grassroots activities in Japan.

### **8.2.2.2 Emergence of *Machizukuri* Organizations**

The term *machizukuri* is used widely to describe the broadening concept of city planning. Typically, the bottom-up type of processes and activities are referred to as *machizukuri* in the Japanese planning field.<sup>3</sup> Thus, *machizukuri* is often used especially when city planning is conducted with active engagement of citizens and nonprofit organizations.

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<sup>3</sup>It is also true that a wide variety of activities can be called *machizukuri* including not only bottom-up processes and activities, but also top-down government led initiatives. Depending on the context in which the term is used, it can have different interpretation. In this chapter, *machizukuri* is about the bottom-up type of planning and not the traditional top-down approach.



In recent years, *machizukuri organizations*, which function like civic groups with interests in planning issues, have been formed and now play important roles in participatory planning. Until the 1990s, *machizukuri organizations*, or civic groups in general, were rather scarce in the Japanese society.

*Machizukuri* groups are generally grassroots type of organizations. The main function of *machizukuri* groups is to bring concerned citizens around planning issues, and to promote dialogue and action among them to improve the living environment of their community. While some *machizukuri* groups are interested in general issues pertaining to development, the environment, and land use planning, other groups have a specific interest in pursuing such particular issues as protecting the local environment or historic preservation.

In contrast to the newly formed *machizukuri* groups, a number of traditional neighborhood associations, called *chounaikai*, have had a long-standing influence on communities. A number of scholars observe that such neighborhood associations (*chounaikai* and also *jichikai*) are dominated by elderly landowners and small business proprietors. Considering long existence of *chounaikai* in their neighborhoods, with many elderly people participating, such neighborhood organizations are not always a suitable base for active or bilateral dialogues between citizens and public officials.

### 8.2.2.3 Introduction of Participatory Techniques

When the City Planning Act was revised in 1992, it became a requirement for local governments to develop Municipal Master Plans with public participation. After this, planning scholars and practitioners explored new techniques for public participation. A number of techniques developed by American experts were then introduced to Japan. Some of the examples included the design games of Henry Sanoff, landscape design techniques of Robin Moore and Randolph Hester, and the concept of pattern language of Christopher Alexander. Among these studies, the participatory techniques of (1) workshops, (2) design games, (3) walking tours, and (4) computer simulation became known in Japan.

It is widely believed that the Japanese people highly evaluate the value of building consensus by dialogue. When the conversation becomes too formal, however, many Japanese people tend to hesitate to speak out. To overcome this tendency, a number of scholars and planning consultants have recommended using the technique of *workshops*.

Using the workshop techniques for making Municipal Master Plans has become a popular practice among innovative municipalities. When a workshop technique is used, small task groups called *kyougikai* are usually formed. These task groups are composed of citizens and the representatives of the *chounaikai* and *jichikai* associations. A combination of different

techniques, such as walking tours and interactive meetings, are used in a series of workshops in order to enable participants to express their ideas with few constraints and little pressure.

Other typically used techniques for public participation in Japan include (1) public meetings, (2) written surveys, (3) distribution of newsletters, (4) Internet websites, and (5) display at key settings.<sup>4</sup>

#### **8.2.2.4 Development of Municipal Master Plans by Municipalities**

The revision of the City Planning Act in 1992 was an epoch-making incident because public participation was mandated to municipalities in developing land use plans. Spurred by the enactment of the Nonprofit Organization Act, *machizukuri* organizations and other citizen groups have been attempting to play major roles in participatory planning in Japan. The requirement to produce Municipal Master Plans has become the catalyst for public participation with cooperation of *machizukuri* organizations to become part of Japanese planning.

Since the City Planning Act was revised, however, municipality administrators, planning scholars, and planning consultants have had to learn public participation in a relatively short period of time. As a result, a wide variety of approaches by municipalities can be observed in terms of how public participation is implemented. In sum, participatory planning is still in its early stage in Japan, and municipalities face challenges to make public participation more fruitful.

In the following sections, Komae City the case using participatory planning is introduced. Focusing on a specific municipality enables us to learn how participatory planning is conducted and what kind of challenges the municipality is facing.

### **8.3 Case Study of the Komae City Master Plan**

#### **8.3.1 Main Profile of Characteristics of Komae City**

Komae is a small city located in the mid-southern part of Tokyo Metropolitan Area. The area of 2.47 square miles makes it the third smallest city in Japan, and the population was 74,000 as of 2001.<sup>5</sup> Komae City is a bedroom community

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<sup>4</sup>This is not a comprehensive list and there may be others.

<sup>5</sup>Data from Komae City (2002, p. 13).

that developed out of an agricultural village after railway service was installed in 1927. Using the railway system, many of the residents commute to the business districts of central Tokyo.

The developed area is mainly residential, and 88.5% of the land area is zoned for residential use.<sup>6</sup> Despite the city's proximity to the center of Tokyo, Komae residents live in suburbia with trees and streams.

The city area can be divided into three sub-areas, North, Central, South, which were also used during the development of the Komae City Master Plan.

### 8.3.2 Planning Process of the Komae City Master Plan

The Komae City government officially announced the development of the Komae City Master Plan in 1997. Since then, it took nearly four years until the Plan was finalized. The overall process of developing the Komae City Master Plan is illustrated in Table 8-1.

**Table 8-1.** Overview of the planning process of the Komae City Master Plan

	<b>Overview of planning process</b>	<b>Organizations during planning process</b>
Year 1 Apr 1997 – Mar 1998	Public announcement (Dec 1997)	Master Plan Team formed Technical Assessment Comm. formed (TAC)
Year 2 Apr 1998 – Mar 1999	Draft overall chapter	Master Plan Steering Comm. formed (MPSC)
Year 3 Apr 1999 – Mar 2000	Draft neighborhood chapter Draft implementation chapter	Neighborhood Task Groups formed (NTGs) (MPSC, TAC meetings continue)
Year 4 Apr 2000 – Mar 2001	Finalize master plan Mayor approves plan (Feb 2001)	MPSC, TAC meetings continue

Source: Produced by author using information from Komae City Master Plan

<sup>6</sup>Komae City (2002, p. 5).

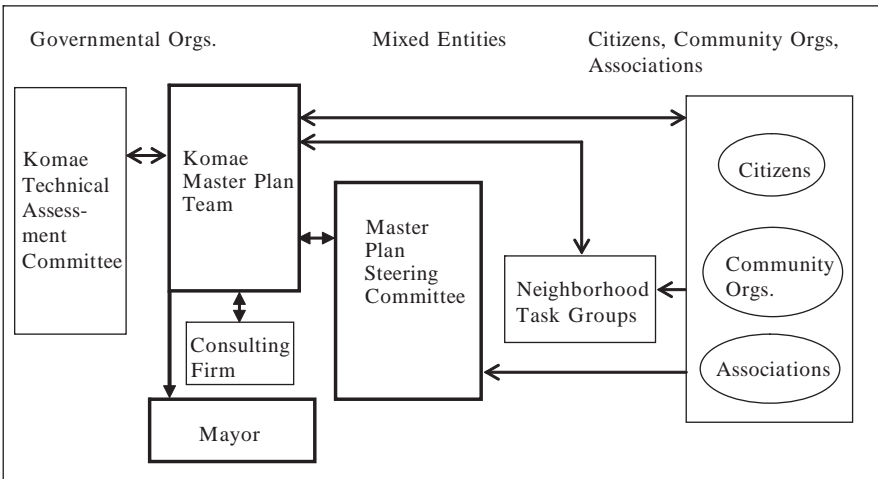
**8.3.2.1 Preliminary Data Collection: Year One (April 1997 to March 1998)**

The Komae City government began preparation of the Komae City Master Plan internally in the summer of 1997. The Komae Master Plan Team was then formed. The team consisted of five administrators and staff members of the Planning Division of the Department of Construction and Planning (Fig. 8-1).

The Technical Assessment Committee (TAC) was also formed. The TAC was comprised of management-level administrators from nine divisions of the government. The first few TAC meetings discussed the creation of a Master Plan Steering Committee (MPSC) and the methods to be used for public participation in developing the Master Plan.

Since public participation was mandated for the development of the Master Plan, the TAC decided to involve citizens as members of the MPSC. Eventually, four out of eleven seats of the MPSC were allocated to individual citizens.

The Mayor officially announced in a seminar held in December of 1997 that the Komae City Master Plan would be prepared with public participation. Shortly after this seminar, the city announced the Komae City Master Plan process in the Komae Newsletter. As Komae City did not have an Internet website set up at the time, the newsletter was the only method for the government to publicize the Master Plan process to a wide audience. At around the same time, a consulting company hired by the city conducted a written survey of 3,000 city residents.



**Fig. 8-1.** Organizational structure for producing plan (source: produced by author using information from Komae City Master Plan)

### 8.3.2.2 Planning Draft of Overall Chapter: Year Two (April 1998 to March 1999)

The primary tasks to be accomplished during the second year of the Master Plan development were to form the Master Plan Steering Committee (MPSC) and to prepare a draft of the Overall Plan Chapter of the Master Plan.<sup>7</sup>

By June of 1998, the MPSC was formed. The Mayor delegated the role of evaluating the ultimate outcomes of the Master Plan to this committee, and the main discussion on the plan took place at the MPSC meetings. The eleven people on this committee included two experts from academia, four people from Komae organizations (public and/or private), one government administrator, and four citizens.

Shortly after the MPSC meetings began, some members indicated that the documents used at the meetings did not provide sufficient background information for developing a good plan. The members recognized the necessity to obtain more in-depth information directly from the city residents. Thus, the MPSC decided to form Neighborhood Task Groups (NTGs)<sup>8</sup> for each neighborhood as a basis for collecting information. The information gathered from citizens by these NTGs was utilized for producing the Neighborhood Plan Chapters scheduled for the following year.

As the discussion at the MPSC meetings proceeded, one problem became apparent. The MPSC members, many of whom were appointed from Komae public and/or private organizations (the Komae Chamber of Commerce, the Komae Agricultural Association, the Komae Fire Station, and the Komae Social Welfare Association) rarely spoke at meetings. It seemed that some of the MPSC members were either not knowledgeable about or not interested in the topics being discussed.

All the MPSC meetings were open to the public, and meeting dates and times were announced in the Komae Newsletter. Although there was always time allocated for the public to speak at the end of the MPSC meetings, only few audience members were present during the second year.

Although the general public lacked interest in the Master Plan process, there were two community organizations in Komae that were concerned about planning and development issues. One was the *Group Thinking of Komae*<sup>9</sup> and the other was the *Komae City Citizens Association*.<sup>10</sup>

<sup>7</sup>The City Planning Act requires a Municipal Master Plan to have an Overall Plan Chapter and a Neighborhood Plan Chapter.

<sup>8</sup>Neighborhood Task Group exercise is conducted as a series of workshops in Japan.

<sup>9</sup>This group does not have an official English name so I have translated their name. In Japanese the group's name is *Komae no machi wo kangaeru kai*.

<sup>10</sup>This group does not have an official English name so I have translated their name. In Japanese the group's name is *Komae machizukuri no kai*.

Both groups had previously worked on Citizens Master plans, which is a citizen's version of a Municipal Master Plan. The city government held an information exchange session with them to obtain input from these groups. Additionally, the Komae Junior Chamber, a consortium of young businessmen, attended that meeting.

### **8.3.2.3 Forming Neighborhood Task Groups: Year Three (April 1999 to March 2000)**

In one of the MPSC meetings of the third year, participants discussed in detail the role and activities of the Neighborhood Task Groups (NTGs). Shortly after, a news release was published calling for applications for membership on the NTGs. Thirty-one citizens were selected for membership out of 42 applicants. In addition to those selected, some of the members were directly appointed to each of the NTGs, mainly from the traditional neighborhood organizations (*chounaikai* and *jichikai*). In the end, there were 22 members each on the North and Central NTGs, and 19 on the South NTG.

After the NTGs activities were convened, the MPSC requested a joint meeting. This meeting was held after walking tours of the NTGs, so that all participants could discuss relevant policies and neighborhood-specific issues that were found during the tours. After the joint meeting, some NTGs members, especially the leaders and assistant leaders, attended the MPSC meetings.

In an initiative aimed at community outreach, posters describing the work of each of the NTGs were displayed in the Komae City Hall and in the concourse of Komae Station. The idea for this form of outreach was generated by the Master Plan Team. This effort came as a surprise to the MPSC members, as the administrators on the Master Plan Team had initially been reluctant to promote public participation.

While the NTGs were compiling the information necessary to make recommendations for the Neighborhood Chapters of the plan, the MPSC and the TAC focused their efforts primarily on the third chapter: Implementation of the Master Plan.

### **8.3.2.4 Finalizing the Content of the Final Plan: Year Four (April 2000 to March 2001)**

During the fourth year, the Master Plan Team and consultants completed a Draft Master Plan using the recommendations of each NTGs. Immediately after the Draft Master Plan was released, the leaders and assistant leaders of the NTGs submitted a letter voicing opinions on the draft's content, including both pros and cons. The Master Plan Team wrote a letter in response, in

which they explained their interpretations of the opinions expressed by the NTGs, and explicated modifications considered accordingly.

