

Process Innovation Case Study of Insurance Industry: Based on Case of H Company

Jong Yang Jeon¹, Jun Il Lee² and Doo Soon Kwon^{3*}

¹Department Management Information Systems, Hankuk University of Foreign Studies, Seoul, Korea; mislab@hufs.ac.kr

²Department Graduate School of Business, Hankuk University of Foreign Studies, Seoul, Korea; cap55@nate.com

³Department U-City, Seoul Venture University, Seoul, Korea; do20kg@naver.com

Abstract

The insurance industry is recently trying many types of innovations and improvements to survive in competition. In other words, many insurance companies are increasing work efficiencies and productivities, and furthermore, strengthening business competitive power by fundamentally changing company organization and process. The purpose of this study is classified into two categories based on these discussions. The first is to examine success factor and critical points through BPR methodology and PI construction case of the next generation process innovation. The second is to study consideration of personal, organizational, and social affects complexly using the system through the next generation process innovation. The project for the next generation process innovation should be progress, the method and guideline of large project management should be proposed through these and must be applied to other information system development in the future.

Keywords: Insurance Industry, Next Generation Insurance System, Process Innovation

1. Introduction

The insurance industry is recently trying many innovations and improvements in order to survive in the competition. In other words, many insurance companies are increasing work efficiencies and productivities, and furthermore, strengthening business competitive power by fundamentally changing company organization and process. The Business Process Re-engineering (BPR) converged among innovations attempted in insurance industry is considered in customer point of view instead of function point of view, remove and improve unneeded work and process which is management innovation to strengthen business competitive power^{1,2}. In order to push and settle BPR, business vision, organizational structure, change of thought, education training, new approach and management technique and method are important^{1,4}.

According to Kim³, Bancassurance bank (channel selling insurance over the bank counter) had management

innovation by instituting CRM (Customer Relationship Management) to build relation with customer on the basis of integrated IT and knowledge infrastructure decision making system, SCM (Supply Chain Management) for cooperation with supplier and cooperative firm, and ERP (Enterprise Resource Planning) for integration and efficiency of information system based on customer point of view. In addition, Samsung Fire Insurance reformed work process and standardized flow of information, changed to the structure that can manage integrated information based on customer point of view on the basis of BPR method. According to “BPR system also spread to nonmonetary institutions” of internet news organization Digital Times, Hyundai Marine and Fire Insurance and Kyobo Life have built large credit general system including BPR system. The standardization and efficiency were maximized and business competitive power was strengthened through this and continuous BPR institution in insurance industry is prospected to establish.

*Author for correspondence

The continuous BRP institution in insurance industry is increasing investment scale of many global insurance industries and domestic insurance industries, and companies are recently showing interest in work and customer data management for trends of Big Data and Social Network. Therefore, decision makers of companies have big interests in efficient system establishment. Many securities of budget and investment for BPR system support are created but service quality and customer response ability for existing system are very poor compared to the current global insurance industry. Therefore, finding the method to increase competitiveness of information integrated company on the basis of simplification and standardization is important.

The differentiation of this study is largely categorized into two types based on the discussion. First, find the success factors and critical points through BPR methodology and PI construction examples to actively respond in information communication environment based on insurance industry. Second, the research on accommodation and satisfaction, characteristic of media and person-organization, social affects through PI construction examples is needed. The purpose of this study is to draw issues and propose solutions on agreement with company goal, the goal accordance between member of organization and information system by analyzing insurance companies which have the next generation system.

The compositions of this research are as following. In chapter II, the definition and character of BPR, and existing BPR related advanced study are examined. In chapter III, case study of H Fire Insurance Company is examined and lastly implication and further study are discussed.

