

Implementation of an ERP System in a Courier Company

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Abstract:

The following paper discusses a project to adopt enterprise resource planning in a standard courier business, which includes postal and parcel services. The courier business, which has seen a lot of investment, is poised to become the backbone of the new economy. It becomes critical to effectively manage the industry in order to get the greatest profit from the available resources. Enterprise Resource Planning (ERP) is a business software system that enables a company to manage the efficient and effective use of available resources (materials, human resources, finance, customers, and so on) by providing a comprehensive and integrated solution for the company's data processing requirements. Implementing a successful ERP in the courier industry will address strategic, managerial, technical, organisational, and customer support issues by taking into account crucial factors for successful ERP system implementation in the courier industry, that would put the courier on a competitive footing.

Keywords: ERP, postal and courier services, customer happiness, accessibility, Shipment Search, and monitoring.

INTRODUCTION

Enterprise Resource Planning (ERP) is a packaged business software system that helps organisations to manage the efficient and effective use of resources (materials, human resources, finance, and so on) by offering a comprehensive, integrated solution for their information processing needs.[1] The notion of enterprise resource planning (ERP) has been around for a long time, and significant research has shown that having such a system in place helps a business achieve improved efficiency and profitability. The hazards connected with an ERP, on the other hand, have been greatly exaggerated in the corporate sector. Without a question, successful deployment and integration of an ERP information system may provide a company a competitive advantage; yet, integration failure can be disastrous. According to a recent research done in China, only 10% of ERP systems were implemented successfully.[2] The idea of ERP has been around for a long time, and studies have shown that having one helps a company achieve improved efficiency and profitability at both the management and technical levels. [3]. However, in the corporate world, the risks connected with an ERP are frequently overlooked. Without a question, successful deployment and integration of an ERP management system may provide an organisation a competitive advantage; yet, integration failure can be disastrous. ERP systems have the ability to combine a wide range of organisational functions into a single database. For example areas such as Financials, Sales Opportunities, Sales – A/R, Purchasing A/P, Business Partners, Banking and Inventory , were originally separate software applications that were normally

kept independently, but now they may all be found in one system—the ERP system. The courier sector works with a significant quantity of parcels and other consignments, necessitating a considerable amount of human resources to handle and deliver the items to the correct and authenticated recipient. Once the consignment has been released from the source station, a system shall inspect the package for any banned items. If any banned goods are found, the system will not deliver the parcel. Courier services make it simple to send packages of any size or weight [2-5]. Courier services will be a great alternative for many organisations because to their simple web interfaces, tracking, automatic billing, and other features. You can figure out how to choose the optimal courier service for your requirements by following a few basic guidelines. After arriving at the destination city, the item should be delivered to the franchise closest to the pin code.

METHODOLOGY

System Requirement:

Software: 1. Operating System: Windows 7/8 2/10. Front End: WEB TECHNOLOGY (HTML) 3. Back end: oracle database, java. 4. Web browser .

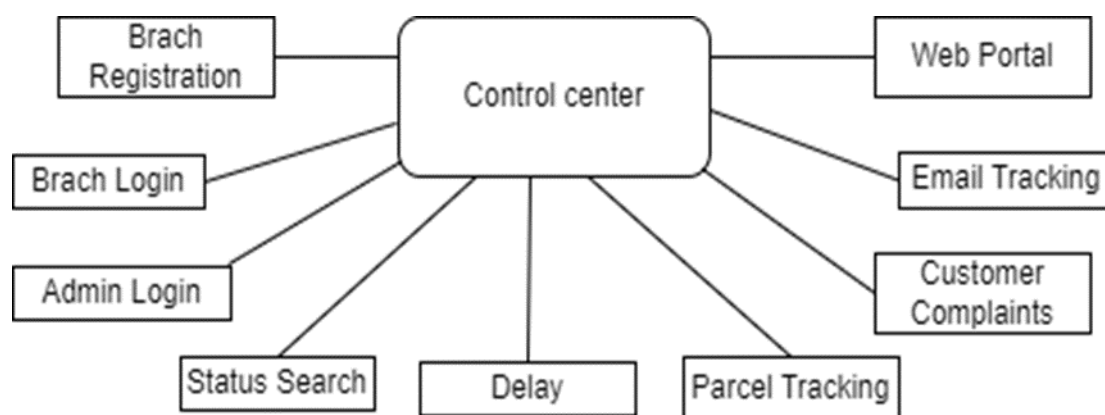
Hardware: 1. Intel x64 architecture or compatible dual-core 1.5 GHz processor 2. Min 4 GB RAM 3. Min 10 GB space in Hard Disk.

Survey of Earlier Work:

Previously, keeping track of various deliveries was done through manual labour; many people were assigned to a specific task, such as maintaining records or sending a specific consignment to a particular destination; however, manual labour had many restrictions and was subject to mistakes; as a result, numerous shipments were delivered incorrectly; the above process was time intensive and prone to human error. They also had multiple channel partners and they were used to take peoples parcels on the courier service behalf and as this was also done manually this was also prone to human errors. The present state and tracking of the cargo demanded the automation of this human task.