The MPSC held subsequent meetings during which they discussed their own opinions of the Draft Master Plan internally, and with the Master Plan Team and consultants. After four such meetings, the Master Plan was close to being finalized, and the Komae City government decided to hold general public meetings at several locations to present the plan to the citizens.

At the last MPSC meeting on November 11, 2000, the final Master Plan was presented by the Chairman of the MPSC to the Mayor for his approval. The final Master Plan was approved and adopted by the Mayor in February of 2001 without any subsequent modifications.

### 8.3.3 Content of the Komae City Master Plan

The Komae City Master Plan is divided into two volumes. The first volume contains the main content of the plan in three chapters: Overall Plan, Neighborhood Plan, and Implementation Plan. The second volume includes information on public participation processes used in the development of the plan: the full text of three neighborhood recommendations, the list of proposals made by the NTGs, letters exchanged between the NTGs and the Master Plan Team, and written surveys. The MPSC members suggested that the second volume be included as part of the Master Plan as they strongly felt that it was important to illustrate how public participation processes were utilized.

The Master Plan covered six different elements: (1) land use planning, (2) roads and transportation, (3) environment: water and greenery, (4) social welfare; building safety and planning for the disabled, (5) disaster prevention, and (6) urban design. The inclusion of the elements regarding the environment and disaster prevention differentiated the Komae City Master Plan from master plans produced by other municipalities. The consideration of the *environment* reflected the high value Komae citizens have historically placed on preserving their water and greenery resources. The consideration of *disaster prevention* reflected that the memory of the 1995 Kobe Earthquake was still fresh in the minds of the Japanese citizens.

In the Neighborhood Plan chapter, the three neighborhoods were discussed separately. In all three neighborhoods, the topic of *road and transportation* was a debated issue. The claims of the North and Central Neighborhoods were similar to that of many participants in the NTGs who felt that some of the planned roads were no longer necessary. This was the opposite in the South Neighborhood because this area had insufficient road infrastructure.

Thus, the road system was divided into three categories: (1) Priority Construction Roads, (2) Construction Roads, and (3) Reconsideration Roads, which recommended the timing to construct and/or reconsider the roads for each neighborhood. Roads identified as Priority Construction Roads would be recommended to be built within the time frame of the Master Plan. The necessity of the next level of roads, Construction Roads, would be reviewed after the Priority Construction Roads were underway. Roads that were considered no longer necessary would be labeled as Reconsideration Roads.

In the North Neighborhood Plan, trunk road 3.4.7 attracted attention of the members of the North NTG. Many members felt this road was no longer necessary, and they felt it should be designated as a Reconsideration Road. However, the administrators of the city had a different view and sought to designate it as a Priority Construction Road because it was determined to be important from a regional perspective: road 3.4.7 would connect Komae with another city and a Tokyo ward (Choufu City on its west and Setagaya Ward on its east). The designation of road 3.4.7 was debated many times at the MPSC meetings. The MPSC members reached an agreement by settling on the designation of Construction Road since it was the best solution represented by a compromise between the local and regional perspective. In the Neighborhood Chapter, road 3.4.7 is described as one where NTGs members could not build consensus on constructing this road. Therefore, the city will provide additional opportunities for discussion, and further research will be conducted to consider the necessity of road 3.4.7.

### **8.3.4 Community Organization in Komae City**

There are approximately 20 community organizations in Komae City that deal with planning, development, land use, finance, or environmental issues. Nearly half of these organizations are focused on environmental issues related to the two rivers and the city's flora. These environmental groups, however, did not express particular interest in the Master Plan when it was being developed.

As described earlier, there are two machizukuri organizations, the *Group Thinking of Komae* and the *Komae City Citizens Association*, that focus their activities on broad-scale planning policy and development issues. Indeed, they expressed their strong interest in the Master Plan being developed.

The Group Thinking of Komae became a community organization in September of 1991. It grew out of a movement that started in mid-1980s, when there was growing opposition to plans for the north exit of Komae Station. As the new station for the elevated railway was opening, Komae City developed redevelopment plans for the nearby area. As part of this project,



the city government wanted to construct a road system that would run through land owned by a Buddhist Temple, and an adjacent forested area.

The movement started in opposition to those plans was so successful that the citizens were able to change the routes of the roads. The citizens who worked together in that effort, including a priest of a local temple, architects, and a planning consultant residing in Komae City, decided to organize a community group that would focus on historic preservation, development, land use, and planning issues in Komae. They have been very active since then and still continue their activities to this day.

The Komae City Citizens Association is the other community group dealing with broad planning issues. This group started in 1996 and is loosely connected to a political party that seeks political change through grassroots activism. A politician from that party, during a successful campaign for a seat in the Komae City assembly in 1995, promised that if elected, she would start a community organization to develop a Citizens' Master Plan. The Komae City Citizens Association was formed and led by that politician, and completed a Citizens' Master Plan in 1998. After the completion of the Citizens' Master Plan, the Association suspended activities related to large-scale planning.

## **8.4 Analysis of the Case Study**

### **8.4.1 Processes and Techniques Used**

During the three and half years of producing this plan, a number of processes and techniques were used to involve stakeholders (private/public organizations, community groups, and citizens). Table 8-2 illustrates those approaches used for public participation.

The overall process in which the citizens and community organizations along with other private/public entities were involved was through membership on the Master Plan Steering Committee (MPSC). A total of 17 meetings were held throughout the planning process, and the members were committed to provide input throughout the process until the plan's completion. It was the MPSC meetings held together with the presence of the Master Plan Team and consultants where the main dialogue took place. The MPSC members were delegated to determine the contents of the Master Plan.

Citizen members of the MPSC were selected among the applicants in consideration of geographic distribution, gender, and the essays written by the applicants. Four citizens were finally selected. Among the four citizens, one was the former president of the Group Thinking of Komae and he was

**Table 8-2.** Processes and techniques used to involve stakeholders*Overall process*

- (1) Master Plan Steering Committee
- (2) Neighborhood Task Groups

*Other techniques used*

- (3) Citizen surveys
- (4) Information exchange session with community organizations
- (5) Joint meeting of MPSC and NTGs
- (6) Letters exchanged between NTGs and Master Plan Team
- (7) Komae newsletter
- (8) Poster displays
- (9) Public meetings
- (10) Feedback by fax

Source: Produced by author using information from Komae City Master Plan

able to bring the ideas of his group to the table of discussion. The other three citizen members were also able to provide their own input to a certain degree, and among them one was extremely active and was willing to provide his input.

Many more citizens were able to get involved through the Neighborhood Task Groups (NTGs). Half of the members were appointed mainly from traditional community organizations. Such appointed members tended to be passive at the meetings. Another half consisted of individual citizens who applied to become members. On the NTGs, both members of the *machizukuri* groups were selected to contribute to the neighborhood plans. The NTGs provided an opportunity to involve more interested citizens and community group members.

The Neighborhood Task Groups' main function was to make recommendations for their specific neighborhoods. The recommendations were used by the Master Plan Team and consultants to constitute each Neighborhood Chapter, and were also utilized in the Overall and Implementation Chapters. After the neighborhood recommendations were written by the NTGs, the consultants produced a list of all the recommendations in a chart with 107 proposals. Of the 107 proposals, 70 were incorporated into the final plan, and 37 were rejected.<sup>11</sup>

In addition to such processes, other participatory techniques were used to involve the general public.

<sup>11</sup>Data from Yamaguchi (2003, pp. 52–69).

Written survey questionnaires were mailed to 3,000 citizens at the initial phase of the planning process to learn the aspiration and the needs of the community. This information was used for framing the initial Overall Chapter.

As another means of obtaining background information, the Master Plan Team announced an information exchange session with community organizations. The city government was especially interested to hear from the two *machizukuri* groups that developed Citizens' Master Plans. In addition to these two groups, the Komae Junior Chamber, a consortium of young businessmen, attended this meeting.

Other techniques such as joint meetings of MPSC and NTGs, letters exchanges between NTGs and Master Plan Team were targeted towards the NTGs to understand and to confirm what their aspirations and recommendations meant.

Komae Newsletters and poster displays were massive outreach methods to provide information to the public. Newsletters were distributed as inserts in major newspapers since most households in Komae City subscribed to a newspaper. For the poster displays, the city government used the City Hall and the concourse of Komae Station.

Public meetings and soliciting feedback by fax were intended to provide interested citizens with opportunities to express their opinions. As the planning process revealed, however, the general public was not interested in the Master Plan and the attendance at the public meetings remained small. Much feedback by fax was not provided, either.

According to the four members of the MPSC whom I interviewed, including the Chairman of the MPSC, two consultants, and an administrator, all indicated that the MPSC and the NTGs were of equal and of significant importance, and that these meetings enabled the type of dialogue necessary to produce the Master Plan (Kato 2004; Watanabe 2004; Yamaguchi 2004; Yamazaki 2004). Without the input of the NTGs, the MPSC members would not have been able to evaluate the content of the plan. The role of the MPSC was far more significant because it had the final say for the recommendations of the plan.

The lead consultant mentioned that although other techniques such as public meetings were useful for soliciting public input, no issues that were already being discussed by the MPSC and NTGs were identified via those techniques (Yamaguchi 2004).

#### **8.4.2 Limited Role of Community Organizations**

The overall planning process for Komae's case placed an emphasis on soliciting input from individual citizens over community organizations.

A sole opportunity specifically targeting to obtain input from *machizukuri* groups was the information exchange session between the Master Plan Team and the two community groups (*Group Thinking of Komae*, *Komae City Citizens Association*). Apart from this one session, no other opportunities were provided. In addition, the administrators and consultants did not directly contact the *machizukuri* groups or attempt to make special contacts such as attending their internal meetings.

The selection of citizen members to be on the Master Plan Steering Committee (MPSC) had constraints in involving community organizations. Two *machizukuri* organizations with the most interest in land use planning were actively operating when the development of the Komae City Master Plan began, but only one group could send their member to the MPSC. The other *machizukuri* group (*Komae City Citizens Association*) was active at the timing of forming the MPSC, and a representative applied for membership on the MPSC, but this candidate was not selected. Since the MPSC meeting was where the main discussion on the content of the Master Plan occurred, it was vital to have representation from both groups.

The *machizukuri* organizations were the only community groups that had the potential to contribute in a meaningful way to the development of the Master Plan. In this particular case, the two groups had already made their plans of Komae City in the past, and had knowledge about the concepts and details to be discussed.

The *machizukuri* organizations, however, were not deeply involved in the Master Plan development processes from the beginning. But, even if the *machizukuri* organizations had been involved from the beginning and throughout the planning activities, given their relatively undeveloped nature, these organizations would not likely have represented a significant proportion of the stakeholders' interests.

Furthermore, since Komae City lacked a large number of *machizukuri* groups interested in land use planning, the public sphere to discuss the content of the Komae City Master Plan was limited. The discussion on the Master Plan took place at the Master Plan Steering Committee and Neighborhood Task Groups meetings. The 20 members of the *Group Thinking of Komae* had discussions during their internal meetings, and this information was fed back to the MPSC through their citizen member. Apart from this group, however, no other community organization had opportunities to discuss issues related to the Komae City Master Plan. Had there been the presence of more and well developed *machizukuri* groups and interest groups in Komae City, the outcome may have been different.

### 8.4.3 Interest of the Larger Population in Komae City

During the first two years of the planning process, the city's general population did not show much interest in the plan being developed. In the newsletter, announcements were made notifying the public about the MPSC meetings which were open to the public. At any one meeting, no more than two people showed up in the audience seat. It was only after the NTGs were formed in the third year that more people started attending the meetings. The leaders and assistant leaders of the NTGs attended the MPSC meetings to voice their opinions.

The final stages before approving the Komae City Master Plan, four separate public meetings were held before the final plan was presented to the Mayor. The number of people attending these meetings was small, however, and neither interesting discussion nor different views were presented at these meetings. A total of 77 opinions and written comments were presented to the Master Plan Team members during this final stage (public meetings, final written comments) of producing the Master Plan, showing only small support from the general public.<sup>12</sup>

Apart from those directly involved through the NTGs, the general public lacked interest in the plan being made. The feedback at the final stages from the larger public illustrated how the public was indifferent to the development of this plan.

## 8.5 Conclusion

This was the first attempt of participatory planning in Komae City, and the planning process was invented as the plan making process proceeded. The MPSC was already formed by Komae City administrators when the meetings began. With the leadership of the Chairman, the MPSC members were able to pressure the administrators of Komae City on the need to have workshops – the Neighborhood Task Groups. This provided new opportunities for public input. However, that was as far as the MPSC members could pursue at this timing. Had Komae City had more experience with public

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<sup>12</sup>Data from Komae City Master Plan (2001a, vol. 2, p. 86).

participation, or had the Chairman been consulted before the MPSC meetings began, they may have been able to have an inclusive process with both *machizukuri* members on the MPSC.

By involving all important stakeholders – community organization – on the major committee (MPSC), additional opportunities for discussion could have been realized. In order for participatory planning to have support from a wide population with many public spheres, the challenge is to create and sustain operations of community groups with interests in planning such as *machizukuri* organizations.

Based on the observation of the Komae case, the presence of abundant community groups (*machizukuri* groups, interest groups, and so on) seems essential for the long-term functioning of participatory planning. By fully understanding the benefits of having community groups, the Komae City government should try to create such conditions that would allow more community organizations to emerge and to continue their activities.

