

Digital Supply Chain Model for Emergency Management in Thai Universities

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Abstract—The purpose of paper is to study and to evaluate digital supply chain model for emergency management in Thai universities. The research sample totalling ten experts consisted of ten experts consisted of five experts on supply chain , five experts on digital technology. The employed research instrument is a questionnaire. Statistics employed for data analysis are mean and standard deviation.. The research findings digital supply chain model for emergency management in Thai Satisfaction comprises six elements namely main components suppliers, University, Good service and security, Customers and satisfaction. The paper found that digital supply chain model for emergency management in Thai has suitability in a good level that mean the model may be applies in support the tasks.

Keywords— *Digital supply chain model, emergency management, Thai universities*

1. Introduction

Security systems in universities are now very important, and Thai universities have more students. Some universities are committed to ensuring the safety and general well-being of those on campus and providing appropriate policies, procedures, and strategies to maintain a safe campus. Due to recent violent crimes, natural disasters, and other emergencies and crises, some universities face many challenges in emergency management practices related to the specific structure and environment of higher education. College and university campuses often cover large geographic areas and can even resemble small towns with all services nearby (medical centers, sports complexes, residential centers, businesses, etc.) . Campus populations change from day to day, semester to semester, and year to year. Many run complex businesses in addition to their academic programs. Hospitals, R&D facilities, performing arts venues, sports complexes, agricultural centers, multifamily housing, hospitality and transportation systems all present a unique set of circumstances

that must be considered when developing emergency management plans. . These structural and environmental features pose challenges for access control, monitoring movement, defining facility and site boundaries, standardizing procedures and decision-making processes, and prioritizing resource allocation. [40] The security system applies the concepts of supply chain management and digital technology. It becomes an option as the company needs to be very competitive as the domestic and international competition is getting more and more intense. In order to be competitive, industry organizations need to ensure that they have people with the skills to work efficiently to improve their performance. Therefore, organizations must have sufficient information and resources to better respond to customer demands. The supply chain management process is therefore a key process that supports the entire system of activities of an organization from upstream to downstream. This enables organizations to review their information systems without delay to ensure that they are operating smoothly and effectively according to their established strategy. [1],[2] Based on realization, researcher has decided study and evaluate digital supply chain model for emergency management in Thai universities for application to increase values of universities and increase satisfaction of consumers.

2. Review of the Literature

Digital system for emergency management in Thai universities

Digital system for emergency management in Thai universities have the potential to change organizations and promote the emergence of new organization. it is consists of comprises six elements namely main components suppliers, University, Good service and security, Customers and satisfaction. All elements can helps to take operational and quality of good work[39]

3. Research Methodology

3.1 Analyse and synthesize documents about digital supply chain model for emergency management in Thai universities

3.2 Study digital supply chain model for emergency management in Thai universities by interviewing the ten expert

3.3 Digital supply chain model for emergency management in Thai universities is presented to expert for consideration and modified it as guided.

3.4 Create a form for evaluating the suitability about digital supply chain model for emergency management in Thai universities

3.5 Analysed to find the mean and standard deviation.

4. Research Findings

Research findings about digital supply chain model for emergency management in Thai universities are presented in figure 1 as shown below:

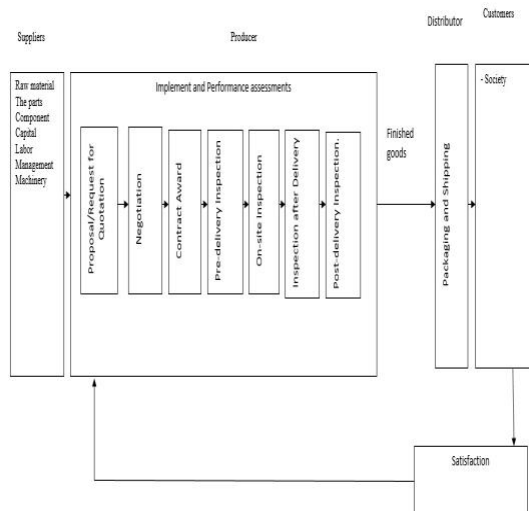


Figure 1 :Digital supply chain model for emergency management in Thai universities

1. Suppliers

Suppliers refer to raw material, The parts, Component, Capital, Labour, Management, Machinery to the university. They can send in the computer system.