2. Definition and Character of Process Innovation

2.1 Process Innovation Definition and Character

The basis of business innovation must be process unlike business innovation method in the past. Process has meaning of full process of delivering values to inner customer and outer customer from begin to the end. Process innovation has character of innovating with the goal related whole process rather than in different department. Many organizations had frustrated business innovation in the past from performing work in different department for

specialization and segmentation. The process innovation is a must from this. It has three different factors from business innovation in the past. First, big achievement can be expected in view of overall process. In other words, it can be focused on coupled time of person and person, department and department unlike only the working hours in different department or division. Second, evaluation system cannot be realized in process innovation. For example, the work in procurement department was difficult to evaluate while procurement process can be focused on the time from request to acquisition of needed items. Third, customers are clearly defined in process innovation. The product and service customers want can be provided, the whole process accommodated by the company for customer request can be shown and objectively evaluated⁵.

Process innovation is one of innovative changes for construction of company organization system. In other words, handle with composure for new environment according to customer request not just for distribution and logistics. The systemized product purchasing stage to final consumer stage should have clear added value with achieving company competitiveness in order to draw achievement of the company. Process innovation will make personal work consistency; employee will do the best to fulfill customer requests with functional expansion of many different dimensions. In order for process innovation to be settled in successfully from this, the chain related to process inner and outer organizations must use information technology and establish and manage efficient system⁶. The companies leading project innovation should put in the short run to create character, product, service, or results of project. There are 9 innovation domains among company process innovations: integrated management, range management, time management, cost management, quality management, human resource management, communication management, risk management, and procurement management. Especially, the validity evaluation in planning is the most important in establishing project. In other words, organization validity, economical validity, technical validity, operational validity evaluations are needed. Second, the elements of process are important. Process helps to understand some issues in planning information process, evaluate IS affect, and predict and manage issue related changes.

The innovation in different department in the past did not have effect but large effect by process innovation represented as business reengineering was created.

2.2 Importances of BPR and ISP Methodologies

BPR (Business Process Reengineering) was founded in America in early 1990, has meaning of improving work and making resource use effectively with making fundamental change from one goal in business action managing organization point of view. BPR has fundamental consideration of work process, and composed with indicators such as production cost, service quality, and energy of employees or redesign of works to strengthening all. In general, the concept of BPR has systemizing data and using computer or information technology to set the direction.

Hammer¹ explained that critical success factors leading BPR successfully are pursuit of change, concentration to work process, value of business and consideration of belief, top-down approach, need of reengineering professional, focus of realization, and short-term stage of project.

Davenport & Short² proposed overall selection of process, gradual performance of project, combined effort with other improvement activities, setting exact goal and direction, and crisis consciousness management of employees.

Hammer⁷ & Champy⁸ argues that 70% of companies carried BPR in the US increased confusion in the organization instead of improving the performance. The false operation of BPR will lead to the failure. BPR is not just simple organization modification or information system change but BPR and ISP in all company points of view can be fulfilled only with attending vision of company, goal, and change will of employees. Therefore, the most important factor in proceed this method is proper propulsion procedure and methodology in organization analysis. Especially, BPR will have competitiveness improvement through effectiveness improvement in harmony of process improvement effort and information system innovation effort for the difficulties of performance without support of information system. This is why many methods to approach BPR and ISP in integrated point of view are presented.

ISP (Information Strategy Planning) is the plan to establish vision of information system to support management plan and goal of the organization. The important item that is still in high rank in the US from survey of 'information technology management issue' for acceptance attitude on rapid management environ-

ment change is information strategy plan establishment⁹. It is strategic plan to establish information system supporting to maximize customer satisfaction and work efficiency with combining management strategy and information technology. The environment change of information system have been changed the paradigm with financial strategy based on accounting in 1960s, manufacturing strategy based on product in 1970s, M&A strategy based for functional combination between companies in 1980s, information strategy in 1990s, and knowledge strategy in 2000s. The main purpose of ISP is to combine directions of management and information technology, and define general strategy for information management. Especially, it has character of sharing information by multiple organizations providing order of priority and identifying project coincide with business goal by providing method to support business vision. This methodology evaluated the current system and has large effects in cost saving of information system from it. The information strategy plan is recognized as the most important management function that company encountered. Multiple planning models and methodologies continuously developed since information strategy plan first came to the fore 20 years ago. ISP major procedures and characters are shown in Table 1.

