Journal of Asian Architecture and Building Engineering

ISSN: 1346-7581 (Print) 1347-2852 (Online) Journal homepage: https://www.tandfonline.com/loi/tabe20

Conservation Management of Historical Assets Through Community Involvement A Case Study of Kanazawa Machiya in Japan

Minyoung Jang, Sung-Hyun Park & Myeong-Hun Lee

To cite this article: Minyoung Jang, Sung-Hyun Park & Myeong-Hun Lee (2017) Conservation Management of Historical Assets Through Community Involvement A Case Study of Kanazawa Machiya in Japan, Journal of Asian Architecture and Building Engineering, 16:1, 53-60, DOI: 10.3130/jaabe.16.53

To link to this article: https://doi.org/10.3130/jaabe.16.53

Published online: 24 Oct 2018.

Conservation Management of Historical Assets Through Community Involvement
A Case Study of Kanazawa Machiya in Japan

Minyoung Jang*[1], Sung-Hyun Park[2] and Myeong-Hun Lee[3]

[1] Ph.D. Student, Department of Frontier Architectural and Urban Engineering, Hanyang University, Korea
[2] Research Professor, Institution for Marine & Island Cultures, Mokpo National University, Korea
[3] Professor, Department of Urban Planning & Engineering, Hanyang University, Korea

Abstract

Under the urban architecture paradigm for urban regeneration, the scope for research related to historical assets has broadened. Historical assets consist of private and public goods. The management responsibility of managing private goods is allocated to individuals, which has complicated the relationships among stakeholders and led to dissipation of assets and conflicts. To address this issue, this study focuses on community involvement in the conservation management of Kanazawa machiya, a Japanese traditional architecture style.

This study was conducted in three phases. The first phase involved classification of the types of conservation management activities and the local actors related to Kanazawa machiya. In the second phase, the relationship between different stakeholders and the characteristics of conservation management activities were investigated using the DEMATEL method. Finally, it drew on the Power-Interest Grid to examine stakeholders' performance capability.

The case study of Kanazawa machiya indicates that the building-up of the conservation management system involves the local actors and development of their activities. It also shows an incremental shift away from a government-led system to one based on government-citizen cooperation. This study demonstrates the necessity of community involvement and civic activities for the conservation management of historical assets.

Keywords: privately owned historical assets; conservation management; community involvement; DEMATEL; stakeholder analysis

1. Introduction

1.1 Background and Purpose

Urban heritage, including its tangible and intangible components, constitutes a key resource in enhancing the liveability of urban areas and fosters economic development and social cohesion in a changing global environment. As the future of humanity hinges on the effective planning and management of resources, conservation has become a strategy to achieve a balance between urban growth and quality of life on a sustainable basis (UNESCO, 2011). As a conservation object has expanded from "units" to "environments," research scope, which is primarily discussed within the limitations of heritage protection and architecture, has also extended to the field of urban planning. Thus, it is necessary to build integrated systems between heritage preservation and urban planning. Urban regeneration has become a primary policy concern, not only in major Asian cities such as Tokyo, Beijing, and Seoul, but globally, and historical assets now receive much attention as a factor for regional revitalization.

This paradigm shift demands a new approach that ensures the coexistence and utilization of historical assets in civil society and is distinct from the preservation method. However, historical assets comprise both private and public goods; thus, administrative projects and policies focused on public goods are limited in comprehensive conservation management. In other words, public value needs to be recognized in terms of privately owned historical assets, wherein management responsibility is allocated to individuals. In addition, conservation progress and methods must be based on community involvement.

Among recent studies concerning the public value of historical assets, Kang (2013) noted the importance of attaching value to "commons" and participating in the conservation process of non-designated heritage. In this process, conservation actors are categorized as different types, namely the "citizen-initiative,"

*Contact Author: Minyoung Jang, Ph.D. Student,
Department of Frontier Architectural and Urban Engineering, Hanyang University,
222 Wangsimni-ro, Seoungdong-gu, Seoul, 04763, Korea
Tel: +82-2-2220-4418
E-mail: myjang@hanyang.ac.kr
(Received April 4, 2016 ; accepted November 18, 2016)
DOI http://doi.org/10.3130/jaabe.16.53

"public-driven," and "mutual assistance" types. English Heritage (2008) and Edurado (2012) discuss managing changes for significant places and adaptive reuse by regarding the public value of historical assets. The development of a conservation management system is a process in which local actors come to understand the value of assets, and in so doing, change their perspectives and participate in activities.

In this regard, the purpose of this study is to identify the characteristics of the activities and actors involved in the conservation management of privately owned historical assets. The sustainable conservation management process demands the participation of a range of stakeholders and their diverse activities based on locality. Thus, this study, which reviews the status of and management system for historical assets, contributes towards advancing the conservation management process and governance initiatives.

