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ANALYZING EFFECTIVE FACTOR OF THE CHANGE MANAGEMENT BASED ON URBAN REGENERATION PROJECT IN REPUBLIC OF KOREA

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ABSTRACT: There are quite a number of business processes in the urban regeneration project. Managers and participants who involved in the project make and use information for the best way to perform in the particular business process. The information can be also reused and produced for data at the next stage. Accordingly, the information sometimes goes out of existence and work data up into new information when the urban regeneration project has been accomplished. But in that case some of changes happen occasionally, the business for urban regeneration has suffered a loss of profit and time as result of confusions about decisions and inappropriate action. For that reason, the information should be analyzed to achieve its aim at the business process under the influence of changes. Then, even though detail processes and management method change, the Core Information, which are important factors for accomplishing the project, help that the project can be operated to solve the problem about confusion and loss of the business. In conclusion, the Core Information is main effective factors for successful urban regeneration projects on the change management. The purpose of this study is to research the information according to the Information-flow and changes, and to find out the influence factors and the Core Information to manage efficiently at the process of urban regeneration projects.

Keywords: Urban Regeneration; Business Process; Change Management; Core Information; Information-flow.

1. INTRODUCTION

The urban, which society and culture are based on its space, play a leading part in developing economy and nations though the globalization. Cities in the world like New York, London, Berlin and Shanghai have been trying to get the upper hand in competition in recent years. And they are struggling to improve competitiveness though changes and urban regeneration. But the urban regeneration project called mega-project has more complexity of the business and larger scale of cost and time than construction project for buildings. So the project for urban should operate and manage as program level for a successful business.

In Korea, there were many cases in large scale projects where the work delayed more than 50% and doubled cost. In the case of US$10 billion projects, 1% of failure can cause US$100 million in damage. Therefore, the program management is greater where the project scale is larger and the longer construction time [1].

When the urban business planed and conducted in Korea, it had trouble and problem to manage effectively among various stakeholders owing to conflicts from other point of view and complicated business processes [2]. That is why the process of mega-project, which needs the large scale cost and time, has been established clearly and laws related to the urban business also often have been changed since business started for urban regeneration.

Many an improvement scheme is making an attempt to cope with a lot of Changes and confusion but it is hard to find the key to successful business management due to the unpredictable changes. For that reason, improvements to make a reasonable decision quickly for business is needed to cut back the cost and save the time.

At the program level, accordingly, information needed to perform the mega-project is important effect factors. In other words, the information can be also reused and produced for data at the next stage. It also sometimes goes out of existence and work data up into new information when the urban regeneration project has been accomplished. Among others, main information, which is more effective for business in each process, can be found at the phase of process though information-flow. It is important factor of the decision-making and means to enhance the flexibility for the changes in the mega-project.

This aims of study is to analyze the influential factors that are able to support for decision-making and systematic business management for changes with the flow diagram presented relations of information at the mega-project process.

2. METHODOLOGY

In this study, the main process is to systematize the procedure of the business, and then find valuable data in the urban regeneration process. First of all, urban regeneration should be defined clearly and it is necessary to make clear what the business targets are. Also it is needed to analyze the project hierarchy level, for example, the project of the cost, time and work scope with literature review. The second phase is to devise the process of urban business in sequence based upon legislation in Korea. The thirdly, among the urban business, this study chose one of the business and found detail data as information the lowest levels of the process, and then detail information was connected each other for relations, that displayed relations in diagram form. Finally, this phase is to analyze the function and role of influential information and gateway at the process is selected as the points to decide issue when the changes, which the law or a participant involved in business, happen during the urban project. In summary, main information at the process of urban project helps to set up effective decisions at the gateway phases.

3. THE PROCESS OF URBAN REGENATION PROJECTS

3.1 The urban regeneration project

At the national level most countries have recently re-examined their urban policies and have put new legislation into place emphasise the need for greater effort to improve the condition of urban areas. The UK government's Urban White Paper, which built on the report of Lord Rogers, *Towards and Urban Renaissance*, is a prime example of this. The French government also has produced a new Planning Act, the SRU of 2000, The Social Cites program in Germany, the Major Cities program in the Netherlands and recent initiatives in urban planning in both Brussels and Walloon region of Belgium and in Italy reinforce the continent-wide nature of this awakening of interest in the future of our towns and cities [3]. This is therefore an auspicious time to examine and review the regeneration process so far, in order to offer a reflection in the capacity of regeneration strategies to meet social, political, economic and environmental goals.

