WIRELESS TECHNOLOGY AND COMMUNICATION: THE PACEMAKERS FOR THE ERP

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To coordinate all the resources, information, and activities needed to complete business processes, to ensure transparency amongst them and to facilitate tracking down information regarding the status of a particular activity or order and so on had really become the concepts of challenge. To tackle these challenges an enterprise-wide information system was designed rather evolved from MRP (Material Requirement Planning) named ERP (Enterprise Resource Planning). Manufacturing management systems have evolved in stages over the past 30 years from a simple means of calculating materials requirements to the automation of an entire enterprise. ERP calls for constant modifications and up gradations. In this paper three important elements, Open Source, Web enabled and wireless technologies namely are discussed that have rejuvenated the functioning of ERP.

1. INTRODUCTION

A complete business demands a perfect transparency amongst all its resources, information, and activities needed for it, which is a challenge. Hence to meet this enterprise-wide information system was designed rather evolved from MRP (Material Requirement Planning) named ERP (Enterprise Resource Planning).

ERP helps in integrating the data in an organization under one common roof. The purpose behind this is not only to ensure transparency but also to facilitate dissimilating down information regarding the status of a particular order or wherever and whenever required. If a company succeeds in this it would definitely achieve ERP benefit. An organization has to do diversified and rigorous planning, formulate strategies before actually going ahead with ERP. ERP can cut down costs; improve the quality of working time. Thus it helps in making the maximum use of technological advancements and strategically developments and has enabled organizations to avoid laborious and tedious processes. ERP systems typically handle the manufacturing, logistics, distribution, inventory, shipping, invoicing, and accounting for a company.[1] ERP software can help in controlling of almost all the business activities such as sales, marketing, delivery, billing, production, inventory management, quality management and management. Organizations cannot progress derive maximum benefits without properly understanding and implementing upon the ERP Fundamentals. There are crucial factors of ERP that deserve attention. The services of ERP cannot occur all of a sudden in any organization. It is a long drawn process that may require a couple of months and might take years depending on size and nature of the organization.

2. NEED OF TECHNOLOGY IN ERP

Companies have to be more vigilant when it has to choose the appropriate platforms and ERP software. This issue becomes much crucial when it comes to the point of corporate amalgamation. [2] The software used by the different companies has to be brought under one common platform. When a company goes in for ERP it must ensure that the information is updated as the facts and figures in the past will have no relevance to the current system. The progression must be constant to make sure that ERP intervention account the most relevant facts. An understanding of ERP basic is necessary to ensure this.

ERP calls for constant modifications and up gradations, therefore ERP developers face tremendous pressure both from vendors and companies. It becomes important to analyze the ERP trends and modalities. Both the vendor and the company would make use of the modern facilities through proper coordination, teamwork and nurturing a cordial atmosphere. These are three important elements that have rejuvenated the functioning of ERP, Open Source, Web enabled and wireless technologies namely.

Open Source has done away with the hassles of paying license fees not only during installation but also whenever a modification is made. The company is relieved from depending even for minute matters.

Web enabled ERP in making the enterprise operations go online, enabling the stakeholder or third party access the required information easily from anywhere in the world. This has proven to be of great help especially during emergencies when the details are required immediately.

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Wireless ERP has helped organizations made the effective and efficient use of the communication channels. It made many elements possible to operate in ERP which otherwise were not. Wireless ERP is nothing but sharing enterprise information through internet and other devices making it possible for outsiders to access the same.

Companies should be clear with the concept of enterprise resource planning before thinking of implementing it. The catch word of ERP implementation is speed. The faster it is implemented the quicker and better are the advantages and delivery in terms of results. This early process has another hold. The returns are sought at a shorter period. This deviation from the conventional practice has become the order of the day as far as many companies are concerned. Formerly Business process reengineering played a vital role with respect to implementation. It is important to know the components of Enterprise resource planning.

3. Wireless World

ERP is no longer just for the back-office technology but, through wireless communications, is being transformed into the vital heart of a network that reaches out to the shop-floor, to delivery fleets and to the customer at the point of delivery. [3] ERP everywhere is now a practical reality and it need not be expensive.

Simple wireless technologies such as barcode scanning provide a platform for significant operational improvement. Critically, not only is there international backing for simple barcode standards, avoiding the complexity of RFID, but these wireless technologies, from Wi - Fi devices around the warehouse and out in the field via the GSM mobile network, are well proven.[4]

Wireless technology has facilitated enterprise operations in diversified ways. Firstly it has helped the stakeholders in getting up-to-date information on enterprise operations as and when required through the use of modern communication devices like mobile phones laptops.

4. Advantages of Wireless Technology and Communication in ERP

Solar soft is fully engaged with the revolution that has made wireless technology a standard part of everyday commercial life. The supply of a complete barcode automation packages that are cost effective and simple to use, supply of high-end RFID (radio frequency identification) systems for the most demanding supply chain applications etc are some of the wireless means boosting ERP. All Solar soft ERP platforms support wireless the options and the Warehouse and Logistics Systems division specializes in adding wireless capabilities to other vendors' systems. Following are the areas in which wireless technology and communication help an enterprise.