Most importantly, the local governments need to listen actively to community organizations and show respect to group members. It is essential to remember that active listening is different than just hearing. Such groups exist for a reason and they need to be heard. Without the recognition by the government side, such groups might be discouraged to continue their activities.

The above recommendations are intended for Komae City, but are probable applicable to other municipalities in Japan. There are many municipalities with less experience in participatory planning and/or with less active citizens and community groups. Such municipalities may face the same challenges as or even harder ones than Komae City. In this sense, it is probable the need to cultivate more community organizations would be a common issue among Japanese municipalities.

## 8.6 Epilogue

At around the same timing when the Komae City Master Plan was being produced, a new *machizukuri* group called the *Finance Research Association*<sup>13</sup> was formed by a number of participants of the Neighborhood Task Group. The new group's goal is to become a watchdog organization overlooking the revenue and expenditures of Komae City which their

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<sup>13</sup>This group does not have an official English name so I have translated their name. In Japanese, the group's name is *Zaisei chousa kai*.

members believe will enable implementation of the recommendations of the Master Plan with the necessary funding. The formation of this group is a step towards creating and stabilizing the activities of *machizukuri* groups in Komae City.

The Komae City Master Plan was the city's first experience using public participation in the process of policy formation. As the planning process proceeded, the attitudes of the city government administrators and staff towards participatory planning changed, and they became more open to the idea. This first experiment contributed to changing the culture of Komae City. Currently, most public policy formation in Komae City is conducted with some degree of public participation.

Six years have passed since the Komae City Master Plan was approved and adopted. One of the most controversial issues of this Master Plan was the road system, especially the trunk road of 3.4.7 in the North Neighborhood. This road was designated as a Construction Road in the Master Plan as a compromise between the citizens' opposition towards constructing this road and Komae City's view support of the road from a regional perspective. According to the recommendation of the Master Plan, trunk road 3.4.7 would be studied further before any action was taken. However, as of September of 2007, studies on the necessity of the road 3.4.7 have not yet started in Komae City government. This is a worrisome situation, since according to the *Nihon Keizai* newspaper, Tokyo Metropolitan Government has decided to construct the road 3.4.7 in Choufu City side as of August 2007.<sup>14</sup> According to the Tokyo Metropolitan Government, this road is still planned to connect to Komae City in the future. Thus, studies and discussions need to resume on road 3.4.7 before it is too late. In fact, a new *machizukuri* group, officially recognized in 2004, called *Komae Machizukuri Citizens Conference*<sup>15</sup> has started studies on the road system in Komae City. It will be the role of such *machizukuri* group to take the initiative to pressure government so that the recommendation of the Master Plan will be reflected in its implementation.

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<sup>14</sup>Article from *Nihon Keizai Shinbun* (2007) and information from Tokyo Metropolitan Government (2006).

<sup>15</sup>This group does not have an official English name so I have translated their name. In Japanese, the group's name is *Komae machizukuri shimin kaigi*.

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# 9. The Role of Urban Planning in the Process of Making Livable Cities in Korea

Jae-Gil Park and Young A Lee

## 9.1 Introduction

### 9.1.1 Backgrounds and Purposes

Making cities can be defined as the social activities and institutional frameworks functioning related to the growth and change of cities. Especially, in physical terms it includes not only individual site development, developing projects in certain urban areas, the building and improvement of urban facilities but also preparative planning to encourage or control these development activities.

Recently, in Korea, a new phase of making cities started which is different from the making cities in the age of development of the 1960s to 1980s. During the time, the central government or local authorities were dominating the process of making cities, proposing and deciding urban plans in general. However, since the mid-1990s, residents, NGOs and professionals have played important roles in the process of city-making as well as the central and local governments. In the mean time, there have been some conflicts with existing urban plans and regulations and also radical shift in urban planning paradigms.

This paper shows (1) what is different between the new city-making and the old one; (2) how to relate the new city-making to the legal structure of urban planning; and (3) what are the matters to be sorted out in order for urban planning to play a right role in new city-making.

### **9.1.2 Research Approach**

Considering the general characteristics and problems of the city-making in the age of development, some theoretical issues in making cities will be defined. Then, these are being used as a perspective to analyse new city making. Investigating new city making cases, we will find out the characteristics of them and suggest the new role of urban planning to encourage the new paradigm. The research methods are literature review and case study.

## **9.2 City-Making in Korea and Existing Urban Planning Paradigm**

### **9.2.1 The Definitions of City-Making and Urban Planning**

City-making is, as mentioned earlier “the social activities and institutional frameworks functioning related to the growth and change of cities”.

In this paper, urban planning is defined as a legal urban planning in National Territory Planning and Land Use Acts. Urban planning is the process of making arrangements to secure the sites to build urban infrastructure and control land uses for the future city-making in advance and to prepare master plan. In Korea, it includes “Urban Management Plan”, which regulates land use, key urban facilities and individual land use activities, and “Urban Master Plan”.

### **9.2.2 Paradigm of City-Making in the Age of Development**

#### **9.2.2.1 Structure of City-Making**

The structure of city-making can be explained as the objects, purpose and process of it. The objects of city-making are to develop urban facilities and land in quantity. The key work is to plan and develop new towns and new urban areas. The purpose of city-making is to work for industrialization and urbanization. Through the urbanizing process, cities have to accommodate population flow and urban functions. The process of city-making is responding quickly and effectively to demand for urban land use, like other

developing countries. The government initiates the mobilization of land, capital and technology. Landlords, construction companies, developers and technical professionals join to it. All in all, suppliers dominate the process.

### **9.2.2.2 Relations of City-Making with Urban Planning**

Urban Management Plan is to announce development projects in need of city-making and reserve land to develop in advance. Becoming a lever to stimulate property market, it led private capital and city-making activities to focus on certain areas. Under the plan-led development – the principle of planning-first – Urban Management Plan legitimates and limits certain city-making activities. It also classifies land to be developed and that to be reserved through zoning system. Urban Master Plan was introduced to control revision of the Urban Management Plan for discreet zoning or urban facilities changes. Such a system of urban planning is institutionally top-down and hierarchical. Urban Management Plan is regulated by Urban Master Plan and urban development projects can only be allowed within the boundary of Urban Management Plan.

Dysfunction of planning and rigid plan-led development have been barriers for urban planning as response to the change of market economy. Planning gains have been got by land owners as windfall. As a result, social inequality and development cost increase made plan-led development difficult to work. As built-up area renewal becomes more important, social capital in neighbourhoods and interests of residents are needed to be considered in city-making. Central and local government initiated, top-down system of urban planning was revealed to have a limit to respond to this demand.

## **9.2.3 Recent Social Trends**

### **9.2.3.1 Social Changes: Democratization and Localization**

Since the 1987 Democratization Declaration in Korea, individualism, taking account of individual freedom and equality, has become important social value. Then local autonomy, which has been realized since the mid-1990s, has made localization and the politics of everyday life to be more focused.

In a totalitarian and nationalistic society in the era of development, utilitarian perspective was dominant, but now it should change into social contract view, which is suitable to individualistic communitarian society based on individual freedom and equality. There are some concrete needs to

accept the societal change and complement city-making in the age of development: devolving urban planning decisions to local authorities, resistance against top-down way of rigid land use regulation, social awareness of the importance of environment conservation and so on.

### **9.2.3.2 New City Making Phenomenon**

Resistance and conflict about urban planning system at the age of development has been growing. Landlords in Greenbelt designated areas demanded to repeal the Greenbelt system. Residents near Seongmi Mountain in Mapo-Gu, Seoul City, argued to withdraw the existing Urban Management plan for water supply reservoir. Bupyeong Market Traders Association in Incheon City asserted to convert the road for cars, which divided the market into two, into a pedestrian street and it has been done. Some NGOs, which used to work at the national level, now work with local communities.

The work of restoring Cheongyecheon and making amenity space in the centre of Seoul has won public recognition and the mayor at that time has become the President in virtue of this work. There are many other examples which show that the quality of urban space from the humanistic viewpoints has become one of the major concerns of people. They include community building movements, such as wall removing projects, community beautification.

## **9.3 Theoretical Consideration About the Structural Changes of City-Making and the Perspective of Making Livable Cities**

### **9.3.1 Theoretical Consideration of the Structural Changes of City-Making**

With the same structure to explain city-making in the period of the 1960s to 1980s, the changes of the structure needed also can be theoretically discussed with its objects, purpose and process.

#### **9.3.1.1 Objects**

Gans (2000) criticizes physical development oriented city-making as physical determination. Jacobs (1992) and Putnam (1993) emphasize social capital. Relph (1995), however, claims physical environment, especially concerning placeness, is still very important. Recently ecological environment

is emphasized like biotope, etc. The range of objects has been widened to include non-physical – social and cultural – environment as well as physical one. Physical environment is focused again as placeness.

### **9.3.1.2 Purpose**

In terms of Habermas, city-making needs not just to accommodate social changes like urbanization and industrialization, but also reconstruct “life world” and protecting it from the “system”. Cities should be designed with the view of inhabitants who live there (Jacobs 1992). Cities as physical entity should be understood not as a “tree” but a “semi-lattice” structure of cultural pattern (Alexander 1965).

### **9.3.1.3 Process**

Governing used to be dominated by the government but it has been changing into governance in which civil society joins in as a major partner. City-making is not initiated only by the central and local governments (Park 2005; Kim et al. 2002). The role of urban planners has also changed. It is expected to encourage reasonable discussion and negotiation among stakeholders in order to sort out problems. This can be said as the role of deliberative practitioner in the communicative planning (Forester 1989).

## **9.3.2 Some Issues of New City Making**

### **9.3.2.1 What Are Different?**

The new city-making should be implemented with the viewpoint of users and inhabitants and can be called as “Making Livable Cities”. The term Making Livable Cities is different from old city-making in terms of objects, purpose and process. Focusing on physical urban development and securing land for development, conventional city-making was to adapt to social changes like urbanization and industrialization. The conventional city-making was supplier-dominating process, in which the government had an initiative and only landlords, construction companies and developers could be included in it.

### **9.3.2.2 How to Relate the Livable City Making to Urban Planning?**

Conventional city-making had been done through a vertical top-down system of “Urban Master Plan – Urban Management Plan – urban development projects”, which was based on the principle of rigid plan-led

development. Urban planning also supported supplier-dominating city-making. Planning gains by public decision were left to be taken by private land owners. Such relation between city-making and urban planning and the way of urban planning cannot be continued any longer, because they are not good enough to support the new type of city-making.

## **9.4 Case Studies of Making Livable Cities**

### **9.4.1 Outlines of the Case and Main Points for Discussion**

#### **9.4.1.1 Outlines**

Making Livable Cities projects can be classified into two groups: government initiated and civil society initiated ones. Among government initiated projects, Cheongyecheon Restoration project in Seoul and Noyu Street project in Gwangjin-gu, Seoul are discussed. Munhwa-dong project in Buk-gu, Gwangju and Samdeog-dong project in Jung-gu, Daegu are civil society initiated ones to be examined.

#### **9.4.1.2 Main Points for Discussion**

In terms of the objects, purpose and process of city-making, each project is to be examined. Then the relations of city-making with urban planning and the tasks to be solved in the future are to be discussed.

### **9.4.2 Case Studies and Analysis**

#### **9.4.2.1 Cheongyecheon Restoration Project** **(<http://cheongye.seoul.go.kr>)**

Object

In July 2003 it started to demolish the structure covered the river, Cheongyecheon and an elevated road over it, which were built in 1958 and a legacy of the age of development. In October 2005 the restoration project was accomplished. After demolishing the old structure of the age of





**Fig. 9-1.** Cheongyecheon restoration project

development, urban amenity spaces, which many citizens enjoy, were created. It is considered as a success of place making (Fig. 9-1).

#### Purpose

Cheongyecheon Restoration project symbolize, as Seoul Development Institute (Seoul Metropolitan Government 2006, p. 52) mentioned, “a new urban management paradigm which consider equity, environment preservation, and humans rather than efficiency, development and cars importantly”. Differentiating it from city-making for industrialization and urbanization up to now, this project was for improving the quality of citizens living and carrying out environment-friendly urban design.

#### Process

This kind of idea was suggested by a professor, at a Reviving Cheongyecheon Research Meeting in September 2000. In April 2004, a candidate for the Mayor of Seoul took it as his election promise. Since then it has become a public agenda. The organisational structure of execution comprised Task Force Team, Research Team, and Citizen Committee. In particular, Citizen Committee consisted of the mayor and representatives from many fields and groups.

In a variety of planning processes such as preparing Cheongyecheon Restoration Master Plan, holding a public hearing about the plan (2002. 2.), confirming the Master Plan (2003. 6.) and carrying out the plan (2003. 7. – 2005. 12.), citizens participated in many ways. The public was especially invited to join in the contest to decide the names of 19 bridges, and citizens made the Wall of Hope, 2m high and 50m long wall of Cheongyecheon, when each participant glued 10,000 ceramic tiles with his/her own hands. In August 2005 citizens voluntarily organized “Cheongsaram (People who love Cheongyecheon)”, a voluntary group to support the management of Cheongyecheon. In January 2006, 10,161 citizens joined in this group.