1.2 Research Scope and Methods

This study investigates the case of Kanazawa machiya (Fig.1.)[1]. Kanazawa is a representative castle town located in Ishikawa Prefecture, Japan. Kanazawa machiya, as a living space for dwelling and working, have become part of the cultural landscape of Kanazawa. This asset has historical value and local identity by showing architectural technique and living culture.

In Kanazawa, the city government has generally enacted an ordinance, developed plans, and implemented projects for heritage. However, recently, with the conservation of Kanazawa machiya becoming a serious social problem, diverse actors, including experts, residents and civic groups launched a range of activities. Kanazawa machiya are mostly privately owned goods; thus, a review of the conservation management process and actors' roles suggests political implications for a sustainable conservation management system at the community level.

Fig.2. illustrates the way in which this study was conducted. The methods of the study are as follows: 1) A literature review was conducted to understand and classify types of conservation management activities and the local actors related to Kanazawa machiya. 2) DEMATEL[2] was employed to investigate the characteristics and relationships between conservation management activities. 3) A stakeholders' Power-Interest Grid[3] was developed to determine actors' performance capabilities.

Fig.1. Kanazawa Machiya

In this study, a literature review, field research, expert questionnaire surveys, and interviews were conducted. The questionnaire surveys for DEMATEL and the Power-Interest Grid were conducted from September 17–25, 2015 through face-to-face and online methods. The DEMATEL analysis demands the selection of survey targets who closely engage in conserving and managing Kanazawa machiya. The 21 respondents[4] comprised 2 city officials, 18 experts (professors and architects) and 1 engineer. Semi-structured interviews were conducted with 10 stakeholders during the "Kanazawa Machiya Junyu"[5] event in September 2015.

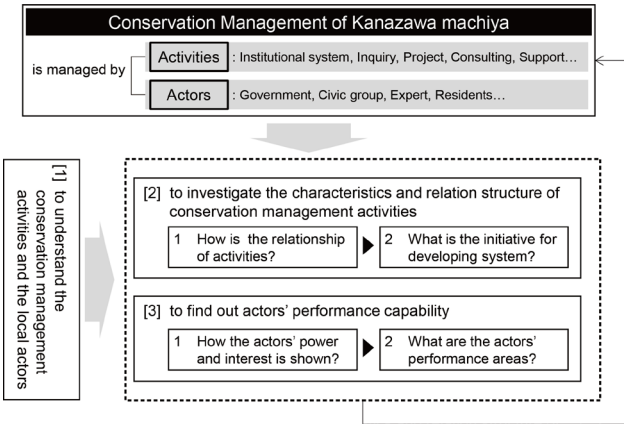

Fig.2. Research Flow

2. Research Field: Kanazawa Machiya

2.1 Public Policy and Civic Engagement

The government-led management system had tended to overlook Kanazawa machiya, most of which were non-designated assets, in terms of protection. Thus, about 2,220 traditional houses—machiya—have been lost over the span of eight years (decreasing from 10,900 houses in 1999 to 8,700 houses in 2007). This problem resulted from the lack of policies on Kanazawa machiya, a difference in awareness of the owners' management and repair responsibilities between generations, and inheritance (Kanazawa city, 2013). To conserve machiya, owners and users need to understand and adhere to regulations regarding buildings. Moreover, it is effective for the succession and utilization of machiya that people who understand the inherent value of these buildings become users. Experts such as professors and architects within Kanazawa city recognized the problem and asked the city government to develop countermeasures for conserving and managing Kanazawa machiya.

In 2005, the city government entrusted various investigation activities to the experts, namely the

Kanazawa Machiya Succession and Utilization Research Group. In 2007, the city government commenced the development of a management system by formulating the "Kanazawa Machiya Succession and Utilization Master Plan." An approach to Kanazawa machiya is based on the aspect of "regeneration and utilization," which contrasts with the "preservation" approach of existing policies to heritage. Among others, the city government supports and subsidizes the "Kanazawa Machiya Regeneration and Utilization Pilot Project," and "Kanazawa Machiya Distribution and Coordinator Project." In 2013, the "Kanazawa Machiya Conservation and Utilization Ordinance" was established as an institutional framework for continuous policy enforcement based on collaboration among the city government, citizens, owners and users, and businesses.

Civic activities began with the Kanazawa Machiya Succession and Utilization Research Group, which is composed of architects, technical engineers, professors, students, and machiya residents. They developed a database (including information such as a machiya's condition, appearance, and civic awareness) through scientific inquiries conducted over approximately five years, and networked with experts, real estate agents, and owners and users. By incorporating a non-profit organization (NPO), the research group gained the status of an intermediate organization and played a key role in conserving and managing machiya through the exchange of opinions among stakeholders. In particular, the NPO manages public relations activities both inside and outside the local community by hosting an event, namely the Kanazawa Machiya Junyu. NPO-based civil activities offer opportunities to change the awareness of machiya owners and citizens regarding Kanazawa machiya as historic assets.