According to the Korean Renaissance Center, the three objectives of urban regeneration are to repair and develop existing decayed urban district in a systematic way, to stimate unique regional socio-cultural characteristics through connecting diverse participants, and to rehabilitate an urban district, including the regional industry and the economy overall [4].

In other word, an urban regeneration project means systematic program in which the downtown area is restored economically, socially and physically by reorganizing the deteriorated infra in the existing downtown relatively underdeveloped due to industrial structure change and new town-oriented urban expansion policy and rebuilding urban spatial structure to introduce and create new function for new urban area [5].

Program management also emphasizes the coordinating and prioritizing of resources across projects, managing links between the projects and the overall costs and risks of the program. Program management may provide a layer above the management of projects and focuses on selecting the best group of projects, defining them in terms of their objectives and providing an environment where projects can be run successfully. Program managers should not micromanage, but should leave project management to the project managers [6]. The urban regeneration projects also have a great impact on local society and residences, regional economy, and the nation as a whole. Therefore, urban regeneration projects need to be viewed as mega-projects that should be managed not as the sum of single projects but rather as a systematic program. Also, the urban regeneration mega-projects where there exist numerous sub-projects and a huge amount of data at a project level, existing approaches are not appreciate to apply. Given the lack of current approaches, thus, project performance is managed from a synthesized program as well as project level to constituting urban regeneration [7].

3.2 The business process

There is several urban business projects depended on a target in urban regeneration business of the Korea; The Reconstruction Projects, the Housing Redevelopment Project and the Housing Environment Improvement Project aim to improve primarily residential environment but each of these business has a different scope of work in terms of business conditions. And the Urban Development Projects has a purpose for create complexes and town area. Lastly that is the Housing Renewal District on the New-Town Project that aims to make urban area better as integrated targets. Also, in terms of a promoter in projects, the urban projects are categorized into three ways: the union type, the Land owner type, the Selected developer type. This categorization is important for understanding the business process because a procedure is different method to select the person who involved in projects as it depended on promoter. When it comes to the processes of a project, there are eight parts : General planning, Renewal planning, Promoter selection, Approve, Disposal, Subdivision & construction, Completion & liquidation, Maintenance.
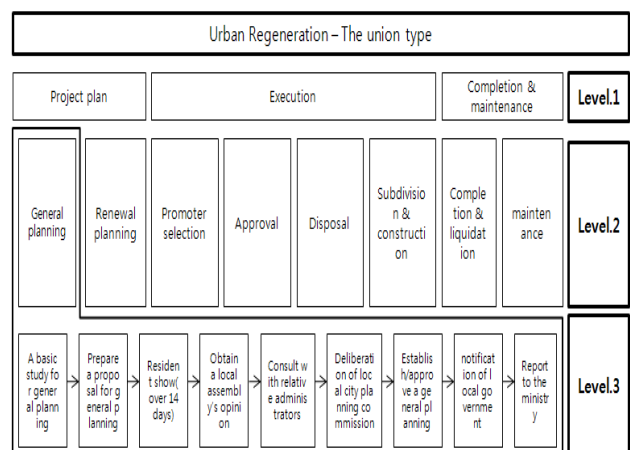
Figure 1. The Business Process of Urban Regeneration – The Union Type

4. ANALYZING INFORMATION ON BISINESS PROCESS

4.1 Framework of Process

Business process model of urban regeneration project is divided in big phases of project plan, execution and completion, mid phases of initial plan of urban regeneration, improvement plan, promoter selection, approval, disposal, subdivision and construction, completion & liquidation and maintenance. Upper side paragraph divided in government, promoter and user. This government is divided into Metropolis/big-city mayor, mayor and etc. [8]. And promoter is divided in a committee and a union. User is divided in land-owner and resident. Constructor in subdivision and construction phase are grouped and added into a committee.

