Management of Consensus-Building Processes in an Urban Industrial Environment

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Abstract

This research examines the process of building consensus between industries and neighborhood residents in an urban industrial environment. Numerous issues currently exist between industries and residents in urban areas. In resolving such issues, industries' and residents' awareness can potentially be changed by creating a community consisting of both parties and by holding various community-centric projects. This paper proposes a consensus-building management maturity model (CBMMM), which promotes consensus building between industries and residents in an urban industrial setting, and analyzes a consensus-building management model (CBMM) which incorporates concepts in project management (PM). As the results, the CBMM, which incorporates aspects of PM and aims to promote consensus building between industries and residents in an urban industrial environment, is proposed. Also, through a survey of residents participating in events, which was conducted to examine the effectiveness of the management of consensus-building processes in an urban industrial environment, the high level of willingness of residents to participate in event planning was revealed. The results show the potential of project management, in which residents participate, to play a significant role in promoting consensus building.

Keywords: urban industrial environment, consensus building management maturity model, community management office, consensus building management model

1. Introduction

Recent years have seen a rapid increase in of the locating of industries in urban settings, owing to regional transportation systems and urban infrastructure developed around industrial sites. There have been many problems in the urban industrial environment regarding noise and vibration originating from factories, increased traffic and the safety of school routes, decreased green space, and the separation between residence areas and industrial areas. In response, industries, which are "earlier settlers", have taken measures to build consensus with neighborhood residents by improving a "symbiotic" relationship with them, through planning the creation or expansion of green space around industrial areas, explaining the contribution of industries' taxes to the region, offering factory tours to gain residents' better understanding, and supporting various events. However, in many cases, these measures have not resolved the fundamental problems in building consensus, and residents continue to make complaints and requests. For industries in urban areas, building consensus with neighborhood residents is a necessary condition for continuing their operation. In the urban industrial environment, if industries can form a community with residents and plan, implement, and evaluate projects for events in which both parties are interested, both parties' awareness toward each other potentially changes because such projects have a mechanism to promote consensus building. Previous studies have analyzed organizational project management maturity models (OPM3)[1], the role of a project management office (PMO)[2], and consensus building for better local relationships [3]. However, few studies have dealt with the management of consensus-building processes in the urban industrial environment. This paper proposes the concept of a community management office (CMO)—an office in charge of coordinating community projects or events—which would contribute to changing the mutual awareness of industries and residents in the urban industrial environment. This paper then examines a consensus-building management maturity model (CBMMM), which is used to quantitatively evaluate the maturity of the management of consensus-building processes in a community, and proposes a consensus-building management model (CBMM) which aims to promote a "symbiotic" relationship between industries and residents in the urban industrial environment.

2. Research Purpose

The purpose of this research is as follows.

(1) To make an investigation and analysis of issues in an urban industrial environment.
(2) To examine a community management office (CMO) and consensus-building management maturity model (CBMMM) in an urban industrial environment.

(3) To propose a consensus-building management model (CBMM) which promotes consensus building between industries and residents in an urban industrial environment.

3. Current Problems Observed in an Urban Industrial Environment

Industries in Yachiyo City in Chiba Prefecture were surveyed on problems [4] in an urban industrial environment. An examination of their responses made clear the following issues (see Figure 1). The opinions and requests from residents are categorized into “increased contacts”, “prevention of noise”, “road maintenance”, “limitations on traffic”, “reduced density of factory areas”, “greener neighborhoods”, and “others”. Specifically, with respect to increased contacts, residents want explanations on waste disposal issues and government rules and regulations on industries, opportunities for factory tours, and housing sales information. In connection with noise issues, noise regulations for trucks are demanded. Regarding roads and traffic, residents complain of road damage caused by heavy vehicles and want traffic congestion reduced in industrial complexes. As to the density in an urban industrial environment and the "greening" of neighborhoods, the separation of residential areas from industrial areas and increased green spaces are requested, respectively. Other opinions include opposition to the opening of gambling facilities such as pachinko parlors. Also, 10% of the respondents mention noise and vibration, 10% mention the residence-industry separation, 5% the issue of green space, 5% the issue of roads, and more than 50% indicate the importance of resolving problems based on communication and collaborative work with neighborhood residents.