Furthermore, several civic groups are involved in Kanazawa machiya. For example, technical engineers and machiya designers established LLP Kanazawa Machiya, which managed renovation businesses such as the regeneration project and distribution coordinator project. Kanazawa Machiya Dormitory Corporation, which comprises four professors, implemented the utilization project using empty machiya. They provide machiya in the form of a share house for university students or a share atelier for young artists, creators, and designers. In addition, there are a machiya residents' club and volunteer activities (Okuriie project) for the migration of elderly residents and cleaning of empty houses.

2.2 Classification of Activities and Actors Related to Kanazawa Machiya

Since the research group's investigation activities in 2005, local actors have implemented a wide range of conservation management activities. To investigate the status of conservation management of Kanazawa machiya, this study analyzed the characteristics of each activity and actors' performance capabilities. First, this study examined the elements of activities and related actors for the conservation management of Kanazawa machiya. For this, it reviewed the Kanazawa Machiya Succession and Utilization Master Plan (2008), the Kanazawa Machiya Conservation and Utilization Policy (2013), the Kanazawa Machiya Conservation and Utilization Ordinance (2013), and other administrative documents related to machiya projects. In the documents, activities are classified according to the problem-solving direction surrounding machiya and objectives of the projects and policies[6]. In this study, seven types of activities were classified according to the characteristics and categories of each activity as follows: institutional system, scientific inquiry, civic awareness program, regeneration project, coordination/consulting, support, and training/education (Table 1.-a). Local actors were also reclassified into five types according to actors' roles and characteristics based on legal classifications (city government, citizens, owners and users, businesses) as follows: the government, NPO, real estate agents, technical engineers, and owners and users (Table 1.-b). The status of each actor's participation was derived from administrative data and supplemented with the interview results.

The "institutional system (C1)" includes the master plan, ordinance, and policies. "Scientific inquiry (C2)" is mainly the NPOs' investigation project, which is entrusted by and receives support from the city government. The "civic awareness program (C3)" is an activity that raises the awareness of the next generation of citizens regarding historic values and the importance of succession. It includes events and public relations activities hosted by the NPO. Residents and users of machiya actively participate in Kanazawa Machiya Junyu by offering their houses as event sites and machiya shops. The aim of the "regeneration project (C4)" is to enhance livability and promote the practical uses of machiya. The government and NPO that are the key players in this project, and there is consent and participation from technical engineers, who use traditional techniques, and machiya owners and users. The NPO manages "coordination/consulting (C5)" with the cooperation of real estate agents and the city government's support. The NPO matches machiya owners with users and offers expert knowledge to revitalize the distribution and purchase of machiya. "Support (C6)" refers to the government's financial and technical support. If a machiya owner claims a subsidy through the submission of a scheme, blueprint, estimate sheet, and photos, the committee evaluates the subsidy rate and maximum amount depending on building type and objects. The committee consists of four professors who meet twice a year. If a machiya receives a subsidy from the city government, it cannot be demolished for 15 years. "Training/education (C7)" is an activity of the city government and Kanazawa Institute of Traditional Crafts to inherit engineers' structural methods and find talent.

Table 1. Conservation Management Activities for Kanazawa Machiya and Local Actors' Participation

a. Activities	Contents	b. Actors' Participation*				
		Government	NPO	Real estate agents	Technical Engineers	Owners & Users
Institutional system (C1)	Master plan (succession and utilization of machiya), ordinance, districts	○				
Scientific inquiry (C2)	Research, survey, questionnaire, present condition investigation	○	○			
Civic awareness program (C3)	Events, public relations, certification system, seminar, exchange meeting, symposium		○			○
Regeneration project (C4)	Renovation project, refresh project, pilot project	○	○		○	○
Coordination/Consulting (C5)	Machiya information bank, distribution consulting project	○	○	○	○	
Support (C6)	Subsidy, grant, technical assistance	○				
Training/Education (C7)	Kanazawa Institute of Traditional Crafts, cultivation of talented individuals	○			○	

*Classification of local actors: ① Government: Kanazawa city, Ishikawa Prefecture, Ministry of Land, Infrastructure, Transport and Tourism; ② NPO: Kanazawa Machiya Houses Association; ③ Real estate agents; ④ Technical Engineers: Actors associated with design, constructing, and other activities for conserving machiya (Kanazawa Institute of Traditional Crafts, LLP Kanazawa Machiya); ⑤ Owners & Users: Actors with rights to own and use Kanazawa machiya

As noted in this section, conservation management activities for Kanazawa machiya tend toward regeneration and utilization. The government and NPO seem to be the principal actors, however, the direct or indirect engagements of local actors, real estate agents, technical engineers, and owners and users is also important (Table 1.-b).