Lots of ideas came from citizens and Seoul metropolitan government put them in practice. So the project was welcomed by citizens. However, in the whole process citizen participation was limited in certain parts.

#### Relations of the City-Making with Urban Planning and Tasks

On the 23rd of March 2003, the Urban Management Plan about the abolition of elevated highway and width change of urban planning road were decided through the Seoul City Urban Planning Committee.

But on the 17th of May 2003, an opinion that these decisions should have followed the change of urban master plan was raised in a meeting of National Affair Mediation Office belonged to Prime Minister. On 27th May, the same opinion was recommended at the meeting chaired by the Vice Minister of Construction and Transportation. Then 2011 Urban Master Plan of Seoul was revised and it was decided through an inquiry meeting of Central National Urban Planning Committee.

Despite being passed through a public meeting, Cheonggyecheon Restoration Master Plan was delayed for 2 months. It was because the abolition of elevated highway was not mentioned in the Seoul City Master Plan. Existing urban planning system was not flexible enough to deal with such new city making agenda.

#### 9.4.2.2 Noyu Street (Gwangjin-Gu, Seoul)

##### Object

Noyu Rodeo Street is a shopping corridor in Gwangjin-gu, Seoul, which is 610m long. A project to improve the quality of physical environment in the street has been carried out, negotiated with residents and shop owners (Fig. 9-2).

Seoul Metropolitan Government said, “the existing shopping areas have been improved individually to make a better shopping environment. To encourage



Fig. 9-2. Noyu street

and guide these activities, a new approach, which is different from city-making in the age of development, is needed” (Seoul Metropolitan Government 2001, p. 3).

#### Purpose

Seoul Metropolitan Government proposed and carried out a pilot programme for the improvement of the existing shopping street. This programme is for quality enhancement needed in “the age of management”, instead of quantity control in “the age of growth”.

The programme is one of new city-making experiments to manage the quality of built-up city environment, which is different from the task of responding to the industrialization and urbanization.

#### Process

The urban design of this street was proposed as a project for physical environment improvement through residents-government cooperation (Seoul Metropolitan Government 2001, pp. 15–16). Participatory urban design of a pilot street to improve existing shopping environment was planned to make people join in the process and reflect the interests and concerns of people (Seoul Metropolitan Government 2001, p. 9).

The body to drive this project was composed of Noyu Rodeo Street Improvement Committee, professionals, activist groups and administration support teams. As a method to keep the public promises of “Making Likable-to-walk Street” and “Maintaining Street’s Identity”, Citizen Committee was made to have regular meetings. It was intended trying to make an organization for residents themselves and to carry out residents initiated city-making in the cooperation of local authority. The local government came to lead the project, and the ability of local community was not empowered very much.

#### Relations of the City-Making with Urban Planning and Tasks

This area has been assigned as a District Unit Planning Area, a part of Urban Management plan. The final plan, however, has not decided yet, because it has not drawn a consensus about a part of plan. This area is just designated by Special Design District.

#### **9.4.2.3 Munhwa-Dong (<http://bukgu.gwangju.kr>)**

#### Object

As Bukgu local government in Gwangju carried out “Making Beautiful Towns”, Munhwa-dong has been undertaking a “Well-keeping Town as Living Place” project in the theme of “cultural town with poems and paintings”.



**Fig. 9-3.** Munhwa-dong city-making

As decorating walls with poems and pictures, they tried to form local communities. Physical city-making aimed for non-physical community making (Fig. 9-3).

**Purpose**

In August 2000, with the change of neighbourhood office function, Bukgu in Gwangju transformed Dong local offices into Residents Autonomy Centres, and also carried out “Making Beautiful Towns” projects in 26 Dongs. In December 2003, Making Town Team was established and an ordinance about Making Town projects was institutionalised (2004. 3).

Local government defines “Making Town” as a process that people become to have ownership of their towns and an activity that people make their own towns together (Bukgu Gwangju 2006, p. 9), which can be differentiated from the public sector initiated, top-down community development in the 1970s and 1980s. This project is for community building. Its purpose is different from the one of city-making in the age of development.

**Process**

Residents Autonomy Committee that consisted of 23 members led the project. Particularly, the chair of committee in his 70s and a member who is a sculptor contributed to the project a lot with enthusiasm.

Since 2002, under the theme of cultural town with poems and paintings many activities have been done, for example painting walls, making mosaic boards, sticking poems and pictures (about 150 pieces). In 2005, putting up a friendly nameplate project started and 63 households have made unique nameplates of their own.

Bukgu local government makes a support plan for this every year. Residents Autonomy Committee asks the public to suggest ideas, and the committee makes proposals and bids for grant from Bukgu. Residents occasionally pay a bit of expenses. Projects are performed by Residents Autonomy Committee with the participation of residents, professionals and NGOs. Facilities built through the projects are managed by the committee. The difference from city-making of the age of development is that residents propose ideas themselves and actively lead the projects. Gu government just supports the residents administratively and financially.

Relations of the City-Making with Urban Planning and Tasks

Making Town projects do not need any change in urban planning generally.

#### 9.4.2.4 *Samdeog-Dong*

Object

Samdeog-dong in Jung-gu of Daegu has a residential area for 6,000 people. There was removing wall project in this area for community building (Maeulyeondae 2003, pp. 39–45).

Like Munhwa-dong, this case can be said as a city-making to improve the quality of life, which includes removing walls, making cultural facilities, wall painting and so on (Fig. 9-4).

Purpose

This case was started from a social activist's practice. He started to remove walls in this area (1998). After that, the space was provided for neighbours living in the alley to meet together. Like Munhwa-dong, many kinds of physical and non-physical city-making projects have been carried out. They are all for community building in the end.



Fig. 9-4. Samdeog-dong city-making

### Process

A social activist mobilized human resources, like the support of professionals and a NGO (YMCA), and did a variety of activities and made facilities to make communities around alleys.

Removing wall project has become a part of programme called “Love Daegu Movement” and the local government is supporting it by waste disposal of broken walls, gardening advices, etc.

### Relations of the City-Making with Urban Planning and Tasks

Because of the loosened land use control by Urban Management Plan, many one-room flat buildings were permitted to build. People disagreed these building permissions (2000). Daegu Urban and Residential Environment Improvement Master Plan, prepared in 2006, designated this area as Improvement Expected Area, which stimulated redevelopment and rebuilding projects. Then the opinion of the community divided into two and conflicts appeared in the community.

Legal urban planning, which includes sectional plans like Urban and Residential Environment Improvement Master Plan, could be a barrier rather than support new city-making practice. Urban planning system should be reorganized into a social system to support Making Livable Cities.

## 9.4.3 Discussion

Conventional city-making has been responding to urbanization and industrialization, government initiated, quantitative and physical development oriented. In contrast, the “Making Livable Cities” is improving activity with the standpoint of inhabitants and users. In the end, it is expected to increase amenity in neighbourhoods and to build local communities. The public sector including local governments needs to have a system to provide support so that residents can implement the leading role.

To promote Making Livable Cities activities, urban planning needs to have a more supportive system. It should be able to control the existing land use and also to be a system in which central and local governments, market and civil society negotiate and get agreements. So the governance of urban community should be considered as a mediator among these stakeholders and a supporter of city-making activities.

To deal with the existing problems of urban planning system and make it more supportive to the Making Livable Cities, it is needed to change present vertical top-down system into horizontal triangle system (Figs. 9-5 and 9-6). Urban Master Plan and Urban and Residential Environment Improvement Master Plan should be changed from “blue-print plan” to “policy plan”.

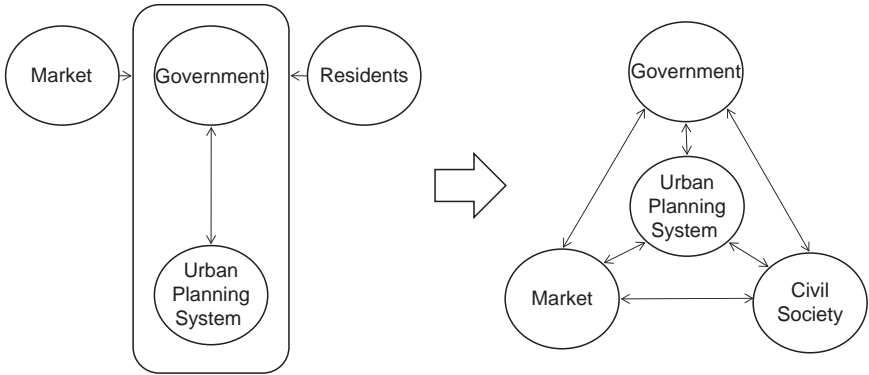


Fig. 9-5. Changing role of urban planning system

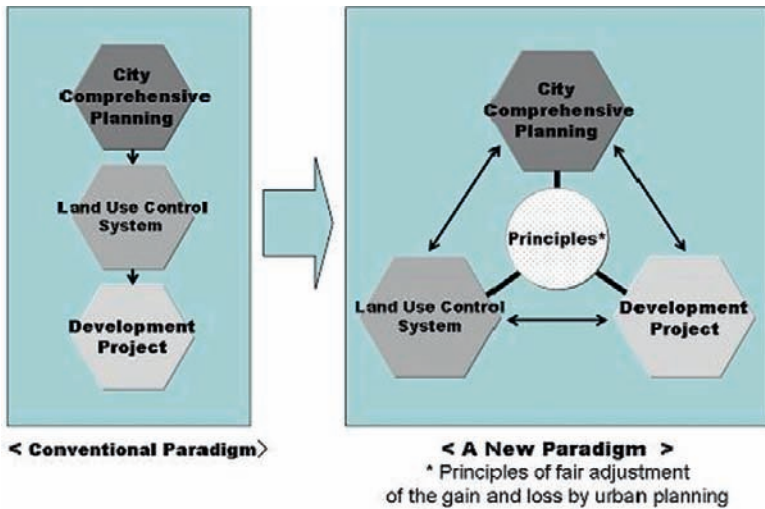


Fig. 9-6. Paradigms shift of urban planning system

## 9.5 Conclusion: Tasks of Urban Planning to Encourage Making Livable Cities

### 9.5.1 Summary

The Making Livable Cities is to reflect the viewpoints of inhabitants living there. Traditional city-making to respond to rapid social changes like urbanization is being replaced by a new one. It is a very fundamental change and can be called the advent of a new paradigm.

For the Making Livable Cities, most of all urban planning systems have to play supportive and encouraging roles. In this point of view, the following matters should be considered concretely:

- To change vertical top-down system into horizontal triangle system
- To transform Urban Master Plan from “blue-print plan” to “policy plan”
- To improve the land use control ability of Urban Management Plan

### **9.5.2 Future Tasks**

More in-depth case studies should be examined for more concrete evidences and international comparison studies are also needed to show the general and unique features of Korean cases.

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# 10. Mobilizing Communities to Regenerate Deprived Urban Neighborhoods in Glasgow

Naofumi Suzuki

## 10.1 Introduction

Since the late 1990s, British urban policy has been characterized by its understanding of the concentration of multiple disadvantages in inner and peripheral urban neighborhoods as “social exclusion”, which are to be tackled by means of strategic partnerships between public, private and community sectors (Social Exclusion Unit 1998, 2001). Within these partnerships, it has been expected that local communities would play a leading role in initiating and managing urban regeneration projects, although such community-led projects have not necessarily been altogether successful in sustaining themselves. Drawing on the case study of a sport-based social regeneration project targeted at young people, this chapter considers the way in which a community-led, locally-based, small-scale urban regeneration project might be able to sustain and develop itself within the wider framework of urban regeneration policy.

This chapter consists of two main parts. The first provides an overview of the chronological development and recent tendencies of British urban regeneration policy, with a particular focus on the difference between English and Scottish approaches. In doing so, it will set up a backdrop to the case study through a review of the issues around the relationships between the recent urban regeneration partnership schemes and communities.

The second half presents the findings from the case study. After briefly summarizing the study that this chapter is drawn upon and its methodology, the subsequent three subsections present the key findings from the study. First, the nature of multiple disadvantages that young people in the

studied area were faced with is described. Then, the development process of the case study project, which had been deemed successful for this type of sport-based social inclusion initiative, is detailed. This will follow with a discussion of the factors that contributed to the sustainable development of the project.

Finally, the concluding section draws together the two main parts, commenting on the implications and lessons from the case study for the issues concerning collaborative planning and communities.

## **10.2 Urban Regeneration Policy in the UK**

### **10.2.1 A Brief History of Urban Regeneration Partnership**

British urban regeneration policy has developed in various forms since the 1960s when the former industrial cities started experiencing a rapid decline. Despite the commonalities between English and Scottish approaches, there have been some key differences between them (McCarthy 2007).

While urban policy in the early years of the 1950s and 1960s was concerned with the social aspects of urban poverty, it was deemed ineffective as it was based upon a social pathological understanding of urban poverty. Urban policy was to tackle “the deviancy of spatially defined groups and individuals” (p. 29) and the structural causes of poverty were overlooked. In the late 1970s, the focus shifted towards property-led, economic regeneration. In the meantime, the emphasis began to be placed upon “partnerships” involving the private sector as well as local communities, although the public sector remained as the main actor of regeneration. Notably, in 1975, an experimental, comprehensive area-based partnership called the Glasgow East Area Renewal (GEAR) project was initiated in the East End of Glasgow, Scotland (Keating 1988; Donnison and Middleton 1987).

