TECHNOLOGY TRANSFER: DEVELOPING CRISIS MANAGEMENT SYSTEM IN THE KOREAN BUSINESS ENVIRONMENT

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Keywords

Abstract

This paper suggests a resource-based approach for crisis management system development in the Korean workplace and describes system architecture being developed with this approach. This approach is centered on the disaster itself rather than a business process. The system provides human and physical resource allocation, which is dependent on crisis type, crisis level, and the location of crisis.

Introduction

The objective of this paper is to show why existing business crisis process approach fails in Korean cultural workplace and to illustrate how a new crisis management system was developed. Korean corporations have realized the need to develop a contingency plan for response and recovery rather than just a preparation and warning system as crisis management. In order to develop the plans successfully, it is essential to lay a firm foundation: risk assessment and business impact analysis. However, in the design of its plan in the Korean business environment, it appears that one major issue has received insufficient attention. The issue is the effect of the cultural bias of western business process-oriented analysis.

Korean organizations are focused on the disaster event itself and primarilyinterested in how its related resources can be repaired and allocated fast. It is not important for them to decide business process priority under a specific disaster. Based upon their assumptions, it has not worked effectively with a western business process-oriented approach such as developing a crisis management system.

Cultural Difference on the crisis management between United States and South Korea

We often talk about the culture difference between western and eastern countries. In the crisis management field, the differences can be found in terms of applying the methodology and conducting the projects. In this chapter, we will compare the factors based on the crisis management phase.

Comparisons of the risk and vulnerability analysis

Conducting a survey is generally used to determine the vulnerable business processes in the vulnerability analysis and business impact analysis phase. However, if you conduct a survey in a Korean company, you will be very surprised that the survey results show a great gap [inconsistencies, ed.] in the results of interviews. In another words, the survey result does not have much credibility.

The main reason of this phenomenon is the employees in the corporation do not have the right concept of the crisis management. Therefore, the survey answers from the employees for business impact analysis do not show the most vulnerable business process. In addition to that, the executive officers in the company do not want to believe the results of the vulnerability analysis if the result is not the same way as they expected.

Therefore, for realistic results of a vulnerability analysis in Korea, it is better to have an in-depth interview with senior officers or decision makers who have a long work experience on the specific business functions in the company. Although the in-depth interview results can be subjective, this method would work better than survey methods in the Korean corporations.

Comparisons of the contingency planning phase

There are many differences between South Korea and United States (US) for developing contingency planning. In the United States, a probability-based approach to crisis events on contingency plan is a common approach. The concept of the risk is equivalent to the impact multiples with probabilities on the specific disaster event. Therefore, building a contingency plan is to minimize or prevent the probability of the occurrences of the disaster events. However, in Korea, the concept of plan is not same as the United States. Many corporations in Korea treat the developing of the contingency planning is a part of procedure as same as other impractical plans in the company. Under the strong bureaucratic culture in company, a plan is just a plan. Therefore, with this dummy contingency plan, the response and recovery procedures after the disaster also cannot be carried out effectively. These errors can commonly found among many Korean companies. For instance, K Corporation in Korea had conducted a risk assessment and crisis management system development project in 1999. Based on the research results of this project, K Corporation developed a disaster prevention plan and

reported this to the Ministry of government administration and home affairs. The disaster prevention plan only covered the monthly civil defense drill procedure, which could not be applied to the real disaster situation, and impractical reporting procedures!

Another significant difference is the viewpoint of the target business process of the contingency planning. In the US, contingency planning is developed based on the results of the business impact analysis in risk assessment. Throughout the business impact analysis, the first priority is to protect the contingency plan. However, in Korea, the business process is not as important as the disaster events themselves. Therefore, A disaster event is a starting point to build a contingency plan. Figure 1 illustrates the difference of viewpoints between US and South Korea.