4.2 Modeling method of Process

BPMN modeling method is easy for non-experienced user based on BPD (Business Process Diagram), Swim lane Diagram. And it allows users to design business process through dividing and modeling parties and activities. Each party is included in rectangular box of pool, and pool has sub-Swim lane called lane. Activity includes details of process, and each activity is connected through arrow line. Arrow line shows progress of process, and dash arrow line means information exchanges between parties in different pool. (e.g., Metropolis/Big-city mayor, mayor, land owner). And text footnote is the way of describing additional information for each process. Core symbols for BPMN are as follows in table 6 [9].

Table 1. Descriptions of BPMN Modeling

Element	Description	Notation
Event	An event is something that "happens" during the course of a business process. These events affect the flow of the process and usually have a cause (trigger) or an impact (result). There are three types of Events, based on when they affect the flow: Start, Intermediate, and End.	○
Activity	An Activity is represented by a rounded-corner rectangle and is a generic term for work that company performs. An Activity can be atomic or monatomic (compound). The types of Activities are: Task and Sub-Process.	▢
Gateway	A Gateway is represented by the familiar diamond shape and is used to control the divergence and convergence of Sequence Flow.	◇
Sequence Flow	A Sequence Flow is represented by a solid line with a solid arrowhead and is used to show the order (the sequence) that activities will be	→

performed in a Process. Note that the term "control flow" is generally not used in BPMN

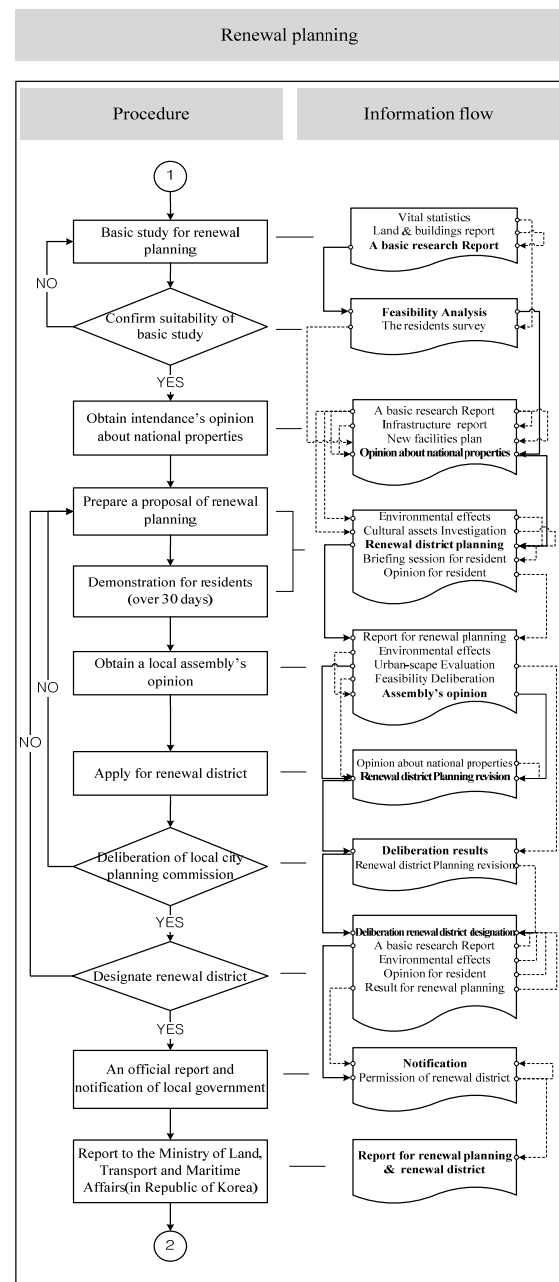|		
Message Flow	A Message Flow is represented by a dashed line with an open arrowhead and is used to show the flow of messages between two separate Process Participants (business entities or business roles) that send and receive them. In BPMN, two separate Pools in the Diagram will represent the two Participants.	⊶┄┄┄▷

4.3 Information flow and relation

Figure 2. The Information-Flow(Renewal Planning)

Information-Flow is easy for understanding which one it has relations. Figure 2 shows information-flow at the second phase of the eight in urban business process of the Korea. As for each of information in detail, firstly Vital statistics affect the resident survey and a basic research report is being influenced by Land & buildings report. After that, a basic research report has a relation with Feasibility Analysis deeply the next step in the process. In other words, a basic research report plays an important role in not only Feasibility Analysis at the next process but also Land & buildings report at the same level. Accordingly, a basic research Report can be main information at the first process. Moreover, at the process of Obtain a local assembly's opinion, Apply for renewal district and Deliberation of local city planning commission, many of the related information should be focusing on the process of the Designate renewal district as gateway for the next phrase. So Information-Flow is definitely evidence to find what more important information is at the urban business process. As a result of information-flow, the target in process of Renewal planning could be the process of Designate renewal district, and it means Deliberation renewal district designation is most important information as the Core Information which is the most valuable one influenced by main information at the one of the eight phases.