Margaret Thatcher’s era since 1979 saw a more radical shift towards property development and economic regeneration with the private sector given an enhanced role under the name of “public–private partnership”. Although partnerships were supposed to mobilize the funds and exploit the know-how of the private sector for the purpose of delivering public policy objectives more effectively, in reality it was often the case that financial leverage was provided by the public sector so as to give an incentive to stimulate the

interests of private investors (Boyle 1989). The 1990s then saw the effort to promote more effective partnerships. Notably, competitive bidding schemes were introduced, such as City Challenge and Single Regeneration Budget (SRB) in England. These schemes could be credited for realizing a more efficient use of public funds. In the meantime, however, McCarthy (2007) argues that in the formation of the partnerships, the role of local authorities as well as the volunteer sector was marginalized, while the private sector furthered its influence on the decision as to where and how their money would be used via the partnerships. This meant “a shift away from aid to the most deprived areas towards those with demonstrable potential” (p. 33). As a result, the gap between the affluent and the poor areas was said to have widened during the reign of the Conservatives in the 1980s and 1990s (McCarthy 2007).

To tackle this broadening spatial inequality, the New Labour government elected in 1997 placed greater importance upon the role of local communities in forming partnerships, though the principle of competitive bidding was inherited from the previous Major government (McCarthy 2007). This approach, known as the “Third Way”, also has its own critics, who have argued that it is an uneasy compromise between Thatcherite neo-liberalism and authoritarian communitarianism (Atkinson and Helms 2007). However, the approach has also been positively received by some commentators, in that it has provided more strategic solutions to the problems of “social exclusion” faced by deprived urban neighborhoods (Lupton 2003).

To be put briefly, New Labour’s approach to urban regeneration is based on the understanding that the geographically concentrated multiple disadvantages such as high unemployment rates, low educational attainment, high incidences of crime, ill health, poor housing conditions and family breakdowns are interlinked and caused by the fact that residents of these neighborhoods are structurally excluded from mainstream society (Social Exclusion Unit 1998). Therefore, the effective way of tackling these problems is not to treat them separately, but to construct a comprehensive strategy based on local needs through a partnership, in which local communities are encouraged to be involved in the decision-making process (Social Exclusion Unit 2001). Naturally, the emphasis has shifted from physical (re-)development to social and community aspects such as vocational training, educational support and community safety. In other words, these programs are to enhance “social inclusion” of those affected by the multiple disadvantages persistent in the most deprived neighborhoods. Meanwhile, voluntary organizations are now expected to be among the main actors in delivering these programs.

### 10.2.2 Differences Between England and Scotland

While the overall trend described above is applicable to the UK in general, there are to some extent local variations historically, and the difference may be widening after devolution in the late 1990s (McCarthy 2007). There is little difference in principle in terms of the increasing emphasis placed upon partnerships since the late 1970s as well as the shift in the features stressed within partnerships. However, some have argued that urban regeneration partnerships have been more effective in Scotland than in England (Lloyd et al. 2001). The main difference lies in the levels of comprehensiveness and continuity.

In England, it is said that compartmentalism across governmental departments as well as between central and local governments has plagued the formation of an integrative approach to regeneration, which resulted in the coexistence of a number of different regeneration initiatives (McCarthy 2007; Atkinson and Helms 2007; Lloyd et al. 2001). While New Deal for Communities (NDC) is considered to be the main initiative under New Labour, there have also been SRB, Employment Zones, Educational Action Zones, Health Action Zones, New Deal for Young People, Crime Reduction Program, and Sure Start, among others. Many of these have been criticized as being too short-lived.

In contrast, in Scotland, where there has been a more corporatist tradition, the coordination between the central and local governments has been smoother, and thus the urban regeneration initiatives have been relatively integrative and continuous (McCarthy 2007; Lloyd et al. 2001). In fact, while being considered an experiment, the GEAR project lasted for about a decade (Boyle 1989). Similarly, the *New Life for Urban Scotland* program, launched in 1988 in four peripheral social housing estates, also lasted for a decade. Subsequently, in 1996, the launch of the Priority Partnership Area (PPA) program was announced with an emphasis on city-wide partnerships, and 12 areas in ten cities were designated as PPAs as a result of competitive bidding (McCarthy 2007). These PPAs were succeeded by the Labour government, and further developed and expanded into 34 area-based and 14 thematic Social Inclusion Partnerships (SIPs) in 1999 (Lloyd et al. 2001). Meanwhile, with an aim to develop a more comprehensive bottom-up approach to planning, the Community Planning pathfinder projects were implemented in five local authorities. Following these pathfinder projects, the Local Government in Scotland Act 2003 made it compulsory for all local authorities to have a Community Planning structure in place. As a result, all SIPs were integrated and reorganized into Community Planning Programs (CPPs) (Communities Scotland and Scottish Executive 2003).

Hence, despite going through several changes of political administrations, the urban regeneration initiatives in Scotland have evolved incrementally, by succeeding elements of previous ones, and have become more integrative while also extending their geographical coverage. This is an important institutional backdrop against which the success of the case study project should be understood. It will be described later in this chapter how this project sustained and expanded itself in an exceptional manner for this type of project. It is evident, however, that this institutional structure alone is not sufficient for any community-based project to achieve the same level of sustainability, if not expansion, since there are in fact many that struggle for survival. The next section therefore considers the criticisms against the contemporary community involvement schemes in the UK.

### **10.2.3 Current Issues of Community Involvement**

So far the chapter has described how British urban regeneration initiatives have come to emphasize the importance of partnerships between public, private and community sectors. This was to encourage a bottom-up approach to strategy making and service delivery that directly reflects local needs, with an aim to tackle the multiple disadvantages and promote social inclusion. Within this partnership structure, each community project is required to participate in competitive bidding. Community-based voluntary organizations are expected to play a greater role than ever before, but concerns have been also raised from the viewpoint of communities. They include the following three issues.

First, some are critical of the political rhetoric of the New Labour government. In their view, the government describes the communities as both problem and the active agent to solve it, while this rhetoric cleverly allows the government to avoid taking responsibility for tackling the macro socio-economic structure, which is the root cause of poverty (Atkinson and Helms 2007; McWilliams et al. 2004). In other words, it is a rhetoric that imposes the responsibility upon the local people who are the victims rather than the perpetrators.

Second, the ideal of empowerment through community participation may not always materialize in reality. Although institutions to involve local community members in decision-making processes such as community consultation have been in place, commentators like McWilliams (2004) believe that the policy agenda and priorities are in reality set by the local policy agencies, and local people are in fact left powerless in key decisions. Analyzing the process of community consultation in one of the SIPs, McWilliams (2004) concludes that the process “was woefully inadequate.

At best it was tokenistic, and at worst, local people were being ‘exploited’ to legitimize the policy process” (p. 274).

Third, the principle of competitive bidding makes the existence of a project highly dependent upon the success of funding applications. As Kearns and Turok (2000) point out, the assessment of funding applications could be based on whether or not they match the government’s policy agenda rather than the efficacy of projects themselves. In the face of fierce competition for funding, it may be the case that each project’s primary concern is how to write up an application that favorably matches the criteria set by the government. Therefore, there may be the risk that those projects presenting truly innovative ideas would be left out.

The rest of the chapter considers these issues through the case study of a community-led urban regeneration project. If the goal of urban regeneration policy is to cultivate social inclusion programs that truly reflect local needs, analysis at the levels of institutional partnership processes and political rhetoric would be inadequate to uncover whether such a goal is achieved or not at a project level. The following sections thus attempt to analyze the process of a social inclusion program successfully sustaining and expanding itself over the course of five years and longer. As a result, the contributing factors to its success will be identified.

## **10.3 Case Study**

### **10.3.1 About the Study**

This study was carried out by the author for 12 months in 2004 and 2005 in the East End of Glasgow, Scotland. A grounded theory approach (Strauss and Corbin 1998) was employed in investigating several sport-related community regeneration projects. Three main methods were used for data collection: over a hundred hours of participant observation as a volunteer worker in two projects; semi-structured interviews with 15 staff members from five projects, each lasting 60-90 minutes; and six focus groups with a total of 30 young people who participated in the main project, each lasting 30-60 minutes.

An advantage of qualitative research is that it makes a detailed analysis of a social process possible, although, it is also inevitable for the subjectivity of the researcher to intervene. The use of multiple methods is called triangulation, which is the recommended practice to improve reliability, or dependability, of research findings (Guba and Lincoln 1989). In particular, the grounded theory approach is oriented towards theory building “grounded” in the gathered

data, which is made possible through constant comparisons of properties and dimensions generated through the reflective process of observation and data analysis (Strauss and Corbin 1998). The study was designed to enable a comparison between the main, most established sport-based regeneration project, the Urban Fox Program, and several other projects, which presented a variety in terms of the properties and dimensions. Thus, it was made possible to carve out the contributing factors to the relative success of the main project. Before discussing the process of the project growth and its contributing factors, the next section will first set out the context within which the case study project was situated, with a particular focus on the issues around young people living in the area.

### **10.3.2 Territoriality and Young People's Social Exclusion**

The problem that young people in the East End of Glasgow were faced with could be formulated as the vicious circle of the deprivation of capabilities in making a transition into adulthood (Suzuki 2008). As Furlong and Cartmel (1997) maintain, in contemporary British society, where the difference between social classes may appear to have diminished and there is more diversity in choosing careers, young people in fact are still bounded by the inequality rooted in the traditional class differences. Furthermore, they are placed under an even harsher condition; they are expected to make their own way out of the uncertainty due to the collapse of the traditional class structure, negotiating their transition with their own responsibilities (Furlong and Cartmel 1997). Under these circumstances, the outcome of the transition is dependent upon the extent to which a young person possesses the "resource base", such as access to education, vocational training and family support (Furlong et al. 2003). In this respect, greatly disadvantaged are the young people living in deprived neighborhoods, where problems such as low educational attainment, high unemployment rates and family breakdowns are persistent (Social Exclusion Unit 2000b). In addition, the high incidence of anti-social behaviour (e.g. drinking in public space, drug taking, street violence, robbery and vandalism) is also a serious concern of community safety, and young people are considered responsible for a great proportion of it (Social Exclusion Unit 2000a).

The East End of Glasgow has suffered such multiple disadvantages for decades and has been subjected to a series of urban regeneration initiatives since the 1970s, but it remains one of the most deprived areas relative to the national standard (Scottish Executive 2006). This study uncovered the process by which the young people brought up in the area were trapped into

a vicious circle of deprivation. One of the most prominent issues in the area was the territoriality among young people. Territoriality most visibly manifested itself in what was called “gang fighting”, a violent clash between groups of young people from neighboring housing estates. Whatever the impression the word “gang” might convey, these young people were not an organized criminal group, and the membership was rather fluid (Suzuki and Kintrea 2007; Kintrea and Suzuki 2008). More importantly, territoriality more or less affected every young person growing up in the area; it was not just those frequently involved in fights, but young people were generally restricted in their geographical mobility because of the fear of indiscriminate attacks by gangs from adjacent neighborhoods. This led to limited opportunities in leisure, education and employment, inter alia. This presented an obvious disadvantage in the transition from school to work or further education, which would make it unlikely for the entire area to improve its profile. This was the problem that the sport-based projects aspired to resolve.

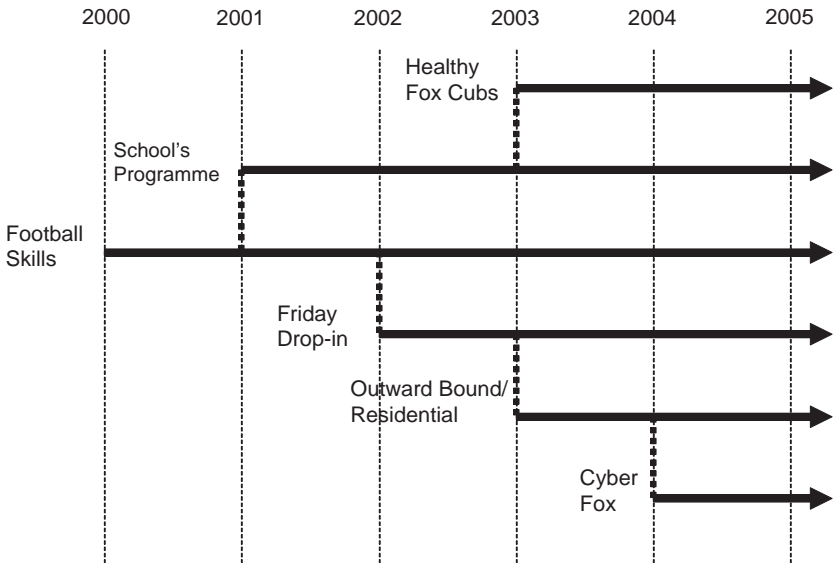
### **10.3.3 Development Process of the Urban Fox Program**

#### ***Summary of the Project***

The Urban Fox Program (Urban Fox) had the longest history of operation in the area not only as a sport-based project, but also as a service targeted at young people. The project title symbolizes the project ethos of breaking down territoriality, since foxes are territorial in nature but travel to urban areas beyond their own territory. As of 2004, it was said to engage with 500–600 young people aged between 5 and 17 in ten communities within the East End every week. The services were delivered free of charge, with funding coming from the East End Social Inclusion Partnerships (East End SIP) as well as other private funders and the police. It continued to be funded by the Glasgow Community Planning Partnership (Glasgow CPP) after the integration of the SIPs in 2005. It had three full-time staff members and approximately 20 others, including part-time and sessionally paid workers, as well as unpaid volunteers.