Figure 1. Difference of viewpoints between US and South Korea
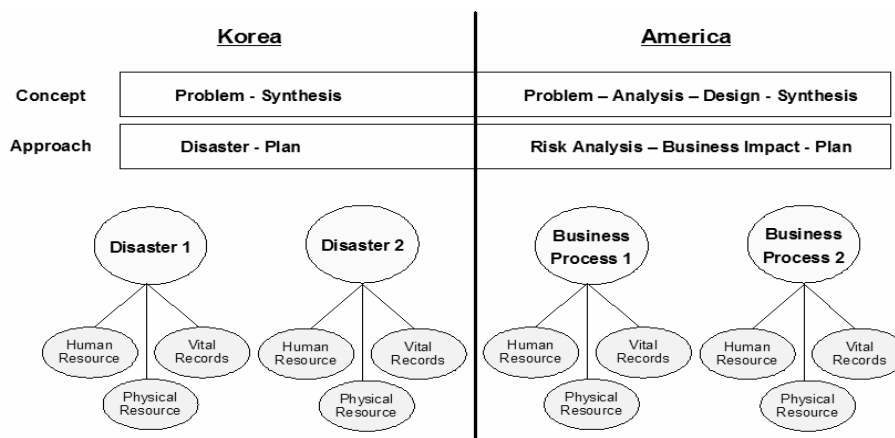
These differences might come from cultureal difference of organization between the US and South Korea. In the US, an organization has a very detail set of job description for each position, and the operation of the company is also based on this set of job descriptions and responsibilities.   In Korea an organization is seen to consist of many departments and divisions and either a department or division will be a basic operational unit to run the company. Therefore, defining the department's role and responsibilities is more important than defining individual position's responsibilities in the corporation. Therefore, the role and responsibilities of individual employee in the company is not clearly defined. Under these circumstances, a business operation depends on the employee's know-how and abilities.   If there is a loss of very experienced and talented employees in the company, this can be a great threat to the whole business operation of the company.

According to the recent research, in a majority of companies in Korean, human resources and physical resources including infrastructures are the most necessary things to protect in order to

run the business. Therefore, the concept of the crisis management in Korea based on protecting human and physical resources in the company. This shows a significant difference on concept of the crisis management in US.

Comparisons of response/recovery phase

It is a very interesting observation that many corporations focus on developing the automated response and recovery system as a part of the contingency planning. For example, automated emergency notification procedure and emergency reporting, building an automated system for collecting the emergency situations are most emphasized in the crisis management projects in Korea. This shows that Korean companies consider the response and recovery phase is most important than any other crisis management stages. This means that the risk assessment and vulnerability analysis phase is treated as only minor pre-activity for the building of an automated response and recovery system. In addition to that, the concept of the crisis management is comprehended as developing automated back-up systems on computer systems in Korea.

Comparisons on the exercises and drill phase

The exercise phase on the crisis management helps us to understand the contingency plan. It also provides a chance to evaluate and modify the contingency based on the exercise results. Tabletop exercises, drills are the one of the way to practice the contingency plan in practice. However, the exercise phase is the most difficult phase to implement in Korea. Most companies in Korea do not practice the drill after developing the contingency plans. Any drill associated with disaster or crisis is considered as a part of civil defense drill, which is conducted by Ministry of government administration and home affairs.

The interesting point throughout risks assessment and crisis management system development project on K Corporation and K Bank's strategic planning development on crisis management project was that they requested to build a virtual simulation on specific event as a part of the project requirements. This shows that companies in Korea prefer to have a quantified method as a drill and exercise than having a real drill with real people to practice the contingency plan.

Crisis management model for Korea

This section covers a development of crisis management model for corporations in Korean based on the problems that have discussed.

Issues of the corporations in Korea on crisis management

First of all, there are no clear definitions and descriptions of the business process in the corporation. Companies usually reply on the employee's know-how that has been gained throughout the long working experience. Therefore the business process can be defined differently according to employee's know-how and viewpoint of the business process.

Secondly, employees do not understand the urgency of a contingency plan. In Korea, a building plan is considered as a reporting tool for senior officers as a part of regular work procedure. Mostly, employees in an organization have a huge doubt about a contingency plan. And most think that it won't work under the real disaster situation. This is caused by the strong bureaucratic culture in Korea. Therefore, it is hard to get positive support from the employees on developing the contingency plan.

Thirdly, the complicated decision making procedure is a big obstacle under the real disaster situation. The lack of standard reporting procedure for decision-making in the organization requires more time for decision-making.

Next, there is strong need for the automated crisis management system as part of a contingency plan. This would be good for the crisis management for the information systems; however an automated system cannot cover the whole procedure of crisis management.

Developing the crisis management process

Based on the problems shown above, a crisis management process will be discussed. The crisis management team and its communication process is shown figure 2. As illustrated, crisis communication can be added in the case of cooperating with other organizations.