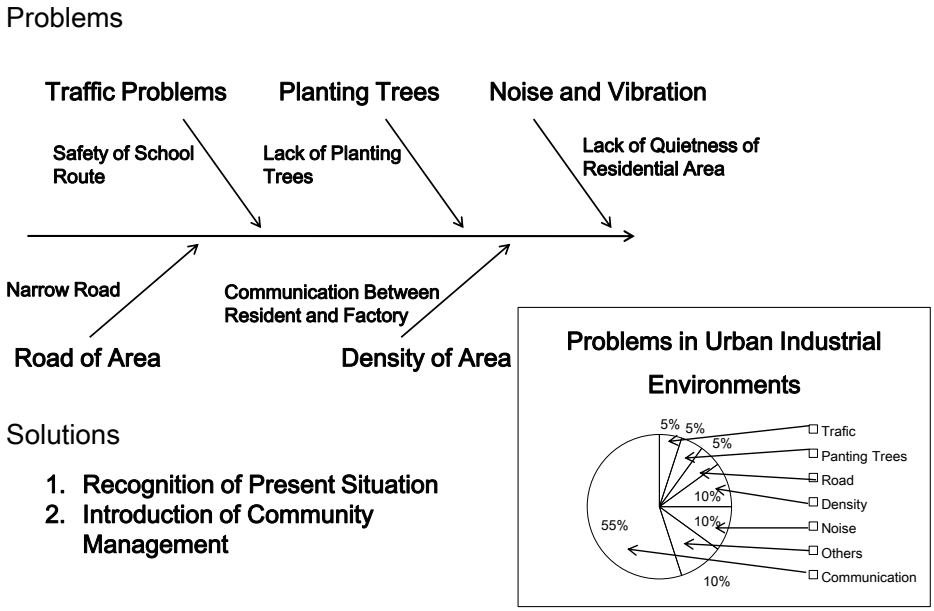

Figure 1 Current Situation in the Urban Industrial Environment

4. Management of Consensus-Building Processes in an Urban Industrial Environment

4.1 Community Management Office

Managing a community efficiently requires examination of not only its definition and administration, but also the establishment of its concept and the design of its properties, foundation, and places for member interactions. This research proposes the setting up of a community management office (CMO) in an urban industrial environment. A CMO performs coordination and management functions in resolving various issues existing in a community in an urban industrial environment. In this research, the CMO has functions of a project management office (PMO) and

aims especially at providing coordination and support for the smooth implementation of projects in a community. Therefore, the CMO potentially can provide coordination services for building consensus with residents, while improving the quality and effectiveness of project management in a community.

4.2 Consensus-Building Management Maturity Model (CBMMM)

Based on the project management maturity model (PMMM), this research proposes a consensus-building management maturity model (CBMMM) for building consensus between industries and residents. Figure 2 shows the levels and the processes in the CBMMM in the context of the urban industrial environment. As a higher level in the CBMMM is attained through collaboration between industries and residents in a community, the degree of consensus built between the two parties in the community is expected to rise. The levels in the CBMMM are defined as follows.