In Market and field satisfying middlemen, customers and check on salesmen:

1. Warehouse automation in place, can help leverage the bar-coding system to drive improvements through the supply chain to the point of delivery. [5]

2. Providing salesmen with mobile handheld devices (usually linked via GSM) enables real-time goods tracking, whilst photographic evidence or signatures can be captured in the field to show proof of delivery.

3. The proof of delivery in the form of photograph or signature is vital for many organizations servicing the building industry.

4. When any problem arises with delivery – whether through operational error or a customer change of mind - a replacement delivery or authorized return can be placed immediately.

5. This immediate response drives up customer service, whilst prompt rescheduling can save days in the delivery of a replacement item, again improving the customer relationship.

6. Invoicing can be triggered immediately on acceptance without waiting for the delivery driver to return signed papers to the back office.

At the Warehouse

1. An organization with more than a few people carrying out picking, packing and put-away activities in the warehouse could realize significant productivity gains by switching to barcode automation linked to the ERP software. Many times, the simple automation of the warehouse process using barcodes delivers operational gains in the region of 15-30%. One Solar soft customer has cut goods-in booking time by 90%.

2. Improved speed and accuracy in locating goods and a cut in error rates in picking and fulfillment. Modern ERP systems readily handle multiple identifiers and formats in both the cases whether one is setting up one's own bar-coding system or adopting a suppliers' numbering system.

3. There exist enormous opportunities of adding value to product and services for customers, for example, pre-labeling products at the warehouse with the retail price as well as barcodes, enables the downstream retailer to streamline its own inventory management processes.

Hands Free

Thinking the wireless technology a step ahead, the companies can turn to voice picking and packing systems to yield additional gains. It is proven to be effective, mature and particularly beneficial in tough warehouse environments where operators require heavy-duty gloves or require both hands to lift products, constraining the use of handheld technology.

Multi-lingual

These powerful and effective wireless technologies can be deployed with support for multi-lingual instructions, addressing demands for English/Polish in the UK and English/Spanish in the US.

Real-time Management

1. An Intense integration between wireless systems and ERP provides unexpected rise into the performance of warehouse and logistics operations etc.

2. A manual operation is far too expensive to capture detailed operational information requiring time-consuming form-filling and manual collation of information. Once a wireless system is up and starts functioning, real performance data is captured as a free by-product of normal operations.

3. Combining this information with our Business Intelligence tools one can quickly assess the performance of different teams, shifts, even individuals, as well as performance across different product groups. And this transparency enables organizations to drive significant procedural improvements across all movements.

Criteria for an effective wireless ERP:

Proper coordination with the organizational network:

1. Wireless ERP will give the best results only if it is adopted with a proper communication channel. The communication channels should be improved in the organization to make it (Wireless) ERP friendly. The obsolete computers should be replaced with the latest phones. Mobile and telecommunication facilities should also be at par with the industry standards.[6]

2. Many companies resort to wireless ERP without improving its communication facilities which does not serve the purpose. Additionally there is another major advantage in improving communication facilities. Thus it helps disseminating information, inflating profits and improving productivity enabling the companies to rise up to set professional standards in the market. This would motivate the companies to improve upon all other facilities that directly or indirectly contribute to the working of ERP and make use of facilities like image Enabled ERP system and ERP data capture.

Privacy Issues

1. Privacy is a very significant issue that occupies whenever there is a technological explosion and ERP is no exception to this principle. These require more attention due to the (further) improvement namely wireless ERP from ERP. It has always been a subject matter of conflict whenever things are brought under public domain

2. The company sometimes looses its valuable information or prospective businesses when things are exposed unnecessarily, therefore in this way wireless ERP will be a disaster to the company and not a boon.

3. Wireless ERP should be enveloped in a maximum security. The scrutiny should be made such as it prevents third party access without prior permission and approval from the company. This seems impossible practically but it is strongly recommended to have them in force in order to safeguard the interests of the company. The security system in a company would be successful only if every department in the company has a track of the detailed communication. Bigger companies can go for such system whereas the others should restrict depending on their capacity and needs.

Message Persistency

The term message persistency means the frequency of message transfer. This decides the success of the communication systems and ERP functions and therefore the organization should ensure that there is no slag in the systems or process or any other procedures that is likely to affect it. They should constantly monitor and suggest areas for improvement.

Multiple Applications and Connectivity Speed

Wireless ERP should not depend on just one or two devices like laptop or mobile phone but make use of maximum appliances. This would enable the companies to attain technological edge.

5. CONCLUSION

Wireless ERP has an immense market potential which is evident from the fact that big players like SAP and PeopleSoft have penetrated into the segment. Organizations

cannot progress and derive maximum benefits without properly understanding and implementing the ERP Fundamentals. There are some crucial factors of ERP that deserve attention. The services of ERP cannot occur all of a sudden in any organization. It is a long drawn process that may require a couple of months and might take years depending on size and nature of the organization.

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