Figure 2. Crisis management Process
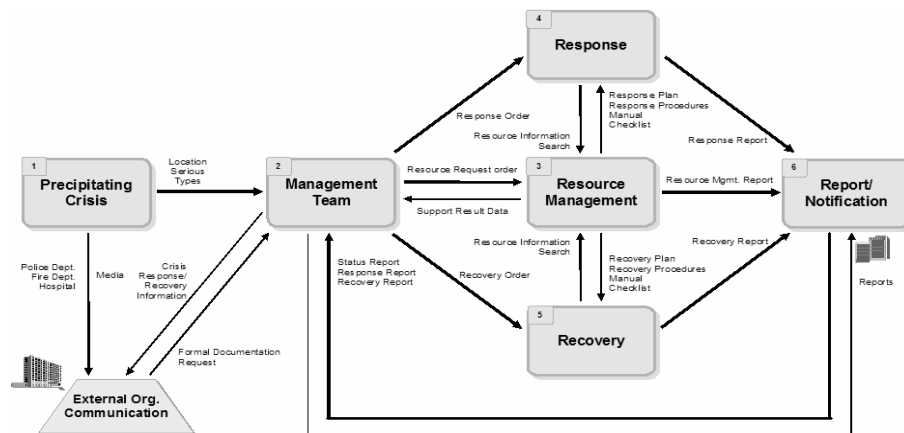
Developing the crisis management model

The structural base of the contingency planning in the model is the crisis type and level at the location. Based on these two components, relevant human resources and physical resources will be combined. Additionally, crisis management team will be formed, and team activities, reporting procedure and action procedure will be defined accordingly. Figure 3 shows the conceptual model of the crisis management in Korea.

Figure 3. Conceptual Model of Crisis Management
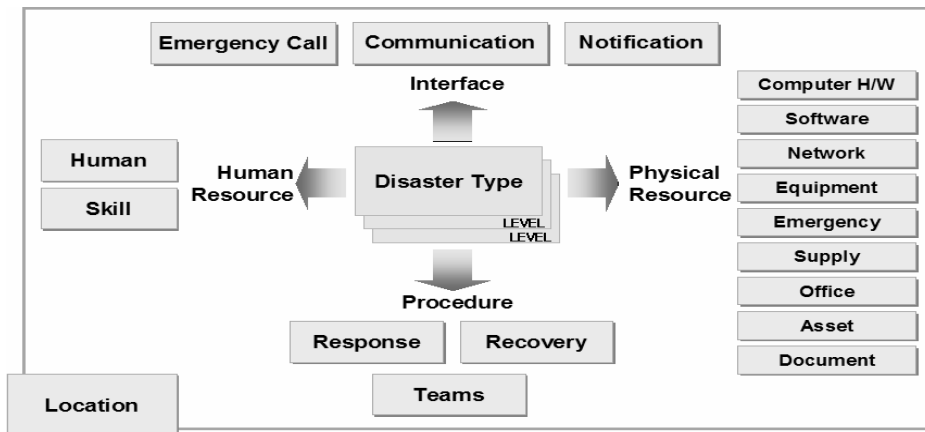
Based on this conceptual model, the detail crisis management model is proposed. This model has four key functions: contingency planning, response and recovery, exercise, and backup. As shown in figure 4, once the crisis occurs, emergency situational information will be collected by the emergency notification procedure and executes the contingency plan. For exercise, the emergency scenario will be developed to apply the response and recovery phase. Additionally, in case of the disabling disaster recovery planning support system, backup site will be set up, so that critical data will be saved to a remote place.

Figure 4. Crisis Management Model
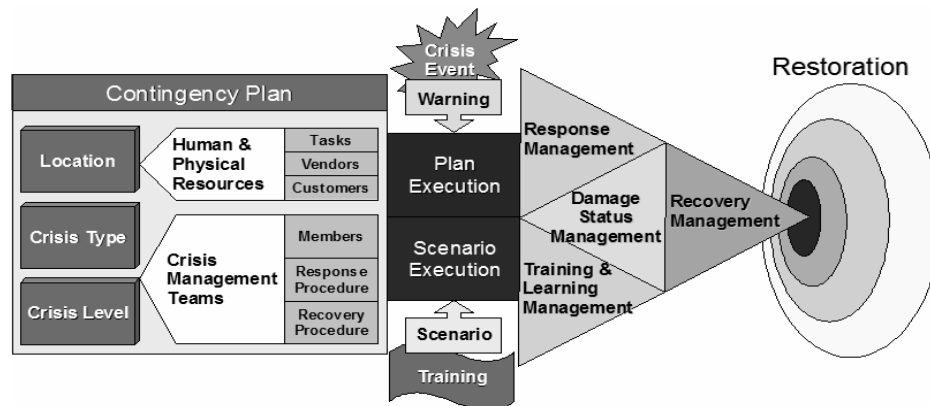
Contingency planning

Three important components of the contingency planning are location, crisis type and crisis level. Figure 5 illustrates the detail components of the contingency planning.

Figure 5. Components of Contingency Plan

First of all, scale, location, area, and zone will be defined. Zone indicates a site with physical distinction such as factories or departments in the cooperation. Area consists of the number of the applicable zones, and location consists of the units with relevant areas. Therefore, the zone is the basic functional unit for the resource management.