Table 1. ISP Major Procedures

Category	Character
Management strategy analysis	Inner/outer environmental analysis of the company Identify vision and strategy of the company
Current work process and organization analysis	As-Is analysis Draw problems and improvements
Current information system analysis and evaluation	Examine and evaluate current information system Draw problems and improvements
Information model development	Process and data model development to support information request
Information structure development	Process and data development to support To-Be process
Information system strategic plan development	Draw project definition and order of priority

3. The Next Generation Insurance System Construction Example of H Company

3.1 Introduction of H Company

H Company was found in 1948 with foundation ideology of 'realize nation property protection and social welfare'. It began with car insurance in 1983 and has many achievements such as selling chauffeur service insurance the first in the nation, and became major company in Korean fire insurance industry with total asset of 5 trillion won in July 2012. Especially, it has been invested the next generation insurance system based on process innovation since 2010.

The key infrastructure for management goal achievement with future-oriented system providing quick and differentiated service from changes as the next generation system has defined key goal and construction direction to achieve it.

Figure 1 defines that the vision of the next generation system is future-oriented system supporting quick and differentiated services to key infrastructure changes, and key goal and construction direction to achieve it. When concretely examined, core purpose of the next generation system can be seen in 3 different points of view. First, sales competitiveness was strengthened through securing good

customer, systematic product and customer information management and application based on combined customer information. Second, efficient improvement connected to CPC was established based on product, customer, and channel to cope with environment change. It also approached differentiated product and service through selective provision of product and service that are beneficial to the company. Third, the productivity was improved with convenience for customer and endless work process through securing quickness, and preemptive action should be prepared with quick sales support and management information provision. The direction of construction can be seen in 4 points of view. First, the efficiency of operation and management through combination of information, function, and regulation is important. Second, flexible construction should respond to flexible construction for business request in time. Third, simplification improves complex work process by simplifying user work. Fourth, optimization improves productivity with endless work process based on user.

3.2 PI Improvement Project of H Company

Figure 2 deduced 29 PI improvement projects with connecting major goal and management strategy of the next generation system of H Company. The vision keywords