4.4 Gateway

The gateway is a sort of point for decision-making. So it means that the points are where the all information and factors of management are reviewed. There are eight phases of urban business process that contain one gateway and the core-information. And each of the phases has a target for performing business. Its target point is gateway, and all of the related information is gathered at the gateway. Table 2 Shows that The Life-Cycle of urban business also has targets on the each step of the sub-category.

Table 2. The Target of Urban Business Life-Cycle

Program level for target	Sub-category	Target
Pre- plan	General planning	The Feasibility of plan
Program set up	Renewal planning	Renewal planning &district designation
Establishing	Promoter selection	Agreement on a committee approval for union
	Approval	The project execution plan
	Disposal	evaluating assets and subdivision
Executing	Subdivision & construction	Contract subdivision & Construction
closing	Completion & liquidation	Agreement about liquidation
	Maintenance	Evaluation of Facilities

When the urban business is in progress, the people who involved in project such as stockholders, union members, promoters, public officials, residents carry out their assignment personally and monitor other participants. In the gateway, however, the information that contains opinions and business report from participants has been collected since the beginning of the business. In other words, although all participants can not join meeting for decision-making at the gateway, the information contains factors about the business management. So the gateway is where the central and local government as deliberators can review all reports and information.

4.5 Core information and change management

There is a lot of information in urban business program. Among information, the Core information has been analyzed through information-flow diagram. It is necessary that the core information should be reviewed when the participants make a decision on issues. So the Core information is a valuable factor for decision-making of urban business. Meanwhile, if the participants often make a decision on the basis of incorrect information at the gateway, the business would be not able to reach the goal step by step and it should be causing huge damages of the cost and time of urban business. Also, because the business is larger scale than the building projects, the extent of the damage is occurs worse than predicted.

The urban regeneration business has a characteristic of complexity that includes cultural and economical factors. In terms of change management, the business should accept changes inevitably for flexible business management. In Korea, in order to absorb various opinions, the government often revises the law and administrative regulations of urban project and happen to change the person in charge, so many of the businesses in progress has suffered from confusion for decision-making. But at the level of program, if the core information has application to business management for decision-making, the process of coping with changes would be efficient in the urban business although

In addition, the information-flow and relations between information are able to make good use of its opportunities of feed-back, namely with information relation-diagram, it is a key to solute the problem. In this case relations between information are analyzed clearly with a way to find a trace of factors that disrupts decision-making, mega-project should be coming up with an effective plan for dealing with changes.

5. CONCLUSION

As analyzed, this research is to find the factors for coping with changes effectively in urban regeneration business with establishing gateway and the core information from the process of business in Korea.

Therefore, the procedure of this study has been logically accomplished to understand the urban regeneration business of Korea and analyze and find the way to deal with troubles of changes.

Main category	Sub category	Procedure	gateway	Main information
Project plan phase	General planning	A basic study for general planning		A basic research Report for general planning
		Prepare a proposal for general planning		Pre-plan
		Resident show(over 14 days)		Briefing session for resident
		Obtain a local assembly's opinion		Assembly's opinion
		Consult with relative administrators		A statement regarding consultations
		Deliberation of local city planning commission		Deliberation results
		Establish/approve a general planning	●	a general planning
		An official report and notification of local government		notification
		Report to the ministry of Land, Transport and Maritime Affairs(in Republic of Korea)		Report for a general planning
	Renewal planning	Basic study for renewal planning		A basic research Report for renewal planning
		Confirm suitability of basic study		Feasibility Analysis
		Obtain intendance's opinion about national properties		Opinion about national properties
		Prepare a proposal of renewal planning		proposal of renewal planning
		Demonstration for residents (over 30 days)		Briefing session for resident
		Obtain a local assembly's opinion		Assembly's opinion
		Apply for renewal district		Application for renewal district
		Deliberation of local city planning commission		Deliberation results
		Designate renewal district	●	Deliberation renewal district designation
		An official report and notification of local government		notification
		Report to the Ministry of Land, Transport and Maritime Affairs(in Republic of Korea)		Report for renewal planning & renewal district
Execution	Promoter selection	Request for agreement on a committee approval		Agreement on a committee approval
		An approval committee		An approval committee
		Select renewal service provider		Application for selecting renewal service provider & business proposal
		Request for agreement of establishing a union		Request for establishing a union
		An inaugural meeting		Vote for a business proposal & articles of association
		Apply for permit of establishing a union		Outline of the union
		Permit of establishing a union	●	Permission of establishing a union
		Residents demonstration		notification
	Approval	Prepare a proposal for project execution permit plan		Data Profiles of the project execution permit plan
		A general meeting for proposal of project execution permit plan		Opinion about the project execution permit plan
		Deliberation of construction commission		Report for evaluation
		Apply for project approval		Application for the project execution permit plan
		Consult for disposal national property		Consult for disposal national property

