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ERP: ITS ADVANTAGES AND LIMITATIONS

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ABSTRACT:

ERP (Enterprise Resource Planning) is an application that uses a centralized database to collect inputs from departments like Accounting, Manufacturing, Supply Chain Management, Sales, Marketing, and Human Resources (HR) to automate business processes, provide insights, and provide internal controls. The installation of an ERP application is only the beginning of management support. To fully utilize ERP applications, organizations' management teams must employ continuous improvement strategies, just like they must with any operational procedure or process. Post-implementation interactions between managers and system users, including knowledge creation, sharing, extraction, preservation, and learning, are required in ERP-equipped businesses. The primary objective of the paper is to study the advantages and limitations of ERP systems.

1. Introduction:

ERP (Enterprise Resource Planning) is an application that uses a centralized database to collect inputs from departments like Accounting, Manufacturing, Supply Chain Management, Sales, Marketing, and Human Resources (HR) to automate business processes, provide insights, and provide internal controls.

Every business has to finish work that needs a lot of different stakeholders with different roles. However, this becomes difficult when the information required to carry out procedures and make crucial decisions is dispersed across disparate systems. Employees may not have access to the data they need, regardless of whether it is stored in spreadsheets or basic business management software. For example, the expense tracking spreadsheets used by the accounting and Financial Planning & Analysis teams might be different.

It is extremely difficult to keep everyone on the same page due to these disparate data sources, which hinders collaboration and productivity, particularly as an organization expands. Because there is no central location where employees can find up-to-date information on all aspects of the business that are relevant to them, employees waste time searching for documents and may duplicate work. Additionally, this makes it challenging to comprehend the full chain of events that impact your company.

By consolidating data in a single database, an ERP system provides managers and employees with cross-departmental visibility. Additionally, it makes it possible for them to analyse a variety of scenarios, discover process enhancements, and achieve significant gains in efficiency by removing the issues that arise from conflicting data sources. As a result, people spend less time searching for necessary data, which results in cost savings and increased productivity.

1.1. Evolution of ERP:

The evolution of ERP structures closely observed the impressive trends in the field of computer hardware and software program structures. During the 1960s most organizations designed, developed and implemented centralized computing structures, broadly speaking automating their inventory control systems using inventory control packages (IC). These have been legacy structures primarily based totally on programming languages which include COBOL, ALGOL and FORTRAN.

Material Requirements Planning (MRP) systems were evolved in the 1970s. This mainly involved planning product or part requirements according to the master production plan. Along this path, a new software system called Manufacturing Resource Planning (MRP II) was introduced in the 1980s. This focused on optimizing manufacturing processes by synchronizing materials with production requirements. MRP II included areas such as manufacturing and sales management, project management, finance, human resources, and engineering.

With the capability of enterprise-wide inter-functional coordination and integration, ERP systems were first introduced in the late 1980s and early 1990s. ERP systems, which are based on the technological foundations of MRP and MRP II, integrate business processes like manufacturing, distribution, accounting, financial management, human resource management, project management, inventory management, service and maintenance, and transportation. This makes the enterprise accessible, visible, and consistent.

The "extended ERPs" were created when ERP vendors added additional modules and functions as "add-ons" to the core modules. Advanced Planning and Scheduling (APS), e-business solutions like Customer Relationship Management (CRM), and Supply Chain Management (SCM) are among these ERP extensions.

2. Objective of the study:

a. To study about facts behind ERP and its evolution.

b. To study about advantages of ERP systems.

c. To study about the limitations of ERP systems.

3. Scope of the study:

a. The research is only based on secondary data.

b. The study is only reliable on the information provided by authors, journals, research papers etc.

4. Enterprise resource planning and its advantage to current industry:

There are 13 major modules in ERP. Each module is designed to meet specific business requirements.

- Finance
- Procurement
- Manufacturing
- Inventory Management
- Order Management
- Warehouse Management
- Supply Chain Management
- Customer Relationship Management (CRM)
- Professional Services Automation (Service Resource Management)
- Workforce Management
- Human Resources Management
- Ecommerce
- Marketing Automation

a. Finance:

The Finance and Accounting module is the most important ERP module as it helps companies understand their current financial situation and future prospects. Key features of this module include Accounts Payable (AP) and Accounts Receivable (AR) tracking and general ledger management. It also prepares and stores important financial documents such as balance sheets, payment slips and tax returns.