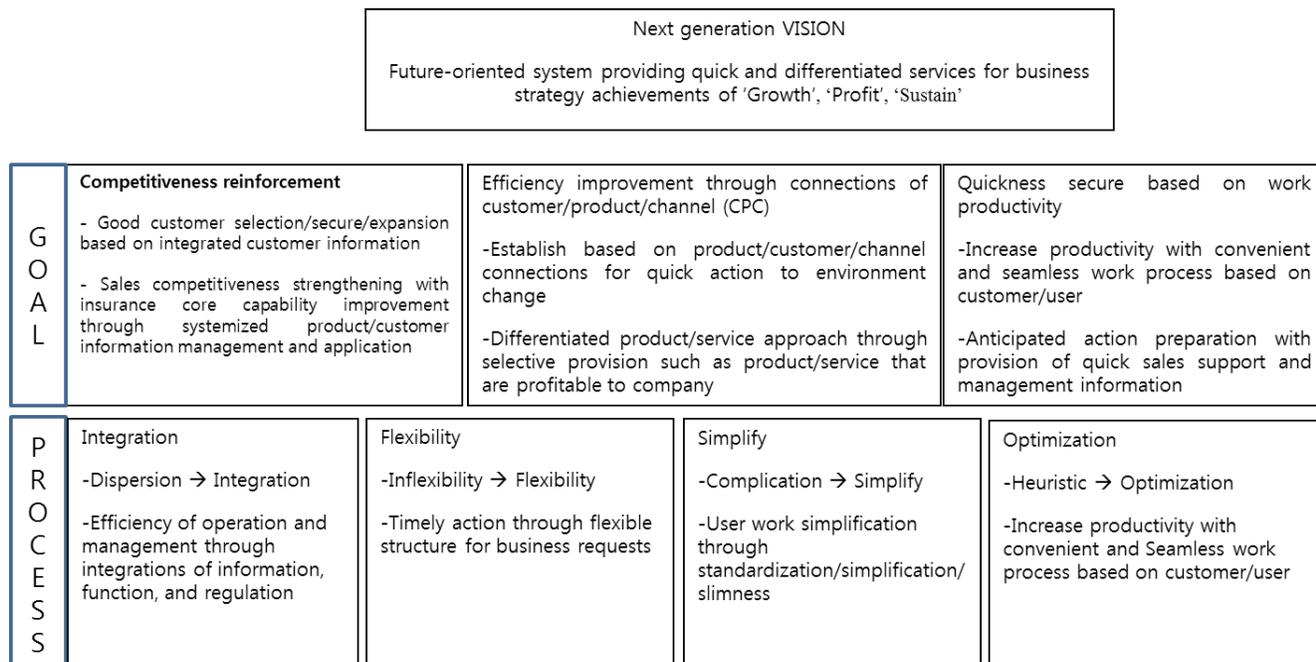


Figure 1. Next generation insurance system vision.

were deducted through PI improvement projects with growth expanding number of customers, stabilized profit structure, and proportion effectiveness.

PI improvement project is deducted with connection of the next generation key goal and management strategy.

3.3 Definition Results of the Next Generation Requests

Table 2 in this research analyzed issues and implications through business architecture material analysis and actual work interviews of EA consulting to analyze work status

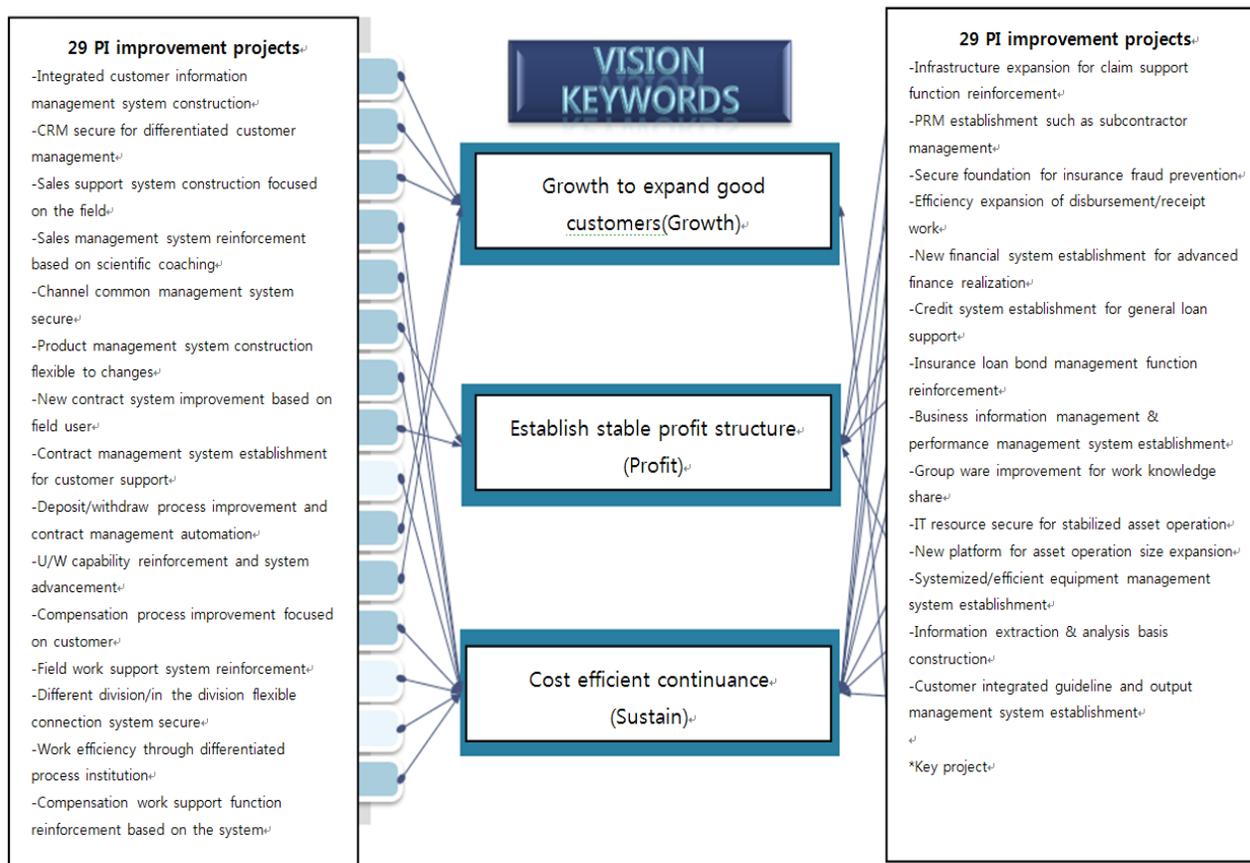


Figure 2. PI improvement project and strategy.