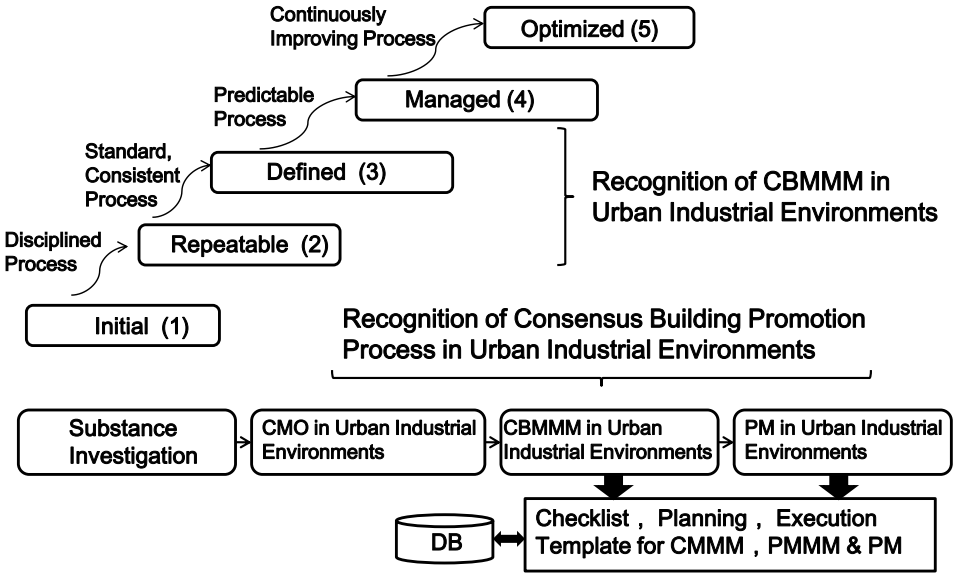

Figure 2 Evaluation of Consensus Building by CBMMM & CMO

Level 1 (Chaotic condition)
A consensus reached in an urban industrial environment is haphazard, leading to a chaotic condition. Various complaints are submitted from residents, but responses are made for only individual cases. Unresolved issues are left untouched, creating a state of disorder. Therefore, it is difficult to satisfy residents.

Level 2 (Documented and repeated processes)
Documented processes are introduced to promote consensus building. Basic management procedures, which handle complaints, requests, and various events run jointly by industries and neighboring residents, are established. There are rules in place which are necessary for repeating consensus-building processes that were successful in the past or similar ones.

Level 3 (Defined processes)
Processes for promoting and managing consensus building are defined and documented in a consistent manner. Such processes are unified by an organization established specially for an urban industrial environment.

Level 4 (Managed processes)

Processes are quantitatively monitored through the collection of data associated with the project plan, detailed plans for evaluation standards, administrative methods, and evaluation methods. Processes for promoting consensus building are qualitatively and quantitatively understood and controlled.

Level 5 (Unified processes)
Due to quantitative feedback from consensus-building processes and trials based on innovative ideas and techniques, continual improvements on processes are feasible, and processes become unified. Residents sufficiently understand the contribution of industries to the region. Residents are satisfied with the condition of the region, and a consensus with residents is reached in an urban industrial setting.

4.3 Consensus-Building Management Model (CBMM)

This paper proposes a consensus-building management model (CBMM) aimed at promoting consensus building between industries and residents in an urban industrial environment. Figure 3 shows the framework of CBMM to clarify the role of PM [5] in the consensus building process. The CBMM in the context of the urban industrial environment can be divided into six phases: the "resident awareness" phase, the phase in which consensus building with residents is pursued, the phase in which consensus building with residents is promoted, the phase with a community management organization, the community management evaluation phase, and the phase in which various types of consensus between industries and residents are unified. The "resident awareness" phase involves requests and complaints from residents as well as industries' contributions to residents' lives. In the phase in which consensus building with residents is promoted, a CMO plans and implements projects and events that encourage residents' participation. As changes in residents' awareness push the level in the CBMMM higher, further promotion of consensus building between industries and residents is expected.