Main category	Sub category	Procedure	gateway	Main information
	Approval (continued)	Consult with a superintendent of educational affairs		Review of educational condition
		A Public show(over 14 days)		A Public show
		Project execution permit	●	Permission of Project execution
		An official report and notification of local government		notification
	Disposal	Select an appraiser		Selection Criteria for an appraiser
		Solicit for evaluating assets(before and after)		Report for evaluating assets
		Notice subdivision for land owner		notification
		Apply for subdivision for land owner		scheme for subdivision
		Establish disposal plan		disposal plan procedure
		Notice demonstration plan		Notice
		Demonstrate and obtain opinion		Opinion about disposal plan
		A general meeting for disposal plan		Vote for disposal plan
		Request/Provide for liquidation		Request for liquidation
		Apply for disposal plan permit		Application for disposal plan permit
		Disposal plan permit	●	Permission of Disposal plan
		Select supervisor for construction		Selection Criteria for construction supervisor
		Draw lots subdivision for land owner		subdivision plan
		Contract subdivision for land owner		Contract subdivision
	Subdivision & construction	Arbitrate/Deposit acceptance		Detail Condition of Arbitrate/Deposit
		Demolition		Report for result of demolition
		Confirm assurance for construction		assurance for construction
		Declare starting construction	●	summary for construction
		Notice to general subdivision		Notice to general subdivision
		Apply for general subdivision		Requirements for general subdivision
		Draw lots general subdivision		general subdivision
		Contract general subdivision		the terms of contract
		Construction		Daily report
Completion & maintenance	Completion & liquidation	Definite site estimation		land surveying
		Apply for building completion permit		Application for pre-delivery inspection
		A permit for building completion	●	pre-delivery inspection
		Official report and notification on local government		notification
		Divide land		procedure for dividing land
		Notice transfer		Notice transfer
		Apply for registration entrust		registration entrust
		A liquidation meeting		Agreement about liquidation
		Liquidate and dismiss the union		terms of payment & dissolution of the union
	maintenance	Operate Facilities		Operation plan
		maintenance	●	Report for result of Facilities
		Dissolution		Evaluation & recording results

Figure 3. Main Information and Gateway in Urban Business Process

Firstly, the characteristic of business has been studied by the literature review. It says that there are many of the processes and participants in the urban regeneration business and the cost and time is needed to manage the project as mega-project. Also, It is required that promoters and coordinators should operate the business as program management.

Secondly, in order to understand the process of business, the modeling of the process was established with BPMN method based on the law.

Thirdly, after analyzing the process, the information that affect the procedure of decision making was found and displayed in diagram form to consider relations.

Fourthly, the core information and gateway was selected in the business process as the criteria of decision-making. Finally, the study suggested that the core information played an active role in deal with changes and necessity of improvements.

In conclusion, it is difficult to standardize the urban business since it has numerous processes and the people concerned. So even though a few changes happen in the projects, the cost and time of business should be damaged more than predicted when not handling the crisis. In other words, the urban project as program is highly risky in terms of change management. It is needed to manage and plan for troubles of the changes strategically. Furthermore, information-flow and relation could be useful the way for effective decision-making. It is recommended that the work to evaluate the process quantitatively will be required next time.

6. ACKNOWLEDGEMENTS

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