For human resource management, employee's personal information and emergency contact information will be collected and obtained for emergency. Also, job task and skills are recorded in the human resource database.

For physical resource management, there are 7 categories: computer systems, software, network, manufacture equipments, assets, and office equipments. Each category contains detail information such as current values, lead-time for order, insurance, contact paper and manuals.

Second of all, crisis type and crisis level are defined based on the location. Crisis level can be defined various scales by a company. After all, emergency management team will be formed and detail team activities by each phase will be defined. Emergency reporting procedure will be set up for the emergency management team.

Response and recovery phase

Once the disaster occurs, the emergency notification will be delivered by the disaster recovery and planning support system. At that time, the situational information will be collected and will be sent to a chief officer of emergency management team by SMS (Short Message Service) and e-mail. The chief officers of the emergency management team will execute the contingency plan based on the location and crisis type and crisis level.

The disaster recovery and planning support system will provide necessary data to emergency management team including human and physical resource information, team activities and

reporting procedures.

Once the response and recovery phase are over, new data will be save to the disaster recovery and planning support system for future use. Figure 6 shows the detail procedure on response and recovery phase.

Figure 6. Procedures on Response and Recovery Phase
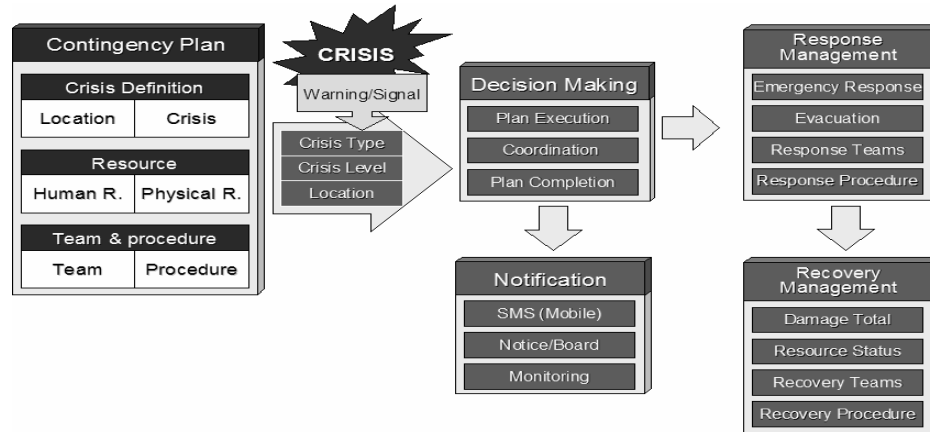
Exercise and learning

For effective maintenance of the contingency plan, exercise and drill are required. By developing virtual scenarios, the emergency management team will learn more about other type of disaster and gain more experiences. The detail exercise and learning procedure are shown as figure 7.

Figure 7. Exercise and Learning Procedures
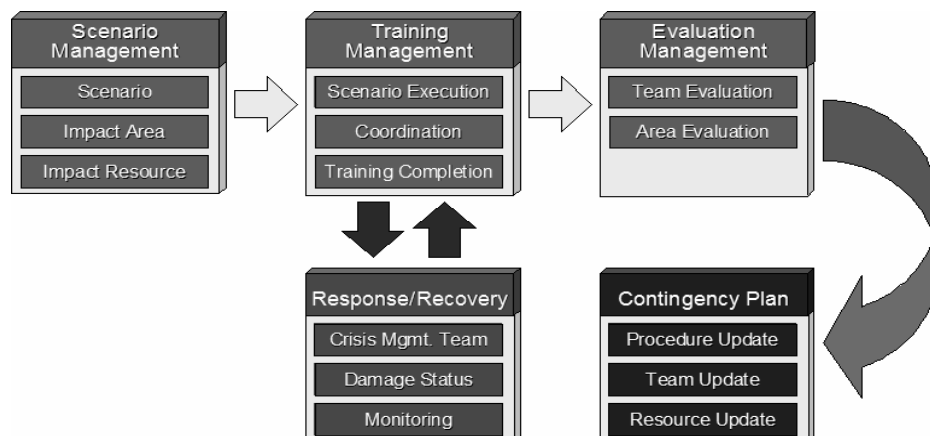
Conclusion

This paper discussed about developing the new crisis management model for the corporations in Korea. As mentioned previously, the difference between US and Korea is the viewpoint of

the business processes and contingency planning. To overcome these differences and apply the crisis management theory in Korea, this paper suggested a new crisis management model.

The most significant achievement of developing this model will be helping corporations to make their contingency plan more practical. The proposed crisis management model can be used to developing a crisis management procedure for various organizations such as local governments and public sectors. This model can be extended flexibility to the crisis management of existing information systems in corporations as well.

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