The activities provided included: football coaching once a week for each of the ten communities; a youth club type of service on Friday nights using local community centers; PE service in local primary schools; residential camps in the summer and winter; outward bound activities during holiday periods, and other ad hoc events. These activities were not only to provide





**Fig. 10-1.** “Evolution” of Urban Fox

positive leisure opportunities, but also to open up communication channels with the young people, so that the staff members could provide the necessary support and advice to help them deal with problems or difficulties they were faced with. When the project was revisited in November 2007, the project had started street youth work. Hence, the project had strengthened the aspect of youth work unlike normal sport-based projects. This, however, was not achieved over night. The project started in 2000 as a small-scale football coaching project in four communities and gradually developed each year as shown in Fig. 10-1.

### **Early Days**

A year before the launch of the project, the project co-ordinator of Urban Fox had an experience of jointly providing a week-long program for young people aged 16–18 years in two communities in the north and east of Glasgow. The program combined sporting activities and educational inputs about community safety. This inspired him to start up a similar project for a younger age group. In 2000, he was granted funding from the Scottish Executive to deliver a football coaching project, then called the East End Football Program, using the facilities of community centers in

four communities in the East End on weekday evenings. He also held four football festivals where young people gathered from the four communities at a central facility. At first, each session attracted some ten participants and 85 attended the first festival. By the fourth festival, attendance had grown to around 350 people, with many more sports and leisure activities added. Meanwhile, the co-ordinator began talking with the community development officer of the Culture and Leisure Service of the Glasgow City Council, about measures to make the project more attractive. As a result, they came up with the symbolic project name, Urban Fox, a character logo, and the project slogan “Redcard the gangs”.

### ***Partnership with the East End SIP and Geographic Expansion***

Having seen its “success” of the first year, the East End SIP approached Urban Fox. A female officer of the SIP, who would become a full-time worker of the project later on, suggested to the co-ordinator to apply for SIP funding. The application was successful, and he took this opportunity to expand the services. While keeping the original football coaching in communities, the project began teaching at PE classes in nine local primary schools, combining six football coaching and two educational input sessions in an 8-week program. This had a spin-off effect on football coaching in communities, which also expanded the area coverage to nine communities. Also, in the festival held that year, Urban Fox’s mascot was introduced, which in the co-ordinator’s view, had a great impact on gaining recognition from local people as well as potential partners.

### ***“Gonna No Break That” Campaign***

At the end of 2001, these promotion strategies led to an opportunity for further expansion of the services. When Urban Fox held a festival on one weekend, a police officer volunteered for them as a steward. After the event, he went to a community safety forum organized by the Strathclyde Police London Road office, wearing a T-shirt with a large Urban Fox logo on it. When his boss noticed it, the officer explained the project to him. The boss then proposed to use the logo for a community safety campaign. After negotiating with the project co-ordinator, the “Gonna no break that” campaign was launched, with the Urban Fox logo printed on banners and flyers of the campaign. They were put up on bus windows and telephone boxes, as it was a campaign to stop the vandalism that was frustrating bus and telephone companies. Urban Fox received 4,000 pounds in return, while it also managed to gain publicity around the city at no cost.

### ***Diversification of Service***

In 2002, Urban Fox invested the 4,000 pounds to create a new service; one area began the pilot project of the Friday Drop-in service. This service was to open up the facility of a community center on Friday evenings to provide young people aged 12–15 with activities such as computer games, dancing, pool and so on. It was aimed to prevent young people from committing anti-social activities such as drinking, drug use and gang fighting by providing positive alternatives when they were most likely to happen. It was also intended to create opportunities to communicate with young people, which football coaching alone could not effectively achieve. Thirteen to fourteen young people were reported to regularly participate in the pilot project.

In 2003, the same service was expanded to another eight communities with the East End SIP providing the funds. It attracted 15–40 young people in each community. Two other strands of service were also stemmed out of the Friday Drop-in. One was a summer camp, where five participants from each of the drop-in clubs were selected and brought together to participate in outdoor activities, such as canoeing, kayaking, mountain biking among others. After the first summer camp, these outdoor leisure activities were kept as regular day-trip programs during holiday periods, though with a smaller number of participants. These programs possessed the same elements as festivals, in that they would bring young people from different communities together. This was specifically designed to break down territoriality. The other strand was the Cyber Fox program, which was to provide opportunities to play PC games and/or to learn IT skills on Saturdays. It was first delivered as a pilot in one of the community centers used for the Friday Drop-in.

Meanwhile, another service added around the same period, this time stemming out from the PE service in schools, was the Healthy Fox Cubs program, which was designed to offer instruction on basic body movement exercise for younger children aged 5 and over, as this age group was experiencing a serious problem of obesity. However, after running pilot projects in several communities, this service was pending due to staff shortages as of 2004.

The year 2004 saw further pilots, such as a DJ and music editing service and the entry to the Friday night football league organized by the Scottish Football Association, the latter being a preparation for starting up its own football league on Sundays. Urban Fox also started offering its services outside the East End SIP area, when a school offered to buy the football coaching services on Saturdays.

After completion of the fieldwork in early 2005, the project kept developing; notably, outreach street work began, making the project more of

a comprehensive youth service, rather than just a diversionary sport and leisure project.

### **10.3.4 Contributing Factors to the Sustainable Development of Urban Fox**

Hence, since 2000 to date, Urban Fox has succeeded in expanding and running itself continuously, and in doing so, it has acquired broader functions beyond sport and leisure provision and now generally address the youth-related issues in the communities. This section thus points out four sets of factors that seemed to contribute to this achievement.

#### ***Visible Factors***

First, there were three “visible” factors for the project’s “success”, namely size, versatility, and continuity. These are not only the outputs of effective project management, but also part of its mechanism. The project size of Urban Fox had become considerably larger than any other youth- and sport-related project in the area, with 500–600 people participating on a weekly basis, as compared to the maximum of some 120 in a one-off event organized by another project. This could also be attributed to the fact that it provided its service in all ten communities within the East End, unlike others, which typically served one community. Significance lies in the fact that participants of Urban Fox reportedly included those who would frequently be involved in gang fighting, which was usually not the case for smaller-scale projects. As many commentators have pointed out, securing continuous participation by the target group is a necessary condition for any sport-based social inclusion project to produce intended outcomes (Coalter 2007; Nichols 2007; Taylor et al. 1999; Crabbe 2005). In this respect, Urban Fox performed relatively well.

Such a large number of participants could only be attracted because of the versatility of its service. To offer a variety of activities was a key not only to attract young people with different interests but also to “keep them coming back”. Young people, in the views of the project workers, could very easily get “bored”. Notably, the project deliberately guided its participants from one part of a project to another. For instance, a young person who first got to know about the project through a PE program in school, could start participating in football coaching in communities, where he would also learn about the availability of a Friday Drop-in service. Once he got involved in that, it would open up opportunities to participate in other events such as a

summer camp. Hence, being involved in Urban Fox would directly improve young people's well-being, by enabling access to a number of positive activities that would otherwise not be accessible for many of them who were from low income families.

Furthermore, the versatility of service was acquired over many years. Since 2000, the project had added approximately one service per year, running a pilot in a smaller number of areas before extending it to the whole of the East End. Thus, continuity was necessary in achieving the versatility, and then the size.

### ***Financial Factors***

Second, the continuous development was founded on its financing strategy. It is often due to the difficulty of securing finance beyond the initial funding period that sport-based projects do not last long (Coalter et al. 2000). However, Urban Fox had managed to secure funding from the East End SIP and then the Glasgow CPP. Even more, it had succeeded in increasing the amount of funding, while also receiving funding from other organizations. Three factors seemed to contribute to this financial success. The first was its marketing and publicizing activities, such as the logo, the slogans and the mascot, which not only symbolized the objective of the project, but were also designed to attract the attention of potential patrons and partners, as seen in the case of the "Gonna no break that" campaign. The second factor was the project size itself. The high presence in the area meant that potential funders would naturally regard the project as a "success". Finally, the strategy of running a pilot before putting in a funding application also seemed to be effective.

### ***Organizational Factors***

Third, the type of organization seemed to be important. The financing strategy above was made possible because Urban Fox was run by a voluntary organization. Commentators such as Coalter (Coalter et al. 2000) and Crabbe (2006b) have pointed out the advantages of voluntary organizations over local authorities and the police in running sport-based social inclusion projects. Urban Fox seemed to demonstrate four advantages in these terms. First, voluntary organizations could access any kind of funding sources, and decide on how to spend the money (Crabbe 2006b). While the SIP had been the primary funder of Urban Fox, it could also go for other funders such as the police and private foundations. Second, they could run a pilot before applying for funding, by putting in extra voluntary work. Third, voluntary organizations have no limit in marketing and publicizing a project.

Although the money granted by the East End SIP or the Glasgow CPP had to be spent within the SIP or CPP area, Urban Fox were selling services outside the SIP area as well. The co-ordinator in fact had a vision to become independent from public funding by selling its service as a package to councils outside Glasgow, though he admitted that it would take years for this vision to materialize. Finally, voluntary organizations tend to demonstrate a higher level of commitment and ownership by the staff members (Coalter et al. 2000). In particular, the strong self-belief and leadership of the co-ordinator of Urban Fox seemed to be the key to bringing the staff members together. In contrast, it could be often the case that a specific project objective such as crime prevention, is not addressed properly by the sessions run by sports coaches, who tend to focus on sports development objectives (Houlihan and White 2002). Such conflicts of interest were observable in one of the projects in the area, which was jointly run by the police and a local basketball club.

### ***Mobilizing Communities***

The fourth factor was the strengthening of the human resource base in the communities. The sustainable development of a project is ultimately dependent on the manpower dedicated to the project. To develop a new service, a project would need highly committed staff members, who would not hesitate to work unpaid when necessary, as well as appropriate partners who could offer specialized services. The co-ordinator of Urban Fox seemed to be good at utilizing his personal networks to mobilize necessary manpower within the communities. Moreover, some staff members were young people who used to participate in the projects, but had grown older than the target age. These young people naturally showed high levels of commitment to the project. In other words, as the project continued, it kept producing “graduates” who added to the human resource base from which the project could recruit new employees whenever necessary. This way, further development of the project would become easier.

## **10.4 Conclusion**

Urban Fox expanded and transformed from a small sport-based project to become a multidimensional social inclusion program. The process through which this transformation took place seems to provide a number of useful lessons to the management of neighborhood regeneration programs. This concluding section considers the implications of Urban Fox’s experience

to community involvement within the framework of an urban regeneration partnership in relation to the three issues raised earlier.

First, with regard to the argument that the political rhetoric of community involvement is used to impose responsibility upon the vulnerable communities, such adversity was not observable as far as Urban Fox was concerned. On the contrary, staff members of Urban Fox showed a strong commitment to actively taking onboard the major concerns of their own communities – territoriality among young people in particular – and taking initiatives in tackling them through communities' self help.

Second, the concern that the process of community involvement is often tokenistic or in reality the exploitation of local people for the purpose of legitimating the policy process did not seem to materialize in the case of the relationship between the East End SIP and Urban Fox. While it was the SIP that initially approached Urban Fox and suggest that it should apply for funding when the project was operating on voluntary basis, Urban Fox did not seem to rely solely on the SIP but rather strategically exploited the system to realize their aspirations.

Third, in relation to the decision-making process of competitive bidding, the financing strategy of Urban Fox was to place a higher priority on demonstrating the effectiveness of its services run on a voluntary basis before applying for funding, rather than making up application documents to match a funder's agenda. This strategy seemed to have led to their relative independence from the East End SIP, as Urban Fox had succeeded in attracting other funders including the police and private foundations. Moreover, these other sources of funding helped them run pilot projects, which often resulted in additional funding from the SIP to make them permanent services.

This chapter has illustrated the dynamic processes of a community-based social inclusion program being nurtured under the urban regeneration schemes in Scotland, which are said to be more integrative and continuous than those in England. However, neither does this deny the negative aspects of competitive bidding and community involvement mentioned above, or prove the superiority of Scottish regeneration schemes over English ones. In fact, other sport-based projects with similar objectives in the East End of Glasgow tended to struggle to get going. Nevertheless, the case of Urban Fox exemplifies the fact that with an adequate management strategy, it is possible to develop a sustainable project rooted in communities.

The lessons learnt from this study in fact share a lot with Crabbe and his colleagues' larger-scale evaluative study of a sport-based social inclusion initiative in England and Wales, *Positive Futures* (Crabbe 2005, 2006a,b; Crabbe et al. 2006). The Positive Futures initiative is not part of a com-

prehensive regeneration partnership like SIPs, but funded by Home Office with an aim to tackle drug and crime issues of young people in deprived neighborhoods. Crabbe (2005) argues that among the projects studied, it was those projects which successfully formed partnerships with other organizations working in the neighborhoods that could draw further funding to sustain themselves. Recognizing the vulnerability of voluntary organizations in general, Crabbe (2006b) also maintains that they are relatively strong in terms of creating more innovative and sustainable organizational structures.