3. Conservation Management Activities for Kanazawa Machiya

3.1 Analysis Framework

This study employed the structural model DEMATEL method to determine the status of conserving and managing Kanazawa machiya. DEMATEL was employed as an objective method to confirm the effect of each element and explore the relation between complex problems. DEMATEL investigates targets that are closely related to the issues. Questionnaire surveys with a matrix sheet were conducted to analyze the data and determine the relationships between seven activity elements (C1–C7, Table 1.-a). The row of the matrix shows "cause" and the column shows "effect." The survey question asked the extent to which each element influences the others. The respondents were scored on a five-point scale (0, 1, 2, 3, and 4) on the pairwise comparison matrix (0: No influence, 1: Low influence, 2: Medium influence, 3: High influence, 4: Very high influence). In addition, the degree of importance of activity elements was investigated using a five-point scale to compare the results of DEMATEL, which indicates the current characteristics of conservation management activities.

3.2 Relation Structure of Conservation Management Activities: DEMATEL Results

DEMATEL was employed to analyze the relation between elements alongside the process in Table 2., using the sum of rows and columns of the total-relationship matrix (T) as calculated from the surveys. The sum of rows (D) of the total-relationship matrix (T) indicates the degree of effect or cause for each element in the whole problem. The sum of columns (R) is the reverse-effect degree or degree of cause for related problems through the collection of all problems. The sum of D and R, the prominence, shows the degree which element C plays a role in the whole problem without reference to cause and effect. The subtraction of R from D, the relation, shows that element C became the "cause" or "effect" in the whole problem. If (D-R) is positive, element C affects other elements as the dispatcher. If (D-R) is negative, element C is influenced by other factors as the receiver. A directed graph can be drawn to visualize the relation structure of the problems based on the prominence (D+R) and the relation (D-R).

From 21 responses regarding conservation management activities for Kanazawa machiya, the total-relationship matrix (T), prominence (D+R) and relation (D-R) were calculated (Table 3.-a). The regeneration project (C4) ranked both D (9.284) and R (9.534) first among 7 activity elements. This shows that C4 has a serious status in conservation management activities.

Fig.3. is a directed graph showing the status and direction of each activity element. It uses the value of (D+R) and (D-R) from Table 3.-a-(2) as x–y coordinates. The strongest prominence (D+R) was for the regeneration project (C4, 18.818), followed by support (C6, 17.499), and the institutional system (C1, 17.472). The most prominent dispatcher elements (D-R<0) were scientific inquiry (C2, 1.100) and training/education (C7, 0.206). The most prominent receiver elements (D-R<0) were support (C6, -0.673) and coordination/consulting (C5, -0.366).

Table 2. Analysis Process and Methodology of DEMATEL

	Step	Methodology	Formula
1	Calculating the direct-influence matrix using scores	• To obtain n×n matrix A from the expert's questionnaire	$A = \begin{bmatrix} a_{11} & \cdots & a_{1n} \\ \vdots & \ddots & \vdots \\ a_{n1} & \cdots & a_{nn} \end{bmatrix}$
2	Normalizing the direct-influence matrix (X)	• Generalization: to obtain the average matrix by averaging all the experts' scores • Normalization Matrix (X): to seek the sum of each row and normalize it after dividing the sum of the rows by the largest value	$X = \frac{1}{\max \sum_{j=1}^{n} a_{ij}} \cdot A, i, j = 1, 2, \cdots, n$
3	Attaining the total-relationship matrix (T)	• The total-relationship matrix (T) indicates only direct relations • A continuous decrease of the indirect effects of issues along with the powers of matrix X guarantees convergent solutions to the matrix inversion	$T = X + X^2 + \cdots + X^m = X(1 - X)^{-1}$ $T = [t_{ij}]_{n \times x}, i, j = 1, 2, \cdots, n$
4	Analyzing the results	• The sum of rows (D) for the total-relationship matrix (T) indicates the degree of effect or cause for each issue in the whole problem • The sum of columns (R) is the reverse-effect degree or degree of cause for related problems through the collection of all problems	$D = \left[\sum_{i=1}^{n} t_{ij}\right]_{n \times 1} = [t_i]_{n \times 1}$ $R = \left[\sum_{j=1}^{n} t_{ij}\right]_{1 \times n} = [t_j]_{n \times 1}$

Table 3. Result of DEMATEL/Importance of Conservation Management Activities

	a. DEMATEL											b. Importance		
	(1) Total-relationship Matrix							(2) Center and Cause						
	C1	C2	C3	C4	C5	C6	C7	D	R	D+R	D-R	Average	σ	Rank
C1	1.178	1.102	1.225	1.430	1.284	1.354	1.096	8.669	8.804	17.472	-0.135	4.143	0.981	4
C2	1.275	0.938	1.175	1.369	1.256	1.292	1.058	8.365	7.265	15.629	1.100	3.810	0.957	7
C3	1.258	1.044	1.047	1.365	1.239	1.305	1.037	8.295	8.178	16.473	0.116	**4.333**	**0.642**	**1**
C4	1.424	1.163	1.308	1.367	1.392	1.459	1.173	**9.284**	**9.534**	18.818	-0.250	4.190	0.794	2
C5	1.250	1.039	1.178	1.367	1.103	1.304	1.031	8.272	8.638	16.910	-0.366	3.952	0.950	6
C6	1.282	1.041	1.187	1.400	1.250	1.181	1.072	8.413	9.086	17.499	-0.673	4.143	0.888	3
C7	1.136	0.937	1.058	1.237	1.114	1.191	0.850	7.523	7.316	14.839	0.206	4.000	0.926	5