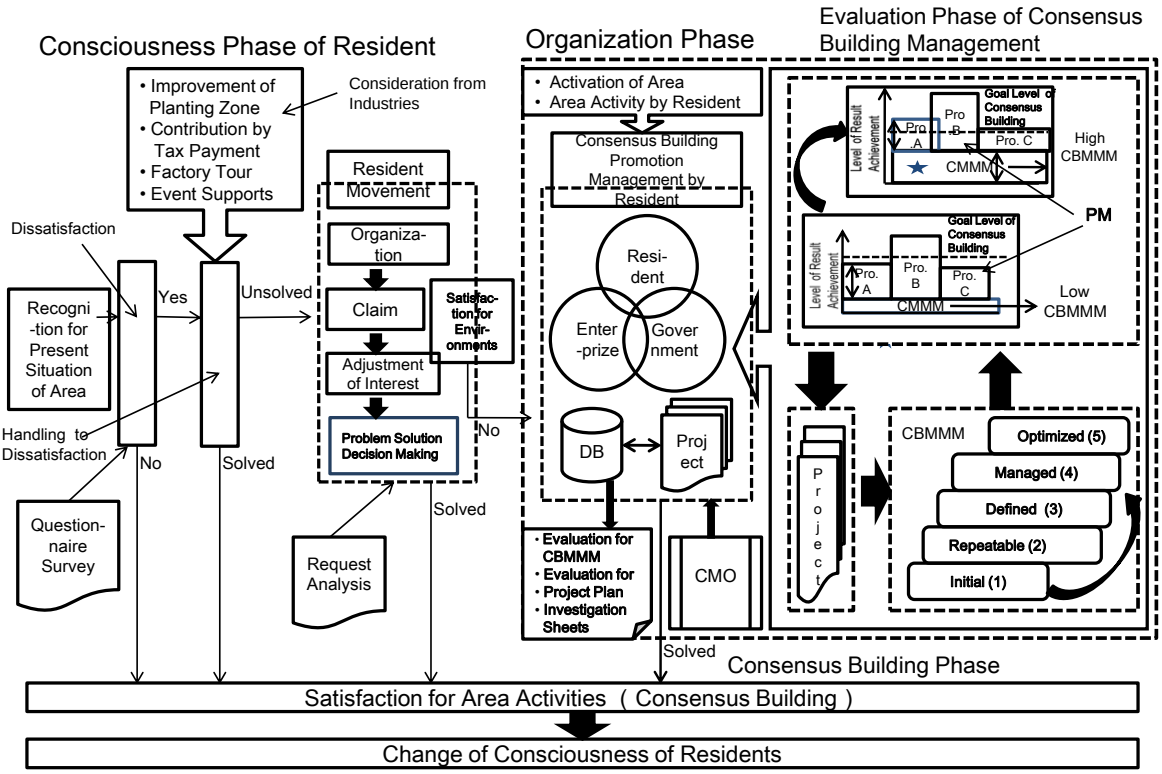

Figure 3 Community Management Model in an Urban Industrial Environment

5. Examination of the Management of Consensus-Building Processes

Using a case from Yachiyo City, Chiba Prefecture, this paper examines the management of consensus-building processes in an urban industrial environment.

5.1 Community Management Office (CMO)

In this research a CMO [6] was set up in the Yachiyo Chamber of Commerce and Industry, and its organization and functions have been previously examined and reported. The office is part of the chamber organization and can operate as a member of the Urban Industry Research Group. The office provides coordination services for requests and complaints from residents and various events in an urban industrial environment, but what distinguishes the office from others is its management and support for various community-led projects.

5.2 Consensus-Building Management Maturity Model (CBMMM)

In order to evaluate the maturity of the management of consensus-building processes, evaluation standards are created, as shown in Table 1. The evaluation categories (and subcategories) include "consensus building with residents" ("consensus building process"), "problems" ("number of occurrences" and "characteristics"), "community", "events" ("time of planning", "preparation period", and "event day"), and "relevant organization" in an urban industrial environment. In addition, events are evaluated in terms of their budget, the number of people involved, communication, enjoyableness, integrity, event's future direction, and the degree of contribution to the region.

Table 1 Evaluation Standard of Consensus Building Promotion Management Maturity Model

Before and After Evaluation Items

Level	1	2	3	4	5
Consensus Building	Chaos	Repeatable Process	Defined Process	Managed Process	Integrated Process
Characteristics of Consensus Building	No Solution is Specified	Claim Management is Established	Low Understanding of Residents	Qualitative, Quantitative Response for Consensus Building	Continuous Feedback from Residents, Continuous Improvement
Number of T Troubles	More than 50	40 - 50	25 - 40	10 - 25	Less than 10
Response for Trouble	Improvement by Money	Improvement by Plan	Long Run Improvement	No Long Run Improvement	No Improvement
Budget for Events	Lack of Budget (50 %)	Lack of Budget (30 – 50 %)	Lack of Budget (Less than 10%)	In Budget Approximately	In Budget
Number of Staff for Events	Lack of Stuff (50%)	Lack of Stuff (30 - 50%)	Lack of Stuff (Less than 10%)	Satisfying Approximately	Satisfying
Communication for Events	Low	Low - Medium	Medium	Medium - High	High

The setting up of a CMO is the main element incorporated in the management of consensus-building processes. Traditionally, neighborhood associations in urban industrial environments have cooperated with relevant government agencies, held events, and handled complaints from residents. The main functions of the newly

established CMO include the preparation of documents for project management, which is planned and executed collaboratively by industries and residents.