Table 2. Key definition

Key Task				Non Key Task		
Area(Level 1)	Key Project	Key Detail Task	Requirement	Area(Level 1)	Non Key Task	Requirement
Customer/Marketing	4	14	111	Customer/Marketing	-	-
Product	1	4	17	Product	-	-
Contract	3	18	133	Contract	1	66
Reward	4	13	88	Reward	4	53
Enterprise	2	3	37	Enterprise	-	-
합계	14	52	386	합계	5	119

including institution current work process based on the next generation system institution of H Company. 386 major projects, 119 non-major projects from total 505 requests reflecting in the next generation were deducted as below.

3.4 To-Be System Construction

The next generation subject domains were decided as new and reconstruction domain as system construction method was classified for fulfillment of target application in the current system.

Construction methods of different system in Figure 3 are EP, MCA, authority management, RMBS, Meta, EAI/ESB, security, development F/W of technology infrastructure. According to three points of view for business management and support are first, classified as risk/control ALM, law-abiding, and receipt audit. Second, it is classified as budget management, financial accountancy, profit management, MIS, IFRS, actuary, and asset management

in business management. Third, it is classified as general affairs, KMS, and group ware in work support. Service supports are UMS, image, tape-recording, output, code, channel support, and customers are classified into 3 different types; first, customer management is classified as customer information and customer service. Second, sales management is classified as sales support and corporation sales. Third, marketing support is classified as customer analysis and sales activities.

Product and contraction are classified as 5 points of view. First, product is classified as product factory. Second, contract is classified as new contract, reinsurance, maintenance and conservation, deposit and withdraw, and closing. Third, U/W is classified as underwriting examination and examination support. Fourth, indemnification is classified as indemnification, lawsuit, compensation claim, subcontractor, and SIU. Fifth, financing is classified as contract security loan and general loan. Information is