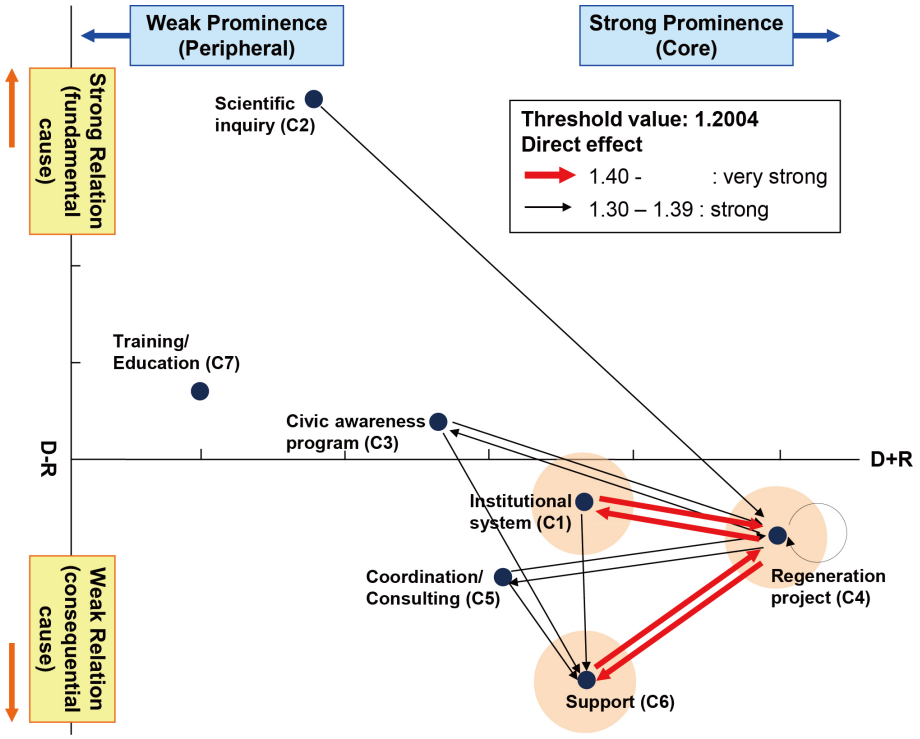

Fig.3. Directed Graph of Conservation Management Activities Related to Kanazawa Machiya

In the directed graph, the regeneration project (C4) is indicated as a key activity in the current situation for conserving and managing Kanazawa machiya. The regeneration project is closely connected to most activity elements, and it specifically mutually influences the institutional system (C1)

and support (C6). Scientific inquiry (C2) is shown as a fundamentally conducted activity, while the institutional system, civic awareness program, regeneration project, and coordination/consulting are concluded to be connected with support (C6) in the end. The relation structure shows that the regeneration project (C4), institutional system (C1), and support (C6) should be considered within a context, because they have complex interactions, but training/education (C7) could be discussed independently.

Table 3.-b provides results for the evaluation of the degree of importance of each activity element for conserving and managing Kanazawa machiya. Respondents evaluated activities in the order of the civic awareness program (C3), regeneration project (C4), and support (C6). These results differ from the results of DEMATEL, which shows the current characteristics of conservation management activities. Specifically, the civic awareness program (C3) is evaluated as the most important activity, but ranked fifth in prominence (D+R) according to DEMATEL. Its relationships with other elements—except the regeneration project (C4) and support (C6)—were analyzed as insignificant. In other words, even though the civic awareness program is the most important aspect to consider for the conservation management of Kanazawa machiya, it does not show strong prominence or a strong relationship with other activities. This indicates the difference between the approach and current system of conservation management activities. To narrow the gap, policy initiatives and tasks are needed.

4. Actors' Performance Capabilities for the Conservation Management of Kanazawa Machiya

4.1 Analysis Framework

This study conducted a stakeholder analysis to determine the perspectives, attitude, and performance areas of local actors involved in conservation management activities for Kanazawa machiya. A stakeholder analysis was conducted to make recommendations for the direction of policy, planning and conflict resolution. Specifically, the Power-Interest Grid was employed to identify rational countermeasures for current issues by classifying them into four categories based on power and interest. Regarding the criteria for categorization, "power" means the level of authority to derive the nature of a stakeholder and its affect in the implementation of policy. The criterion of "interest" means the level of stakeholders' concerns and understanding regarding policies and activities. The four categories are as follows: key player (high power and high interest), subject (limited power and high interest), crowd (limited power and little interest), and context setter (high power but little interest).