In the examination of the urban industrial environment before the introduction of the management of consensus-building processes, only management activities for local events are considered because events in which both industries and residents could participate were held with support from government agencies. The associated CBMMM level is Level 3. Other categories are at Level 1, indicating that the maturity level of the management of consensus-building processes in the urban industrial environments was very low. After the introduction of the CBMM proposed in this research, a CMO was set up, its functions were clarified, procedures to handle troubles between industries and residents were established, community organizations in an urban industrial environment were clearly identified, and documents on planning and executing events, which are seen as projects, were prepared. As a result, the associated CBMMM level improved from Level 1 to Level 3.

5.3 Changes in Residents' Awareness

Participants in local events were surveyed to examine residents' awareness regarding improved CBMMM levels and consensus building between industries and residents in the urban industrial environment targeted. Figures 4 show the results of the survey of residents who participated in events held in Yachiyo City and Funabashi City in

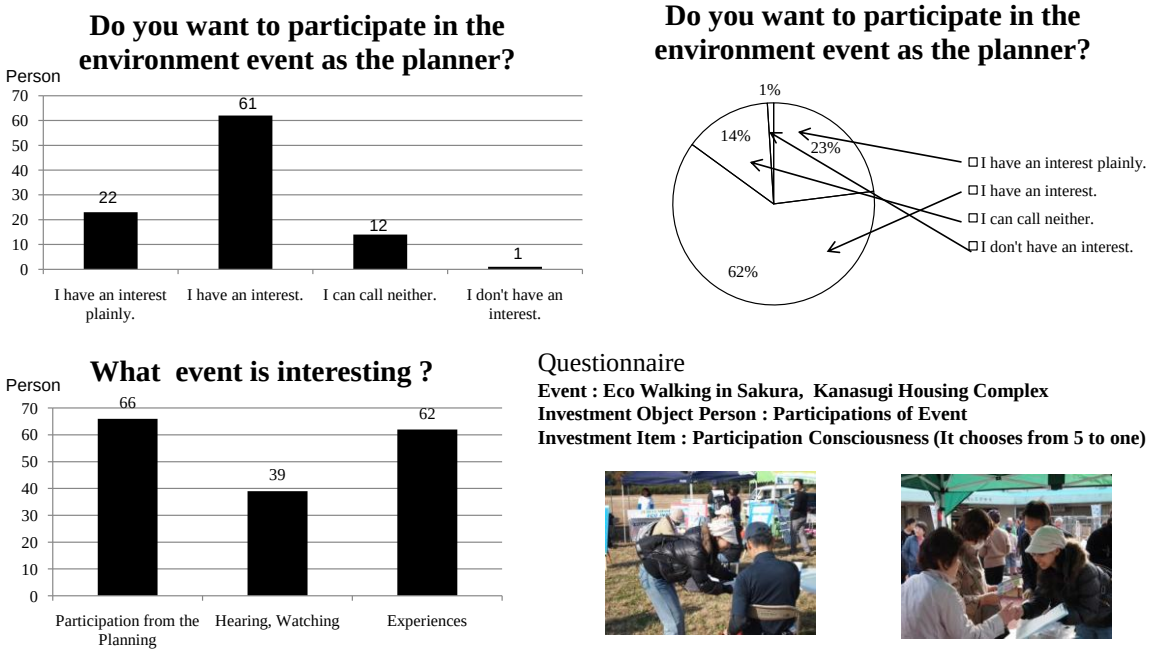

Figure 4 Survey Results for Residents Consciousness

Chiba Prefecture. As the figures show, a large proportion of the respondents want to participate in events as planning members rather than merely as attendants. Also, many residents are interested in events with environmental themes.

The survey results show the possibility of holding events with residents' participation in an urban industrial environment and observing an improved degree of consensus due to the awareness of industries and residents being changed through various events.

6. Conclusions

The conclusions of the research can be summarized as follows.

(1) Through an investigation of the current state of industries and residents in an urban industrial environment, problems associated with consensus building were identified.

(2) A community management office in an urban industrial environment and a consensus-building management maturity model (CBMMM) capable of evaluating the level of consensus attained are proposed.

(3) A consensus-building management model (CBMM), which incorporates aspects of project management and aims to promote consensus building between industries and residents in an urban industrial environment, is proposed.

(4) Through a survey of residents participating in events, which was conducted to examine the effectiveness of the management of consensus-building processes in an urban industrial environment, the high level of willingness of residents to participate in event planning was revealed. The results show the potential of project management, in which residents participate, to play a significant role in promoting consensus building.

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