

FACTORS AFFECTING THE IMPLEMENTATION OF EXISTING E-PROCUREMENT SYSTEM

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Abstract

This paper reviews the implementation status of the current e-procurement system and the problems faced during the implementation. E-procurement solutions though provide a long term advantage to the growing firms as well as already established organizations due to its direct link with the supply chain process. But this needs an efficient integration with the current business process such as material requirement planning etc. Some of the problems that can be faced in the internal business are the cost issues i.e. if the top management finds the profit doing justice to the initial investment and the high risk involved in case of failure to implement in the system. Next is the external business, which deals with continuous support of external market such as vendors and suppliers in doing business using information technology. Some of the technological risks involved are the compatibility issues of the new one with the traditional system. Then one of the major problems is related to the people that are resistant to change and needs to provide efficient training for the same. After that possible solutions are also discussed such as change management programs and platform independent information systems that ensure efficient implementation of the system.

Keywords: *Supply chain, information system, business process, e-procurement.*

1. INTRODUCTION

The concept of e-procurement is basically the automation of various steps in the procurement process through the use of internet enabled tools.[1] Generally, traditional procurement process comprises of nine basic steps starting from requisition that deals with identifying the need and requirement of a material for which procurement needs to be done. Next step is authorization, in which the requisition is distributed over a range of sellers depending on the type of tender, for example open tender. The buyer will approve the quotations sent by the seller and the deal is made

between the buyer and the seller either in the form of contract or as a stand-alone non contract order. Third step is generating a purchase order in the name of the seller or supplier whose quotations are approved. After the goods are received the next step is good receipt note which is generally the confirmation by the buyer that the goods are received. Further, invoice is generated on the supplier end that denotes the goods being shipped and the charges to be applied. Next step is the reconciliation of the invoice with the purchase order which answers some of the questions like is the amount delivered and the charges applied correct? After the process of reconciliation is done the next step is to proceed with the payment process. The payment is done using appropriate payment methods like in terms of electronic cards, p-card or using the cheque. After that some companies may reclaim their taxes depending on their corporate status.[2]

2. FACTORS AFFECTING E-PROCUREMENT IMPLEMENTATION

Now when we have studied about the traditional procurement process, it is obvious to understand the definition of e-procurement. It is basically the automation of all the processes mentioned above using ERP Standards and web technologies. However, certain risks are involved while implementing e-procurement process. These factors are mentioned below:

1. Business Risks

The primary factors influencing or rather affecting the implementation process are the risks involved in the business process itself. These business risks are further divided into two categories:

1.1. Internal Business Risks

Internal Business Risks refer to the risks that arise due to the existing infrastructure for information storing and sharing in the organization and its integration that needs to be done with the new system. Generally, organizations used to put in all

their efforts as well as resources in building the manual system in their early days and when the new system needs to be implemented, it contains a lot of risk to again re-engineer all of them. Further, all the information is already stored in the present system and while the new system is integrated the data needs to be migrated through the systems. In case of any discrepancy or error, the data will be duplicated in both the systems that will put unnecessary load on the efficient working.

1.2. External Business Risks

External Business Risks is exactly the opposite of the internal business risks. While internal business risks involved all the influencing factors within the organization, external business risks involve all the contributing factors from outside the organization. One of the main problem in smooth functioning of the e-procurement process is that the process deals with many outside parties such as vendors, customers etc. Suppose, a supplier is approved for the delivering certain amount of goods and the invoice is generated. Now, using modern day dynamic ERP solutions, digital purchase orders can be generated which can be directly linked to the system of supplier. However, in order to do this, the supplier needs to have a similar kind of system with identical communication standards which is not the case in many situations.

2. Technological Risks

One of the major concerns while implementing the e-procurement system is the uneven distribution of various technological solutions across the globe. This uneven distribution leads to flow of information across various entities in external market very difficult. Various platforms on which different ERP solutions are based sometimes creates problems like compatibility issues or the form in which data is transmitted that leads to inoperability in the procurement process and inefficient transfer of information.