This study conducted a survey on five stakeholder groups (the government, NPO, real estate agents, technical engineers, and owners and users; Table 1.-b) involved in conservation management activities for Kanazawa machiya. According to each actor's capability, power and interest were evaluated on a seven-point Likert scale from "1 (weak)" to "7 (very strong)." The average values of power and interest are used as the x–y coordinates of the Power-Interest Grid.

4.2 Stakeholder Analysis: Power-Interest Grid

Table 4. provides results for the evaluation of power and interest for five stakeholder groups. The evaluation range of each actor's power and interest was from 4.5 to 6.5 points. To compare actors' status and capabilities relatively, actors' performance areas were marked on the quadrant graph based on the average value of each criterion (Fig.4.).

The results of the analysis reveal the government as a key actor that plays a leading role and has strong decision-making authority. In other words, the government is a player that accomplishes the objectives of activities and fosters stakeholders' cooperative relations in the early stage of planning. The NPO is shown to provide important information as a subject with low power but high interest. Technical engineers and real estate agents remain at the level of the crowd, and share information through general communication. Owners and users were identified as context setters with a greater influence on conservation management, but lack of interest. Thus, they need to be considered as an important stakeholder to be converted into a player for sustainable conservation management advancement.

Table 4. Actors' Characteristics and Classification

	Power	Interest	Category
Government	5.810	6.190	A
NPO	4.810	6.286	B
Real estate agents	4.905	4.905	C
Technical engineers	4.762	5.429	C
Owners & Users	4.762	5.429	D
Average	5.190	5.648	

A: Player, B: Subject, C: Crowd, D: Context Setter

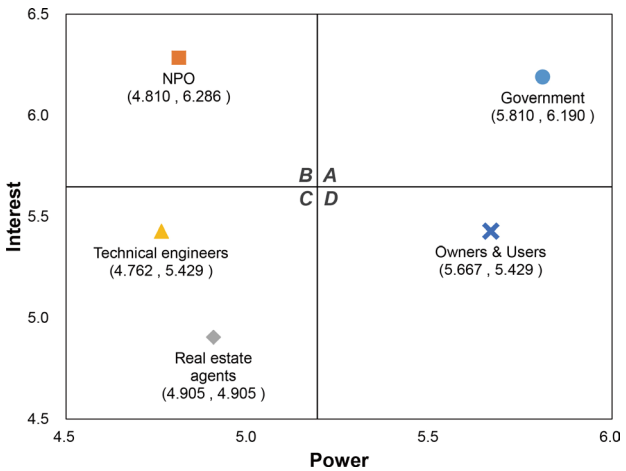

Fig.4. Actors' Performance Area (Power-Interest Grid)

4.3 Results

The analysis revealed the government as a key actor that takes charge of various policies and projects in the conservation management system of Kanazawa machiya. However, the NPO was identified as having the highest interest in Kanazawa machiya. The NPO consists of professors, designers, and engineers. They have implemented practical projects and built network relations with diverse stakeholders. Furthermore, they provide expert information and knowledge, and are involved in various activities such as consultation, public relations, and support.

Although the government still demonstrates great power among stakeholders related to Kanazawa machiya, citizen initiative activities involve diversity and expanding the range of activities, and the NPO performs at the core of civic engagement. This implies that the conservation management process of Kanazawa machiya has taken an incremental step away from a government-led system to a government–citizen cooperative system. In reference to the analysis results and interviews, the relationships of actors surrounding Kanazawa machiya are illustrated in Fig.5.

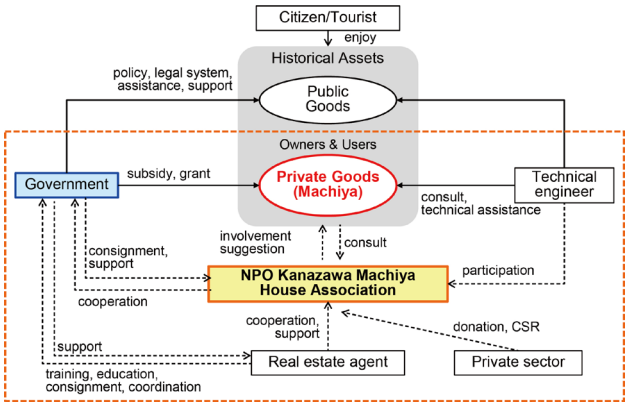

Fig.5. The Relationships of Actors Concerning Conservation Management of Kanazawa Machiya

5. Conclusions

This study focused on a conservation management system based on locality to overcome limitations based on the fact that historical assets comprise both private and public goods. To address this issue, this study investigated the case of Kanazawa machiya, which are privately owned historical assets, managed through community involvement.

The conservation management system for Kanazawa machiya involves a different approach compared to existing government-led policies. This is attributed to the characteristics of machiya, most of which are non-designated assets and private goods. Local actors, such as the government, NPO, real estate agents, technical engineers, and owners and users, have participated in seven types of activities, namely the institutional system, scientific inquiry, civic consciousness program, regeneration project, coordination/consulting, support, and training/education.