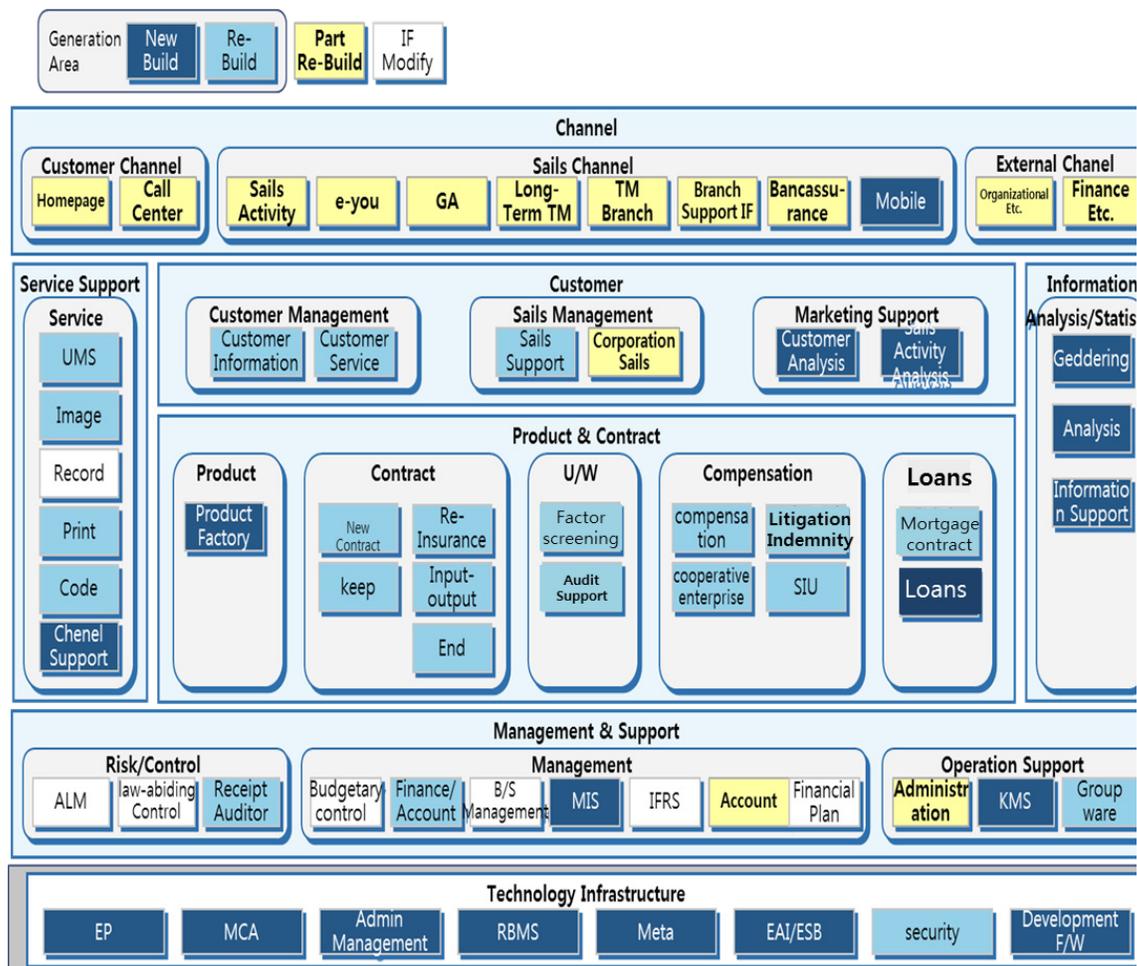


Figure 3. To-Be system.

Customer	<ul style="list-style-type: none"> ● Increase of sales(expect: 21.6 hundred million won) <ul style="list-style-type: none"> - Additional sales possibility of car long-term insurance(goal 1%), long-term insurance expiration customer(goal 3%) according to sales support system establishment of field - Increase of car insurance renewal rate (goal 2%) and good customer persistency rate (goal 2%) 	Contract	<ul style="list-style-type: none"> ● Sales increase aspect (expect: 4.9 hundred million won) <ul style="list-style-type: none"> - Reduce withdrawal cancel contract with contract system improvement, provide customer customized optimized plan ● Cost saving aspect (expect: 25.9 hundred million won) <ul style="list-style-type: none"> - Integrate the work of print notification according to print out rule based standardization and gentrification (4.5 days → 1 day) 	Business management	<ul style="list-style-type: none"> ● Cost saving aspect (expect: 37 hundred million won) <ul style="list-style-type: none"> - Reduce management report writing time, working group meeting minute writing time through business information management & performance management system establishment - Reduce settlement date through new financial system establishment for advanced
Product	<ul style="list-style-type: none"> ● Cost saving aspect (expect: 10.4 hundred million won) <ul style="list-style-type: none"> - Work simplification for product management system flexible to changes and work process simplification for dating of product related information (1,400hr→168hr) 	Compensation	<ul style="list-style-type: none"> ● Sales increase aspect (expect: 2.8 hundred million won) <ul style="list-style-type: none"> - Reduce loss amount through intensive evaluation reinforcement according to work support function reinforcement of system basis ● Cost saving aspect (expect: 101 hundred million won) <ul style="list-style-type: none"> - Reduce document printing cost for compensation through image system establishment (80%) - Reduce additional work of reviewer with system automation 	IT Infrastructure	<ul style="list-style-type: none"> ● Cost saving aspect (expect: 508 hundred million won) <ul style="list-style-type: none"> - Reduce IT service suspension time(0.1hr), reduce channel action time(3wk→1wk) for new channel launching for IT infrastructure reorganization such as H/W, S/W, N/W - Reduce product developing time(6wk→2.5wk) with development/maintenance improvements



Figure 4. Process innovation effectiveness.

classified as analysis and statistics is classified as aggregation, analysis, and information support. Channels are classified into 3 points of view. First, large customer channel is classified as homepage and call center. Second, sales channel is classified as sales activity, e-you, GA, long-term TM, TM dealer, dealer support IF, Bancassurance, and mobile. Third, external channel is classified as related organization and financial institution. It is very important to operate organically and combine each work process module through To-Be system.