In addition to dealing with technological risks in the external market, there is a significant amount of risk in the internal environment as well. If switching from manual procurement process to the automated one is a tedious task, switching from existing information system to a modern one is more of a task. This includes reliable study of the existing system and various entities that needed to be integrated. Further data needs to be migrated from one system to the other.

3. Process Risks

Another important factor that is related to the implementation of the e-procurement process is the

security and reliability issue. Due to the fact that various entities in a market will communicate with each other in order to send and process information, the whole system is generally built on web based solutions. However, the main disadvantage of using web solutions in a business is that it can be easily intercepted. There are many examples in the history that defines the devastating effect of unauthorized access of organization's information on the organization.[3] The organizations became bankrupt overnight by such act of stealing information and selling it to the competitors. Similarly, another act of unauthorized act that is most common now-a-days is the Dos attack on these systems. Denial of service attack is basically overloading the server with a huge amount of requests in a very short period of time that leads to crash of the system due to which organizations suffer millions due to inoperability.

Further, using traditional technologies in the business process like sending email address of suppliers using traditional electronic data interchanges (EDI) methods like mailing or automatic fax rather than on the internet over secure connections may lead to stealing of data as well as unauthorized access.

3. POSSIBLE SOLUTION DURING IMPLEMENTATION

Now that we have discussed about all the factors that influence the implementation of e-procurement process in an organization and all the risks involved, let's talk about the possible solutions that can be implemented while implementing e-procurement solutions in the organization.

1. Security and authentication

This is a major concern as we talked about it earlier while implementing e-procurement solutions. Major preventive measures should be taken in order to ensure privacy and security in the system. To achieve this, various roles and responsibilities are assigned inside the system to various users and after that their authentication is done. For example: Let's suppose the system by the manager or the top management that can view list of all vendors and customers along with their personal information. Further, they can also view the stats related to all the purchases and the invoices. Other type of access can be ordering of materials by the middle management people. Accordingly, roles will be designed for each of the profiles and the functions that are not required will be hidden respectively. Next, authentication process will be carried out that will distinguish users accessing the previously

defined roles. The authentication can be done by various ways such as a combination of username or passwords or fingerprints etc.[4]

2. Communication Standards

Because most of the transactions will be depending on the flow of information across entities residing in multiple locations across the globe, defining a widely accepted communication standard will reduce a lot of risks and errors while communicating. Lately it is discovered that the standard for communicating information and other electronic documents is adopted in the form of extensible markup language standards. The XML standards provide the default for writing. The XML standard defines the content in communication and in the selection of general data [5].

3. Change management programs

The best practice to perform inside an organization while performing the automation of the procurement process, also known as implementing e-procurement process is to assess change management inside the organization. This will include organizing workshops and seminars giving information to the employees about the advantages of using the automated system. After implementation of the system it is necessary to conduct training programs that will give an idea about the system functionality to the actual users.

4. Performance Measurement

This is a concept that will define the actual benefits from implementation of the e-procurement system in the organization. Companies generally perform these performance measurement activities in order to justify the efficiency and ease of implementation. For this, several KPI's (Key Performance Indicators) were already discussed prior to the implementation of the system. KPI's are the standards that are formed by the organization that will give an idea of how the business will perform after implementation of the modern system.[6]

5. Top management Support

As mentioned in the name itself, top management support is primarily required for the successful implementation of the e-procurement process in the organization. Besides that the managerial level staff as well as executive level staff is equally required. The top management helps in taking decisions as well as initiating the whole process. Moreover,

it also helps in making strategies and ensuring it is followed properly. The managerial level staff ensures the policies and guidelines are well understood by the team. Further, the executive level staff is responsible for creating mission and vision and ensuring the committee is working together.

4. CONCLUSION

E-Procurement is the need of the modern day world. With the ever growing competition in the market, the real time processing of information and fast and efficient flow of information as well as material is the need of the hour. In this scenario, the concept of e-procurement integrates the traditional procurement process with the modern day web tools and techniques that not only provides fast and reliable data about various stakeholders in the business such as vendors and customers, it also helps in analyzing the status of the companies when it comes to procurement. In this paper, we discussed about various factors or rather risks involved in the implementation of e-procurement process inside the organization and various solutions that can be implemented to ensure smooth and optimized implementation.

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