The analysis of current conservation management activities revealed that the key activity was the regeneration project run mainly by the government and NPO. This activity contributes to the management and repair of Kanazawa machiya, and has strong connections with other activities. The conservation management of Kanazawa machiya which is based on "scientific inquiry" for practical use and is connected to "supports" can be considered as the fundamental structure for privately owned buildings. The civic awareness program has a weak connection with other activities, despite the fact that experts consider it the most important activity. It needs to be strengthened in future policy issues regarding Kanazawa machiya so that it can positively contribute to the context setter, namely owners and users. Civic engagement has expanded to include diverse activities such as events and a machiya club since the research group was formed upon the recommendation of experts. The NPO, the center of civic engagement, has a high interest in the conservation management of machiya. This tendency shows that Kanazawa already has the basis of a citizen initiative system and raises the expectation of a sustainable system based on locality.

The characteristics of activities and actors' performance capabilities for conserving and managing Kanazawa machiya show that they have taken an incremental step away from a government-led system to a government-citizen cooperative system. Specifically, the NPO is the main actor, performing various activities in the civic awareness program and has connections with technical engineers, real estate agents and so on. For a sustainable conservation management system at the local level, the NPO's activities for civic awareness and value sharing are required to improve the awareness of owners of machiya and citizens. In addition, it is necessary to promote the distribution and purchase of machiya, and to secure private financial funding for its practical regeneration and utilization.

There are many issues in the aspects of funding, recruiting talented people and the institutional system to conserve historical assets. To engage with these issues, community engagement and participation are necessary. These should include not only the government, but also citizens, the third sector, and private sector. Through the case of Kanazawa, the effectiveness of civic engagement was examined in the conservation management process of non-designated assets and private goods. The conservation management process can appear as various types in accordance with regional conditions and the characteristics of related actors. In Kanazawa, government-led polices have been implemented, but in the case of machiya, a government–citizen cooperative system is demonstrated. In the future, additional surveys on different types of conservation management for privately owned historical assets will need to be conducted.

Acknowledgements

Part of this study was presented at the poster session of ICOMOS-IFLA ISCCL 2015 International Symposium, Jeju, S. Korea, and the 2015 Second-half Conference of the Korea Urban Management Association, Seoul, S. Korea.

The authors express appreciation to all the people who answered the questionnaire surveys and interviews, and to the NPO Kanazawa Machiya House Association.

Notes

[1] A Kanazawa machiya is a kind of Japanese traditional architecture, which was built before 1945 in the style of samurai houses, shops, modern Japanese houses, western style houses, and so on. It shows the regional climate, culture, individuality of craftsman and residents.

[2] DEMATEL (DEcision MAking Trial Evaluation Laboratory) is the system analysis developed by the Swiss Battelle Geneva Research Center in 1871. The system structure must already have been theoretically and empirically determined, and the quantitative date to estimate the structure pyramid to a high degree must be available for use (Park, S. H. *et al.*, 2011). This method is especially practical and useful to visualize the complicated relation structure using the matrix and directed graph.

[3] Stakeholder analysis is used to understand the diverse range of potentially conflicting stakeholder interests (Friedman and Miles, 2006) by policy makers, regulation authorities, government, NPO's and media. It is the process of identifying and analyzing the stakeholders who are likely to affect or be affected. There is the methodology of mapping such as stakeholder matrix. Especially, Power-Interest Grid is to categorize the stakeholders and plot on the four quadrants of the grid. Stakeholders can be classified as players, subjects, context setters, and crowd (Eden and Ackermann, 1998).

[4] Sixteen respondents are members of the NPO Kanazawa Machiya Houses Association. Five of them are also members of LLP Kanazawa Machiya.

[5] 'Kanazawa Machiya Junyu' is the event to offer machiya tours, field trips, lectures and exhibitions, cafes and restaurants in the machiya. It has been held annually since 2008, for the enjoyment and various experiences of citizens and visitors to the machiya.

[6] In the Kanazawa Machiya Conservation and Utilization Policy, there are four policy principals: maintenance and repair of machiya, enhancement of habitability and convenience, encouragement of use, improvement of civic awareness and training. According to these four principals, the activities are divided into policies, support, distribution promotion, citizen's understanding and concerns, training and education, scientific inquiry, commendation, technical/financial support.