The Financial Management module automates tasks related to invoicing, supplier payments, financial management and account reconciliation, enabling accounting to close accounts in a timely manner and comply with current revenue recognition standards. It also contains the data that financial planning and analysis professionals need to produce key reports such as profit and loss statements (P&L) and board reports, and to execute scenario planning.

b. Procurement:

An organization's procurement module, also known as the purchasing module, assists it in securing the materials or products it requires to produce and/or sell goods. In this module, businesses can keep a list of approved vendors and associate those suppliers with specific products, assisting with supplier relationship management. The module is able to track and analyse the quotes that come in as well as automate requests for quotes.

The procurement module assists the purchasing department in preparing and sending purchase orders after a company accepts a quote. After that, it is able to monitor that purchase order as the seller transforms it into a sales order and ships the goods, automatically updating inventory levels when the order arrives.

c. Manufacturing:

Material requirements planning (MRP) systems, the earliest form of ERP, were made for manufacturers. Manufacturing is still an important part of ERP. Nowadays, production management or manufacturing execution systems (MES) are typically included in ERP systems. The manufacturing module helps manufacturers plan production and ensure that they have the raw materials and machinery capacity they need for planned production runs. It can help businesses compare actual output to anticipated production and update the status of goods-in-progress during the manufacturing process. In addition, it gives a picture of the shop floor in real time and records information about products in the making and finished ones. It can figure out how long it takes to make an item on average and then compare the supply to expected demand to plan enough production.

d. Inventory Management:

By tracking item quantities and locations down to individual SKUs, the inventory management module makes inventory control possible. Through its integration with the procurement tool, this module provides a comprehensive picture of not only existing inventory but also incoming inventory. Businesses can use this piece of software to keep track of their inventory costs and ensure that they have enough stock without spending too much money on it. An application for inventory management can compare trends in sales to the product that is available, assisting businesses in making informed decisions that improve margins and increase inventory turn (a measure of how frequently inventory is sold over a given period). It can assist in avoiding stockouts and delays, thereby improving customer service.

The inventory management application can also be used to manage shipping, purchase orders, and sales orders for businesses that do not have any other modules for supply chain management. A version of this solution that can track inventory across multiple locations will be required by larger businesses.

e. Order Management:

From receipt to delivery, orders are tracked by an order management module. After customers place orders, this component of the ERP sends them to the warehouse, distribution center, or retail store. It then monitors their status as they are prepared, fulfilled, and shipped to the customer. The order management module reduces unnecessary costs associated with expedited shipping by preventing orders from being lost and increasing rates of on-time delivery.

Based on available inventory and the buyer's location, more advanced order management applications can assist a business in choosing the most cost-effective method of fulfilling an order—for instance, a store versus a warehouse versus a third-party fulfilment partner.

f. Warehouse Management:

Businesses that own and manage their own warehouses stand to benefit from a quick return on investment from a warehouse management module. This application can proficiently direct distribution center workers through all stockroom processes in view of the format of the office, from put away when shipments show up to picking to pressing and transportation. It can also assist businesses in labour planning based on anticipated order volume. Depending on which method is most effective for a given company, the warehouse management module can support batch picking, wave picking, and zone picking. Additionally, some modules can show employees the pick path that is most effective.

Employees are able to quickly locate the appropriate products and expedite the delivery of shipments when the warehouse management module is integrated with applications for inventory management and order management. In the end, faster delivery makes customers happier.

g. Supply Chain Management:

Every step in the supply chain, from sub-suppliers to suppliers to manufacturers to distributors to retailers or consumers, is tracked by a module for supply chain management. It can also handle any returned materials or products that need to be replaced or refunded.