2 University

University mean service provider. It performs the duty to install raw material. Service provider will perform its duty of raw materials Implement and Performance evaluation of each activity as follows:

1. Get Organized

1.1 Build support by getting institutional commitment and leadership for emergency management work.

1.2 Identify, access, and use available resources, from both inside and outside the institution.

1.3 Formulate a project organizational structure [that consists of an advisory committee, a planning

team, a project manager, or other structural components.

1.4 Develop a project work plan that has tasks and milestones.

2. Identify Hazards, Vulnerabilities, and Threats by Conducting a Risk Assessment

2.1 Identify a vulnerability assessment tool, which assists an institution in the ongoing process of identifying and prioritizing risks.

2.2 Identify and profile potential hazards, threats, and vulnerabilities.

2.3 Assess vulnerabilities to potential hazards and the institution's capabilities in responding to an event.

2.4 Assess potential consequences and impacts of various emergency events.

2.5 Identify actions that can be taken to prevent, mitigate, or prepare for hazards and potential hazards.

3. Develop or Update the Emergency Management Plan

3.1 Ensure that the plan incorporates the nine key principles in emergency management that contribute to a successful plan.

3.2 Incorporate the results of work done in topic two, including identification of hazards, threats, and vulnerabilities through a risk assessment

3.3 Address planning elements associated with each of the four phases of emergency management: Prevention and Mitigation, Preparedness, Response, and Recovery.

4. Adopt and Implement the Emergency Management Plan

4.1 Subject the draft plan to a thorough review and approval process.

4.2 Communicate and distribute the plan in various forms (e.g., via the campus Web site, on posters in classrooms, in pull-out guides for specific audiences and responders) to a full range of involved parties.

4.3 Test and practice the plan in training sessions, drills, and exercises.

4.4 Implement action items related to prevention, mitigation, and preparedness.

4.5 Monitor and update the plan on an ongoing and regular basis, with assistance from after-action reports that are compiled following exercises and corrective action reports that are compiled following actual emergencies, and using lessons learned from both.

3. Good service and security

Good service and security refer to students or guest that can receive services.

4. Customers

Customers mean the end-of-process component of the model. They include the society. Finally, the end product will provide added value to the supply chain.

5. Satisfaction

Satisfaction refer to data from the questionnaire assessment. [1],[2],[3],[4],[5],[6] and [40]

Table 1: Results for evaluation about digital supply chain model for emergency management in Thai universities are shown in Tables 1 below:

No	Evaluation Lists	\bar{X}	S.D.	Suitability
1	Main element	3.64	1.19	Good
2	Suppliers	3.64	1.18	Good
3	University	3.70	0.82	Good
4	Good service and security	3.70	1.05	Good
5	Customers	3.70	0.82	Good
6	Satisfaction	3.60	0.69	Good
	Summary	3.66	0.96	Good

From the table 1, The ten experts found that digital supply chain model for emergency management in Thai universities has suitability in a good level ($\bar{X} = 3.66$, S.D. = 0.96).

5. Discussion

Digital supply chain model for emergency management in Thai universities has suitability in a good level ($\bar{X} = 3.66$, S.D. = 0.96). and the design was corresponds to the research of Chansamut and Piriyasurawong has studied supply chain and information system about educational [2] Furthermore, with the study of chansamut suggesting that Technology in supply chain [3],[4],[5],[6],[7],[8],[9],[10],[11],[12],[13],[14],[15],[16],[17],[18],[19],[20],[21],[22],[23],[24],[25],[26],[27],[28],[29],[30],[31],[32],[33],[34],[35],[36],[37] and [38]

6. Conclusion

Digital supply chain model for emergency management in Thai universities has suitability in a good level ($\bar{X} = 3.66$, S.D. = 0.96). that show The model is appropriate and applicable to real practice.

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