While the findings from the case study described in this chapter seemed transferable to the English context to a certain extent, the potential of a sport-based community organization to mobilize the communities while addressing social inclusion objectives is not altogether clear. Some innovative examples are in fact found in the context of overseas development assistance (Coalter 2007). A further cross-contextual comparative study would present an interesting opportunity to explore the relationships between sport, communities, and development partnership.

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# 11. Collaborative Development of Water Environment Quality Index in Japan

Hiroaki Furumai, Futaba Kazama, Hiroshi Nagaoka, and Jun Nakajima

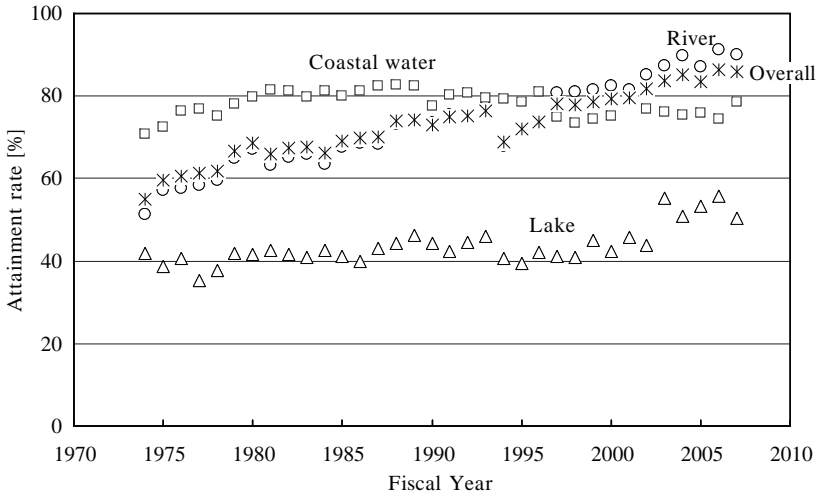
## 11.1 Introduction

### 11.1.1 Water Quality Standards and Their Attainment

Environmental Quality Standards (EQS) are established for water pollution control as target levels for water quality that are to be achieved and maintained in public water bodies under Basic Environment Law. The standards have two major goals: protection of human health and conservation of the living environment. The second goal is set for classified water bodies such as rivers, lakes, reservoirs, and coastal waters, based on water usage. The standard values for the living environment have been established for bio-chemical oxygen demand (BOD), chemical oxygen demand (COD), dissolved oxygen (DO), and other water parameters (Ministry of Environment, Japan; 2002).

The attainment rate of the water quality standard has been the most commonly used method for evaluating water environments. Figure 11-1 shows the change of attainment rates in terms of BOD and COD as the organic pollution indicators from the first year of implementing EQS for water quality management. During the two decades of high economic growth from 1955 to 1975, the rapid spread of pollution in rivers and other bodies of water was clearly evident in urban areas. After this period, river water quality has been improved around the country through effective effluent regulation and the construction of sewerage systems with wastewater treatment plants. The increased attainment rate of BOD in rivers indicates that organic pollution has been mitigated (Ministry of Land, Infrastructure, Transport, and Tourism, Japan; 2007).

Although the high attainment rate has been achieved in terms of BOD in rivers, we have realized that the state of water quality improvement and the



**Fig. 11-1.** Change of attainment rate of water quality standards in public waters

level of public satisfaction toward river water quality are by no means equal. That is, many in the public say that, despite having met water environment quality standards, they do not feel that water environment quality has virtually improved to their satisfaction. This indicates that people have a greater awareness of the water environment and that enhancing water quality requires improving not just the water environment but also the various factors linked to it.

### 11.1.2 Significance of a Water Environment Quality Index

Besides water quality, factors that make up the water environment include the natural state, biological diversity, amenities in the waterfront area, and the regional, historical, and cultural background, all of which come together to form the relationships between people and water (Wagner et al.; 2002). Water quality is conserved by improving these factors, and achieving the conditions that make people feel that their water environment has improved. While a number of indicators have been put forth as a way to measure water environment factors besides water quality, an integrated quality index that produces a comprehensive evaluation of all these water environment quality factors has yet to be established.

The following points were considered as especially important to formulate a water environment quality index:

1. A broader perspective that takes into account more than water environment quality.
2. Psychological quality of life and other mental aspects should be included as a component of water quality.
3. Overall conditions of watersheds and water cycles should also be emphasized.
4. The index should be consistent, easy to apply to evaluating environment equality and easily understood.
5. The index should be a useful tool for policy making and planning by government and reflecting the contribution by citizens and NPOs to actions for water environment improvement.

The water environment quality index proposed here incorporates the opinions of a variety of people concerned with the water environment, and is aimed at the creation of a better index. Moreover, it is hoped that citizen and NPO groups will use this water environment quality index to evaluate the riverside environment of areas they know well and enjoy, undertake further efforts to improve these environments, and publicize the results and thereby expand the circle of effort taken on behalf of a better water environment to the entire country.

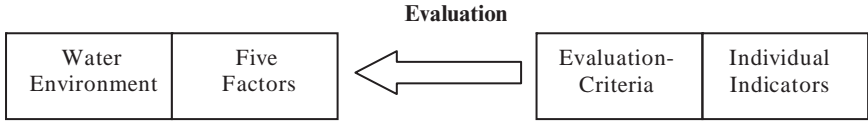
Moreover, we believe that public administrators can use water environment quality index surveys as a useful tool for improving and conserving the water environment, a way to work with the public, NPOs and other groups, and as a constructive tool in basic environmental planning, environmental education and other policies.

## **11.2 Water Environment Quality Index System**

### **11.2.1 Concept of the System**

To evaluate water environment quality, the system specifies five evaluation criteria underlying five factors of water environment as shown in Fig. 11-2. Each criterion comprises five individual indicators that exhibit actual environmental states. The individual indicators are measured and evaluated and then summarized to evaluate the criterion completely.

Five point standard scores are applied to each individual indicator. The criteria's score is evaluated as the average points of the indicators. It is necessary to select the individual indicators that provide objective



**Fig. 11-2.** Concept of the water environment quality index system

*Factors of water environment to be evaluated:* (1) Natural state, (2) biological diversity, (3) water usage, (4) amenity to people, and (5) regional culture on water

and qualitative evaluations. The reproducibility of the measurement is also important for the indicator.

Five factors of the water environment are decided from not only a natural scientific point of view, but also from a social sciences perspective, i.e., the relationship between the water environment and people. The natural state is necessary for people to understand the original figure of the river and its historical change. Biological diversity is one of the most important concepts for the evaluation of the water environment. Sometimes the objective of people’s activities for environment protection is to preserve biological diversity and the natural state. Water utility is related to water quality conservation. Amenity to people is a new but important concept for the evaluation. This is also related to water quality and moreover, can be used for integrated water environment evaluation. Finally, regional culture on water means the role of a river for regional activity and peoples’ life-styles. By considering the relation between the water environment and its regional society, local governments can establish a partnership with people for environmental protection activities.

### 11.2.2 Evaluation Criteria

Five items were specified as evaluation criterion that take into account the water environment, as shown in Table 11-1. They are based on viewpoints with the natural environment and human activity as two primary factors. Each criterion is by no means independent of the others; each is partially interconnected with the others.

### 11.2.3 Individual Indicators

In order to show the indicators in a consolidated form, each evaluation criterion has the following specific individual indicators as shown in Tables 11-2 to 11-6. Each individual indicator is scored from one to five according to its extent of suitability to the criteria. Some individual indicators would be

**Table 11-1.** Evaluation criteria

<b>Environmental factors</b>	<b>Evaluation criteria</b>	<b>Definition of criteria</b>
Natural state	Does the natural state remain?	Evaluation of the extent to which the shoreline environment has maintained its original, natural state
Biological diversity	Are there many kinds of organisms?	Evaluation of biological diversity and living habitats in the shoreline environment
Water usage	Is water quality sufficient for peoples' usage?	Evaluation of water usability in terms of water quality
Amenity to people	Do people feel comfortable?	Sensory evaluation of the beauty and landscape of the shoreline environment
Regional culture on water	What are the regional cultures and activities surrounding the river?	Evaluation of the degree of relationships between the shoreline and the living people

difficult to measure in an actual survey site. Therefore, the average scores of the individual indicators is used for the integrated evaluation of each evaluation criteria. The individual indicator can be replaced by a more suitable indicator according to the characteristics of the survey site, if necessary.

#### (1) *Natural State*

Water flow and construction in the river are mainly investigated in order to evaluate the natural state (Table 11-2).

#### (2) *Biological Diversity*

Presence of plants, birds, small animals, fish and benthos as well as their habitat are investigated for the evaluation of biological diversity (Table 11-3).

#### (3) *Water Usage*

Water usage is evaluated through simple water quality tests related to COD (BOD), SS, coliforms, ammonia and DO (Table 11-4).

#### (4) *Amenity to People*

Investigation is applied to evaluate the amenity to people by making full use of the five senses (Table 11-5).

#### (5) *Regional Culture on Water*

Regional culture is evaluated through the investigation of relations between the river and regional people (Table 11-6).

**Table 11-2.** Indicators of natural state

<b>Individual indicators</b>	<b>Description of individual indicators</b>
Water quantity	Abundance of water flow without storm conditions; large amount or small amount
Percentage of natural current	Percentage of water flow with natural source to total flow; large or small
Embankment conditions	Materials and forms of river wall; natural or artificial
Barriers to movement of water organisms	Presence of structural obstacles to the movement of living organisms; many or few
Water cycle	Abundance of intake or discharge of the river water; flow amount taken in from or taken out to the outside of the basin

**Table 11-3.** Indicators of biological diversity

<b>Individual indicators</b>	<b>Description of individual indicators</b>
Habitat surroundings	Presence of habitat space around the river; plenty or little
Plants	State of aquatic and shoreline plant growth; rich or poor
Birds and small animals	Presence of birds and small animals or their habitat conditions; plenty or little
Fish	Presence of fish species and their habitat conditions; plenty or little
Benthos	State of river bottom and species of organisms living there; rich or poor

**Table 11-4.** Indicators of water usage

<b>Individual indicators</b>	<b>Description of individual indicators</b>
COD or BOD	Amount of organics; polluted or clean
Transparency	Amount of suspended solids; turbid or clean
Fecal coliforms	Microbial safety of water in terms of drinking and bathing; present or absent
Ammonia nitrogen	Water safety for drinking indicating manmade pollution; large or small amount
Dissolved oxygen	Amount of oxygen necessary for species of organisms living in water; enough or deficient



**Table 11-5.** Indicators of amenity to people

<b>Individual indicators</b>	<b>Description of individual indicators</b>
Landscape	Relationship of surrounding environment to shoreline environment; harmonious or not
Visual amenity	Amount of garbage; very much or absent
Tactile amenity	Condition of riverbed and water; comfortable or uncomfortable
Olfactory amenity	Quality and intensity of aroma along shoreline; pleasant or foul
Aural amenity	Quality and intensity of sounds audible at shoreline; pleasant or noisy

**Table 11-6.** Indicators of regional culture on water

<b>Individual indicators</b>	<b>Description of individual indicators</b>
Cultural resources	Presence and use of tangible and intangible historical or cultural resources related to the river; rich or poor
Approach to shoreline	Ease and safety of approach to shoreline for people; easy or difficult
Use by residents	Extent of use of shoreline by residents for leisure and walking; often or seldom
Industrial use	Extent of water use for farming, fishing, manufacturing and water supply; a great deal or little
Environmental activities	Resident clean up activities and environmental education; active or poor

### 11.2.4 Integrated Evaluation

Each evaluation criteria is basically described in the scores of one, three, and five as shown in Table 11-7. A score of two or four means an evaluation midway between a score above or below these scores. The scores of the individual indicators are averaged to obtain the evaluation criteria score. The significance of the average score of each evaluation criteria is roughly as follows.

The scores of criteria are also described by using a pentagon chart in order to clearly show the characteristics of the surveyed site. The chart can be used for describing not only the present situation but also the results of the past activities by showing changes in the chart before and after certain activities.