References

1) Australia ICOMOS, (1999), The Burra Charter.
2) Bae, S. J. (2010) Quantitative Analysis for Problems and Improvement Directions of the Comprehensive Rural Village Development Projects using DEMATEL and Contents Analysis, Journal of Korean Society of Rural Planning, 16(3), pp.173-184.
3) Bernadine M., Jonathan P. and Stephen F. (2012) The role of stakeholders in the marine planning process, Marine Policy, 35, pp.246-257.
4) Eden, C. and Ackermann, F. (1998) Making Strategy: The Journey of Strategic Management, London: Sage Publications.
5) Edurado Rojas (2012), Governance in Historic City Core Regeneration Projects, The Economics of Uniqueness, Washington, D.C.: The World Bank.
6) English Heritage (1997), Sustaining the Historic Environment, London: English Heritage.
7) English Heritage (2008), Conservation principles, policies and guidance for the sustainable management of the historic environment, London: English Heritage.
8) Friedman A. and Miles S. (2006), Stakeholders: Theory and Practice, Oxford: Oxford University Press.
9) ICOMOS (2011), Approaches for the Conservation of Twentieth-Century Architectural Heritage, Madrid Document 2011.
10) Kanazawa City (2010),『Plan for Maintenance and Improvement of Historical Landscape of Kanazawa』.
11) Kanazawa City (2013),『Conservation and Utilization Basic Policy of Kanazawa Machiya』.
12) Kang, D. J. (2013) Exploring a Definition of Urban Heritage with focused on Urban Regeneration, Journal of Korea Planners Association, 48(6), pp.253-267.
13) Kawakami M. (1999), Characteristics and Issues of Historical Conservation in Kanazawa, Citizen Kanazawa, 5, pp.73-81.
14) Kawakami M. (2004), History of Machizukuri Plan and Movement in Kanazawa, Japanese Center for Area Development Research.
15) Kim, C. Y. (2014) A Study on the Preservation and Application of the Historic-Cultural Heritages in Daegu Eupseong, Journal of the Urban Design Institute of Korea, 15(3), pp.47-60.
16) Kim, S. J. and Kim, Y. T. (2012) A Study on the Criteria for Conservation Value of Modern Architecture as Culture Heritage, Journal of the Architectural Institute of Korea, 14(1), pp.47-60.
17) Lee, S. J. (2011) Preliminary study on defining and assessing heritage values for establishing conservation principles, Korean Journal of Cultural Heritage Studies, 44(4), pp.154-171.
18) Marta de le Torre (2002), Assessing the Values of Cultural Heritage, Los Angeles: The Getty Conservation Institute.
19) NPO Kanazawa Machiya Houses Association,『Kanazawa Machiya Annual Report 2006~2014』.
20) NPO Kanazawa Machiya Houses Association,『Kanazawa Machiya: charm and utilization method』, Kanazawa: Noto Printing.
21) NPO Kanazawa Machiya Houses Association,『Newsletter of Kanazawa Machiya』No. 1-13.
22) Park, J. M., Park, S. H. and Yu, D. C. (2012) Structural Analysis of the Community Welfare Problems, Korea Journal of Social Welfare, 64(1), pp.199-223.
23) Park, S. H., Soda, O. and Choi, S. Y. (2011) A Structured Analysis of Urban Decay Problems by DEMATEL, Korea Real Estate Academy Review, 46, pp.321-337.
24) Reed MS, Graves A, Dandy N, Posthumus H, Hubacek K, Morris J, *et al.* (2009), Who's in and why? A typology of stakeholder analysis methods for natural resource management, Journal of Environmental Management, 90, pp.1933-49.
25) Ryu, H. S. and Kim, D. N. (2008) A Study on Urban Design Methodology for Preservation and Reuse of a Modern Historic Building, Journal of the Urban Design Institute of Korea, 11(3), pp.77-92.
26) Shin, J. J., Lee, M. H. and Jung, J. H. (2013) The Study of Linking Method of Project for Regeneration of Historical Cultural Area, Journal of the Architectural Institute of Korea, 29(9), pp.111-120.
27) Shin, Y. (2009) Development of Stakeholder Analysis Framework for Collaborative Tourism development, Journal of the Korean Geographical Society, 44(5), pp.647-660.
28) Sim, K. M. and Tchah, C. Y. (2013) A Study on Systems for Compile the List of Architectural Asset and Use of the Inventory, Anyang: Architecture & Urban Research Institute.
29) Susan M. and Caroline C. (2014), The Role of Public-Private Partnerships and the Thrid Sector in Conserving Heritage Buildings, Sites, and Historic Urban Areas, Los Angeles: The Getty Conservation Institute.
30) Yui, T., Katsunori, F. and Shoko, S. (2014) Promotion Process for Green Space Conservation Activity Participation From Residents' Perspectives, Journal of Architecture and Planning, 79(704), pp.2241-2249.
31) Yun, S. H., Yu, J. H., Cho, H. H. and Jang, H. S. (2015) A Study on Strategies of Small and Midsize Construction Companies for Joint Overseas Expansion, Journal of the Architectural Institute of Korea Structure & Construction, 31(5), pp.97-104.
32) UNESCO (1976), Recommendation concerning the Safeguarding and Contemporary Role of Historic Areas, Nairobi.
33) UNESCO (2011), Recommendation on the Historic Urban Landscape, Paris.
34) Ministry of Land, Infrastructure, Transport and Tourism Website: http://www.mlit.go.jp/
35) Kanazawa City Website: https://www4.city.kanazawa.lg.jp/
36) NPO Kanazawa Machiya Houses Association Website: http://kanazawa-machiya.net/