Implementation:

When a shipment is delivered from one city to another, a barcode sticker is placed on the shipment to be shipped, including information about the source and destination. The cargo will be scanned for any dangerous or prohibited materials; if any are detected, the package will be returned to the customer or subject to legal action; the database should also be updated so that other franchises are aware of the action. If the shipment does not contain any hazardous materials, it should be delivered according to the priority of delivery, i.e. if something is marked as 'fast delivered,' it should be delivered as soon as possible. When a checkpoint is reached, the tracking counter is updated, and the customer can track the shipment. When the cargo arrives at the target city, the relevant system should be classified according to the pin code so that the shipment may be delivered as quickly as possible to the nearest franchise. All shipments from close pin codes should be sorted such that a single person in charge of delivery is liable for all consignments being delivered in adjacent locations. This will save both time and labour, allowing the task to be completed on time. Online tracking of shipments is a vital responsibility during the entire process, since it is a key element for customer satisfaction.



Shipment Tracking:

Using radio, satellite, and cellular technology, a tracking and recovery system may pinpoint the exact position of a product. [7] Only two types of tracking devices were available, according to Gardner, Morrow, and Wyers, and these were radio frequency (RF) transmitters and GPS satellite systems.[8] The (Mobile Phone) Global System for Mobile Communications (GSM) location facility is a relatively recent development. GSM and RF locating devices are proven to be quite successful. The system uses the database and barcode information to determine the shipment's current status. Mobile tracking applications are also available, and the system automatically updates the central server. [9]

Cost Based Analysis:

Organizations should assess how integrating an ERP with their existing business might enhance their present business processes, just as they should with any other large investment. Following the discovery of the advantages, the various expenses involved with the integration should be studied and assessed. Only when the predicted advantages surpass the expenses should an ERP be implemented. Many organisations, according to research, can identify the origins and type of benefits and costs, but most have difficulty quantifying the cost and benefit. [3] Key consumer metrics, such as repeat purchase, are directly influenced by delivery choices. Customers are more satisfied when suppliers provide them with a range of delivery alternatives. Whether via recurring purchases, greater basket size, or enhanced client lifetime value, cost, speed, and convenience all play a part in boosting revenue. Customer happiness is a key indicator for fulfilment success. Customer happiness is one of the most important performance measures that retailers use to track their fulfilment operations across regions. [5, 6] Courier companies are increasing their investments in delivery choices in anticipation of a shift in client expectations. Customers are happier if they can trace their shipments properly, according to a survey. Today's rapid shipping alternatives are becoming the typical expectation of future. As a result, during the next 10 years, companies are investing in or preparing to invest in delivery capabilities. Customer satisfaction can only be maximised if the service provider is well-managed.

Bill Generation:

It becomes a laborious task to produce the bill each time a new vendor is added or a product is delivered. Bill must calculate the total weight and distance travelled in order to create. This task necessitates the use of automation. The bill must be created as soon as the cargo is delivered. Distributors that produce monthly invoices for vendors should also be automated. After each month, a

bill should be issued for the vendor to pay to its distributor; this charge is based on the total number of deliveries made by that particular vendor.

DISCUSSION:

Manual labour was once used to keep track of numerous deliveries; many workers were allocated to a certain activity, like maintaining records or shipping a particular consignment to a given location; nevertheless, manual labour had several limitations and was prone to errors. The concept of enterprise resource planning (ERP) has been around for a long time, and studies have shown that having one may assist a firm increase performance and effectiveness at both the management and technical levels. After completion, this project will reduce delivery time, errors, and human labour, resulting in optimal tracking and exact consignment delivery. The sender may also obtain current updates for the shipment through this project, or in other terms, the sender may monitor the consignment to guarantee that one is delivered to the intended recipients.[10] .

In summary, the results show that the ERP system is not simply a technology but rather a strategic and organizational system that engages in work to achieve benefits for the organization. This is in stark contrast to early ERP studies that believed the software would automatically drive organizational benefits such as lower logistic costs. The reality is that ERP systems require key alignment processes and activities to realize the gains promised. Interestingly, organizations strongly believe that supplementing their internal staff with outside consultants is a must. This is likely a result of analyzing the catastrophic failures

CONCLUSION

After completion, this project will minimise delivery time, mistakes, and human labour, resulting in optimal tracking and precise delivery of consignments. With this project, the sender may also receive current status updates for the consignment, or in other words, the sender can monitor the consignment to ensure that it is delivered to the correct recipients. The company has a large human resource pool. Material and other resources will be able to keep the everyday work running smoothly. Management of the company could track the day-to-day operations of the company from one place because of centralized database and could take necessary actions timely and with more precisions. It would also help the company to boost its customer relationship management and would help to provide its customer with better service.

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