**Table 11-7.** Score system for integrated evaluation

Evaluation criteria	Score				
	5	4	3	2	1
1 Natural state	River is preserved in its original natural state with no evidence of human activity	River shows some signs of human activity	Considerable evidence of human activity		
2 Biological diversity	Water environment is biologically diverse	Water environment capable of supporting life	Water not easily used	Water environment inhospitable to living organisms	
3 Water usage	Safe and pure water suitable for drinking, cooking and bathing	Water suitable for swimming and recreation	Shoreline is an unappealing space	Shoreline is appealing place for walking	
4 Amenity to people	Shoreline area has appeal as place for bathing, recreation, walking, etc.	River is a point of interest to local residents	Relationship between river and local residents is weak		
5 Regional culture on water	River has strong social and cultural relation to local residents				

## 11.3 Application of the Water Environment Quality Index

### 11.3.1 Use by Local Residents and NPOs

Survey zones for the evaluation of river water environments using the index normally stretch over tens to several hundred meters along rivers. People who are willing to use the water environment index are to evaluate items within the survey zone and calculate scores for evaluation criteria. Local residents and NPOs can expect to obtain the following results and apply the water quality index in the following manner when they perform a water environment index survey:

- To perform a pre-survey to learn about (or discover) various conditions in the river basin
- To have opportunities to collaborate with government and other entities by gathering public administrative materials and information from various organizations

- To maintain and preserve the water environment and clarify those items that need to be improved by evaluating the various specific water environment index criteria
- To investigate the background of specific water environment index criteria evaluations and perform a root cause analysis that yields insights into how to improve the water environment
- To evaluate a river from upstream to downstream in order to learn the characteristics of that river
- To distribute survey result data to expand the network of water environment preservation activities

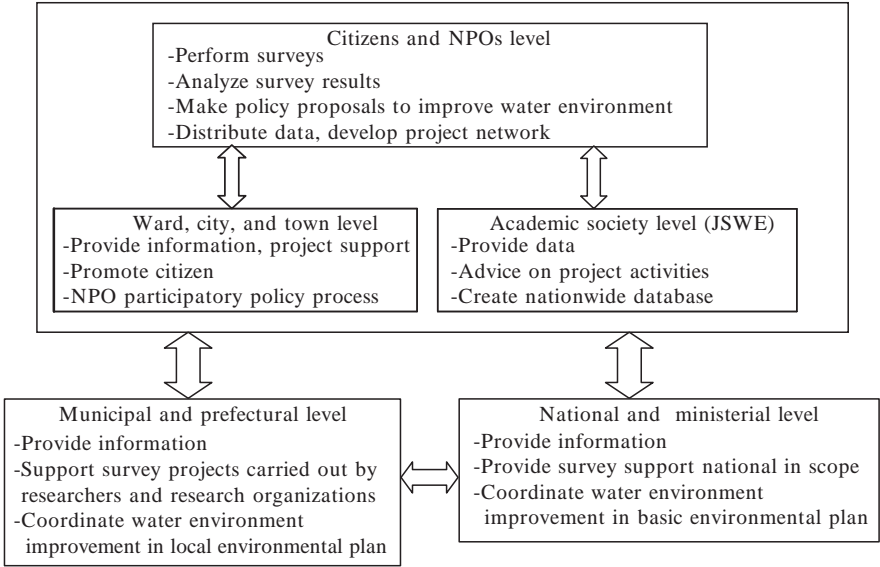
### **11.3.2 Use by Local Governments**

In recent years, the participation of local citizens has become a major component of water environment administration efforts. For this reason, the water environment index has the following applications as a component of policy planning by local governments:

- To provide a tangible opportunity to promote and develop a participatory and cooperative policy process by supplying citizens with information and other resources for survey activities.
- Survey results based on the water environment index criteria makes multi-faceted studies of water environment policy improvement possible.
- To use the water environment index and formulate a water environment policy using numerical targets makes policy details easy for citizens and NPOs to understand.

### **11.3.3 Cooperation Among NPOs, Administration and Water Environment Specialists**

In order for citizens and NPOs to use the water environment index to promote environmental preservation, the cooperation of citizens/NPOs, national/local governments, and specialists on water environments is essential, as shown in Fig. 11-3. Academic societies such as the Japan Society on Water Environment can take advantage of the fact that it is a nationwide organization of specialists providing advice and other support for projects around the country, and build a database of survey results carried out around the country. Municipal, prefectural, and national



**Fig. 11-3.** Schematic diagram of cooperation among NGOs, administration and academic specialists for the evaluation of river environment using the index

government bodies need information and project support from a variety of perspectives.

### 11.3.4 Surveying Flow

Survey flow is illustrated in Fig. 11-4. A survey begins with formulating a survey plan followed by a pre-survey and onsite survey, and concludes with a post-survey to bring the results together. The process assumes that surveys are continued at the survey site until sufficient information is obtained (that is, until the data set is complete) to evaluate the water environment. Survey frequency, as stated below, is assumed to be four times a year.

### 11.3.5 Evaluation of River Environment

The results of the index values can be used to make a radar chart as is shown in Fig. 11-5 for a better understanding of river characteristics. The radar chart can show environmental conditions and the characteristics of rivers therefore suggesting ideas for future measurements.

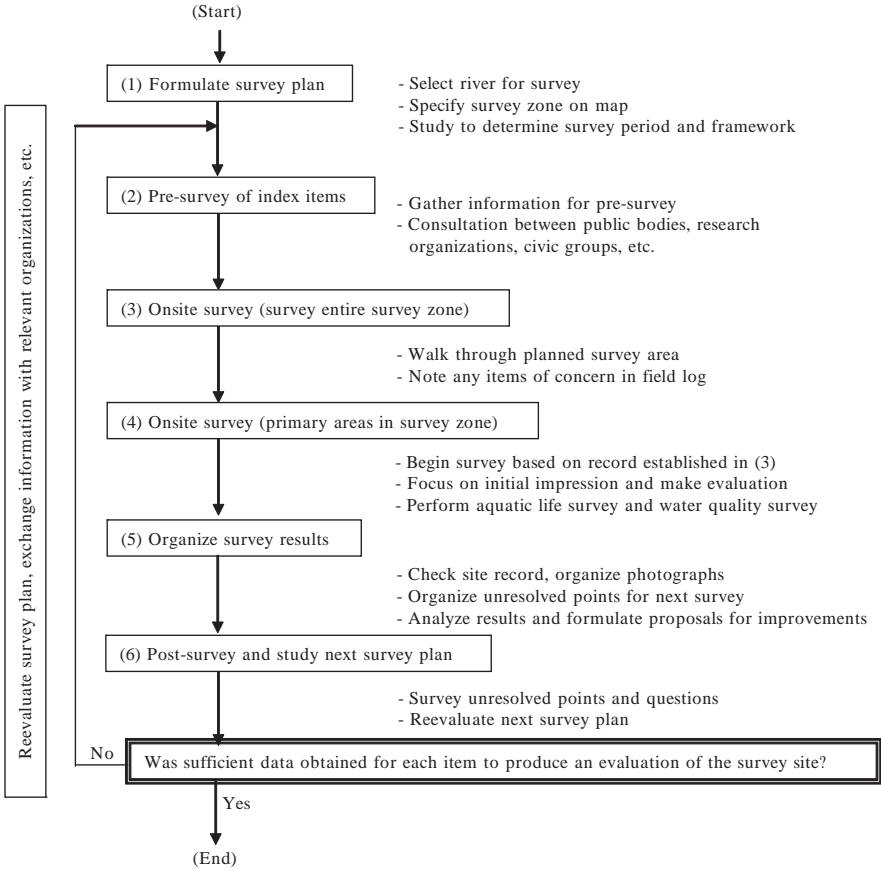


Fig. 11-4. Overall survey flow diagram

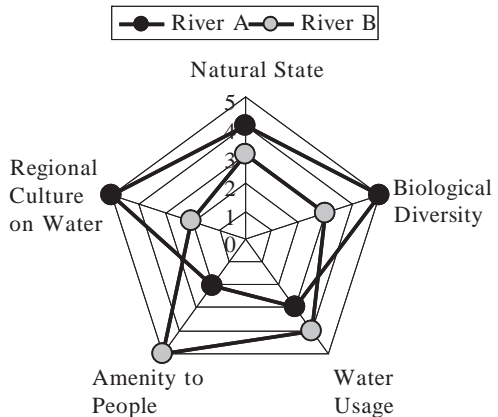


Fig. 11-5. Evaluation using a radar chart

## **11.4 Applying the Water Environment Quality Index by Communities**

### **11.4.1 Community Ability to Monitor Water Environment Quality**

In Japan, there have been several successful community actions to succeed in protecting water environments against pollution caused by rapid industrialization. Some of these actions were guided and supported by scientists, and in those cases, scientists monitored the water quality themselves to identify and show the pollution levels of problematic areas.

Since the improvement of easy test kits, it has become much easier for local residents, students and NPOs to check water quality. So, many groups have started to measure the water quality of areas where they have fears of pollution. The project named “Nationwide Simultaneous Survey of Familiar Water Environment”, the biggest project concerned with water monitoring in Japan, started in partnership with several community based groups and the Ministry of Land, Infrastructure and Transport in 2004. Participants and monitoring points are increasing year by year. In the case of 2007, water quality levels from more than 3,000 monitoring points were tested with the participation of approximately 9,000 people (Fig. 11-6). The executive committee of this project prepared a manual, and held guidance sessions with communities in order to improve the accuracy of monitoring data with the easy test kits. The huge amount of data measured by participants was gathered and presented on a web site as the water quality map of Japan (<http://www.japan-mizumap.org/003main/007outline/index.htm>).

The Biodiversity Center of the Ministry of Environment has produced maps showing the distribution of familiar insects, plants and so on (<http://www.biodic.go.jp/>). Every year, several thousand people provide necessary information to create the maps.

Besides the nationwide activity mentioned before, many small activities concerned with water environment protection take place in local areas by community based groups. These recent community activities give us an expectation that a community will be able to use the water environment quality index perfectly. However, to have a very broad perspective of water environments is not typical for most community members. On this point, the application of the water environmental quality index might be one kind of challenge for the field evaluation of water environments in Japan.



**Fig. 11-6.** Local action for nature observation near a river. **a** Participants listen to an explanation by a plant specialist. **b** Participants are looking for fish and benthos according to the guide of specialist

#### 11.4.2 Case Study for Trial Use of the Index

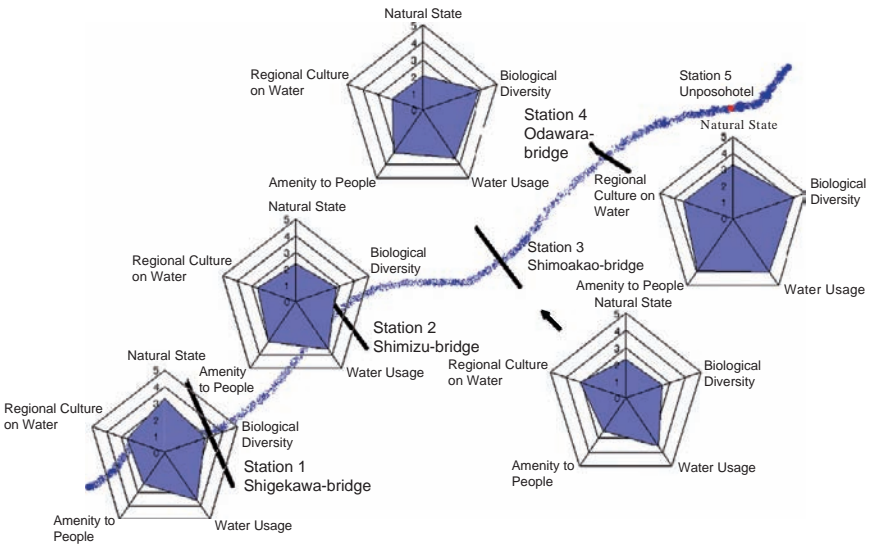
After making a tentative manual for using the water environment quality index, several community groups have begun to use it. In 2007, more than 28 stations were surveyed, including a trial by high school students in Yamanashi prefecture (Fig. 11-7).

This student group has continued to monitor the water quality of the Omo River, located near their school. After continuous monitoring for more than 8 years, they now know that the nitrate concentration of this river is comparatively high to other rivers in the prefecture.

They want to discover the reason and the effects of the nitrate pollution. In order to do this, they have tried using the index in order to solve their questions. They selected five surveillance stations from downstream to upstream, as shown in Fig. 11-8. Other than the upper station in the mountainous area (station 5), the final shapes of the pentagon charts were not significantly different from each other because the length of this river is not very long and the land use along it is almost identical. However, students were able to confirm that the water pollution was caused by human activity and began to understand the different situations of each station in this river. A note written by the students was interesting and the description pointed out the findings obtained during the survey. The note is also an important record to evaluate the water environment. This case may also be an example to show the possibility of this index as a useful tool for environmental education.



**Fig. 11-7.** Surveillance stations. **a** Middle stream station number 2, **b** Upstream station number 5



**Fig. 11-8.** Final pentagon chart in Omo River at summer of 2007 by students of natural science club of HIKAWA High School

### 11.5 Summary

We are now in what is often called the environmental century. We believe that the water environment quality index is a valuable tool for building a healthy water environment and when effectively promoted in every region around the country, can achieve tangible results for the whole country. The primary use of the water environment quality index is as a tool of the



public and NPOs in partnership with public administrators for enhancing activities aimed at ascertaining the conditions of the local water environment, investigating the factors that determine those conditions, and improving the water environment.

The water environment quality index proposed here mainly targets downstream river areas that are closely linked to the lifestyle of people in rural and urban areas. The water environment evaluated will include not only specific points but will also take into account the river's connection to the surrounding water environment in the watershed.

We hope that public administrators will include the index in their measures to improve the water environment on the basis of watersheds and will provide evaluations of a water environment to the public and NPOs that are easy to interpret. The concept of environmental improvement activities using the index should be coordinated with local environmental planning.

It must be noted that conserving water environment quality requires an inclusion of the surrounding general public water zone and that an index for these water zones is a required topic for future study.

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