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Performance Improvement Operations Management Industry Uses Supplier Selection Online

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Abstract

Operational management is the management of a business to the fullest use of all factors of production that is both labor (SDM), machinery, equipment, raw materials and other production factors in the process of transformation to become a wide variety of products or services. What can be done by the management of the operation is to carry out all the functions of the management process: planning (planning), organizing (organizing), the establishment of staff, leadership and control.

Supply chain management is a system in which business process is used to set a mature plan obtained from raw materials to finished goods produced until the final consumer. In a series of supply chain management, the role of the good supplier.

Supplier is one part of the supply chain is very important and affect the viability of a production process. Improper supplier selection may disrupt the operational activities of the company, while the selection of the right supplier will minimize the cost of purchasing, improve the competitiveness of the market and end-user satisfaction.

In the era of information and technology as it is today, with the AEC, suppliers not only from one country, existing suppliers may consist of suppliers from foreign countries. To improve the performance and efficiency of supplier selection in order to obtain a quality supplier with low cost and efficient process necessary suppliers Elections online. In this paper put forward the basic idea of performance improvement operations management by selecting suppliers online. The method used to create an online supplier selection is prototyping. The result is a framework concept online supplier selection methods.

Keyword: Operational Management, Supply Chain Management, Supplier, Supplier Selection Online

Background of study

Within the framework of the supply chain, including the activities of selecting suppliers of complex problems in multi-criteria decision making due to factors involved have different interests. To select a good supplier is not only based on a consideration of the issue price of cheap, but many other criteria that must be involved. (Yu and Tsai, 2008)

On the other hand, selecting new suppliers in particular have a higher degree of difficulty because the data has not been saved partner's track record in the company's database. To select a new supplier is not allowed to use assumptions as the basis for the selection of new suppliers. All must be based on empirical data that owned by the client itself.

To solve the problems of the new supplier selection put forward the basic idea of choosing a new supplier uses a web-based online media.

Literature Review

In a previous study written, supply chain management system is a business process that is used to set a mature plan obtained from raw materials to finished goods produced by the final consumer. (Koster and Delfmann, 2005). Within the framework Supply chain management is related to the selection of the right supplier. (Blecker and Hamburg International Conference of Logistics, 2014) Selection of appropriate suppliers will affect operations and production management as it affects the availability of raw materials (Dima and Grabara, 2013). Selection of suppliers is a strategic decision in the supply chain that improve competitive advantage. (Cooper et al., 1997). Therefore, it is necessary to use a device supplier selection decision support system. (Scott et al., 2015a) Selection of suppliers involves a combination of variables (multi-criteria) complex when used for decision making. (Scott et al., 2015b) Therefore, all the data needed to be managed into useful information for decision-making through a database system (Talarico and Maya Duque, 2015)

Across the studies that have been written are not currently applied online through the Internet media to choose suppliers. Therefore, this study aims to create a prototype decision support system supplier selection is accessible online.

Methodology

The design phase is a decisive stage of implementation can be done well. To implement the prototype used prototyping method as shown in Figure 1.

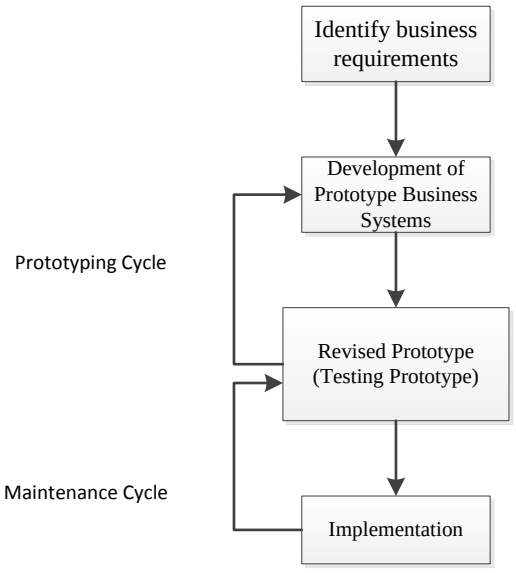

Figure 1. Prototyping Methods

A. **Identify business requirements**

Building information systems began with identifying the needs of the information related to the company's business needs. This identification to analyze all the components used in the system include hardware, software, network including brain ware. At this stage also noted the activities of input, process and control the storage out.

Furthermore, conduct a feasibility study (feasibility study) to formulate the required information the end user, resource requirements, costs, benefits and feasibility of the proposed project. Analysis of system requirements as part of the initial study aims to identify the problems and specific needs of the system. The specific needs of the system are the specification of the things that will be done when the system is implemented.

Needs analysis phase requires evaluation system to determine the ability of the system to define what should be done by the system then determines the criteria to be met system. Several criteria must be met are achieving goals, speed, cost, quality of information produced, efficiency and productivity, accuracy and validity and reliability or reliability.

B. Development of Prototype Business Systems

Prototype development begins with a series of System Design. This activity, determines how the system will meet these objectives. The system design consists of design activities that produce functional specifications. Comprised of interface design, data and processes with the aim of producing specifications for the product and the user interface method, the database structure as well as the processing and control procedures.

The system design will generate prototype software package, a good product should include seven parts:

1) The menu features quick and easy.

2) The display input and output.

3) The report is printed.

4) The data dictionary that stores information on every field, including the length field, editing in any format reports and field use.

5) Database with key formats and record optimal.

6) Displays the online query appropriately to the data store

7) The structure of a simple programming language that allows users to perform special processing, time of occurrence, automated procedures and others.

C. Revised Prototype (Prototype Testing)

Prototyping software packages tested, implemented, evaluated and modified repeatedly until acceptable wearer. Testing the system aims to find mistakes that occur in the system and revise the system. This stage is important to ensure that the system is free of errors. (Pressman, 2005)

Testing of web-based information systems can use the techniques and methods of traditional software testing. Web application testing includes testing the links, browser testing, usability testing, load testing. One model measurements that have been translated into several different languages and did not show significant differences in measurement results is the End User Computing (EUC) Satisfaction. This model emphasizes user satisfaction towards the technological aspects include aspects of the content, accuracy, format, timing and ease of use of the system.

D. Implementation

Once the prototype is accepted, then at this stage is the implementation of the system are ready for operation and further the learning process of the new system and compare it with the old system, technical and operational evaluation and user interactions, systems and information technology. (Mc Leod, Jr. and P. Schell , nd)

Results and discussion

Selection of new suppliers cannot be separated from the availability of preliminary data. A new supplier who has never been a supplier for the company registration is required through the web. At the initial stage, the company disseminates information on the announcement of a supplier. The second stage of the company receiving the document while the registration requirements of the supplier to register online by sending data via email. The third stage of the company received the registration and provide the link address for the form filling criteria for suppliers. The fourth stage companies to check the completeness of data capacity, and of saving the data in the database. The fifth stage, the data stored in the database is processed by the system Pedukung Decision in order to obtain proper sequence selected supplier.

Conclusion.

Based on the description above, it can be concluded that the difficulty of Choosing a new supplier in the era of AEC, can be Overcome using online decision making tools. In making the design tools decision making is done using a prototyping method. There are Several stages for prototyping the method, namely: identification of business needs, the development of a business system prototype, the prototype revision in order to meet the final requirement, implementation.

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