4. Result

Many researches on financial system have been existed but the research on the next generation insurance system is inadequate. Therefore, this study has proposed large project management and guideline through project performance for the next generation insurance system development in process innovation point of view, and below implications are deducted.

First, customer focused work process can be secured that providing consistent customer respond service with

combined customer information management system, and can secure quality of customer information through unified management system. The support of sales opportunities and sales activities can be strengthened based on combined customer information. In addition, customer analysis infrastructure can be prepared using accurate customer information. The customer satisfaction through immediate response by maintaining the latest information with unified customer information management and customer information quality management can be expanded.

Second, customer satisfaction and loyalty increase can be brought with customer needs comprehension, tendency analysis work strengthening, product provision according to the customer request, and customer response to different channel character based on customer information combination in customer point of view. In addition, customer dissatisfaction can be reduced by decreasing unneeded overlapped guide or contact. The reliable customer analysis basis can be secured through quality management and can increase good customers with differentiated marketing through customer

segmentation based on customer analyzed information. The customer information reliability can be secured and campaign related activities will be performed and analyzed to provide differentiated service to good customers.

Third, sales opportunity information can be provided to all channels through field focused sales support system establishment, and can create new contract from provision of standard sales activity model. The sales activity time can be expanded through sale activity results management. The sales efficiency can be expanded through process focused sales management and coaching, and new contract can be created by using sales opportunity information.

Fourth, sales using time can be expanded through provision of hierarchical key indicator from sales management system strengthening based on scientific coaching, and organization management work can be efficiently done through sales organization information management systemization and sales efficiency expansion from process based sales management and coaching. The sales organization recruiting process can be managed from this method, whole process of recruiting according to sales organization information system and sale organization system.

The academic and operational implications are different. The process innovation of the next generation system is largely interested by company decision makers. The budget is invested for information system innovation but customer response for service quality and the existing system are not performing well. However, this study has approached in complex with media, person, organization characters and social affects for acceptance and satisfaction research through PI construction case. The operational implication is important to induce immediate feedback from insurance company to customer. It is very important that organization members can have close efficient work improvement and customer approach through the next generation system.

The significance, critical point, further research direction are in the following. This study has lack of interview, depth interview, and experience sampling for the next generation process innovation subject to experts. The evaluation of company employees using the system will be very important through construction development not only for concentrating on construction development. The further research should have opportunity to connect with other information system and expand combined information system. In other words, the plan to develop as strategic company system is needed.

5. References

1. Hammer M. Reengineering work don't automate, obliterate. *Harv Bus Rev.* 1990 Jul/Aug; 427–35.
2. Davenport TH, Short JE. The new industrial engineering information technology and business process redesign. *Sloan Manage Rev.* 1990; (Summer):11–27.
3. Kim S U. Internet insurance sales prospects and measures. *Insurance.* 2000; 380(1):6–14.
4. Yoon J S, Han K S, Han J M. An exploratory study on the relationships between critical success factors and performance of BPR by organizational maturity level. *Asia Pac J Inf Syst.* 1997; 7(2):103–35.
5. Lee S C. Process managemnet innovation. *Yonsei Manage Res.* 1997; 34(2):3–24.
6. Kim C B. A study on the process innovation and business performance of SCM. *Korea Trade Rev.* 2004; 29(6):255–74.
7. Hammer M. Reengineering The Implementation Perspective. An Educational Offering of The Center for Reengineering Leadership. 1994.
8. Champy J. Reengineering management — the mandate for new leadership. Harper Collins Publishers Inc; 1995.
9. Niederman F, Brancheau JC, Wetherbe JC. Information systems management issues for the 1990s. *MIS Quart.* 1991; 15(4):475–500.