As was mentioned earlier, a wide range of modules, such as procurement, inventory management, manufacturing, order management, and warehouse management, can be included in supply chain management. However, it may have features that go beyond those modules' fundamental capabilities.

h. Customer Relationship Management (CRM):

All information about customers and potential customers is stored in the CRM module. That incorporates the organization's correspondence history with an individual — the date and season of calls and messages, for instance — and their buy history. Because staff members can easily access all of the information they require when working with a customer, a CRM enhances customer service.

CRM is also used by many businesses to keep track of sales leads and opportunities. It is able to keep tabs on how prospects are communicating with you and recommend which customers should be the focus of particular promotions or cross-sell opportunities. Advanced contact managers and reporting tools may be supported by more robust CRM modules, allowing for more targeted marketing.

i. Professional Services Automation (Service Resource Management):

An organization can plan and manage projects with a professional services automation (PSA) module, also known as a service resource management module. This module is often used by businesses that provide services. The application allows managers to approve timesheets and expenses while also keeping track of projects' status and managing human and capital resources. By storing all relevant documents in a shared location, it makes teamwork easier. The PSA module can also prepare and send bills to customers automatically based on billing cycle rules.

j. Workforce Management:

Similar to a human resource management module, a workforce management module is intended for businesses with more hourly than salaried employees. It can measure things like employee productivity and absenteeism as well as workers' attendance and hours.

The module for workforce management may also include payroll. A payroll sub-module handles expense reimbursement and automatically distributes pay checks to employees on a predetermined schedule with the appropriate taxes deducted. It can also provide reports on payroll costs, the total number of overtime hours worked, and other similar KPIs.

k. Human Resources Management:

A human resource management (HRM) or human capital management (HCM) module typically provides additional capabilities in addition to all of the features of a workforce management application. HRM could be thought of as employee CRM. This well-liked module stores documents like job descriptions, offer letters, and performance reviews for every employee. It keeps track of not only hours worked but also information about benefits, sick days, and paid time off (PTO).

The HRM module eliminates a lot of duplicate or incorrect data that is stored in various spreadsheets by storing a vast amount of information on each employee across the organization.

l. Ecommerce:

Businesses that want to sell online can take advantage of an ecommerce module provided by some ERP vendors. A business-to-consumer (B2C) or business-to-business (B2B) ecommerce website can be launched quickly thanks to this module. Employees can easily add new items and update product content (item descriptions, titles, specifications, images, etc.) with the help of user-friendly tools in leading commerce applications and modify the website's appearance.

When the e-commerce application is integrated with other ERP applications, the shared database receives all payment, order, and inventory data from the e-commerce module. That guarantees all exchanges are added to the record, unavailable things are taken out from the site and orders transport on time.

m. Marketing Automation

A marketing automation module has been developed by certain software providers, just like with ecommerce. Digital channels like email, the web, social media, and SMS are all managed by a marketing module. It has advanced customer segmentation features and can automate email sends based on campaign rules so that customers only receive messages that are relevant to them.

Whether it is part of the ERP system or a separate solution, marketing automation software can provide in-depth reports on how well campaigns performed in order to guide spending and plans for future marketing. Over time, these applications increase sales, leads, and customer loyalty.

- The installation of an ERP application is only the beginning of management support. To fully utilize ERP applications, organizations' management teams must employ continuous improvement strategies, just like they must with any operational procedure or process. Post-implementation interactions between managers and system users, including knowledge creation, sharing, extraction, preservation, and learning, are required in ERP-equipped businesses.

5. Limitations of ERP:

Software for Enterprise Resource Planning (ERP) Has Some Drawbacks The following are some of the software's drawbacks:

Expensive System: The fact that Enterprise Resource Planning (ERP) systems can be so expensive is one of their main drawbacks. In addition to the actual software and its implementation, additional expenses may be incurred for computer hardware, updated network equipment, and security software. In order to select the ERP system that will be the most cost-effective and feature-rich choice for your business, it is essential to carefully compare the various options available.

Training Inefficiency: In a manufacturing operation, skills, experience, manpower, and the best use of resources are crucial. Because it is difficult to run your business effectively and smoothly in the absence of these elements, proper ERP training is essential for the system's proper operation. A lot of businesses try to save money by not covering enough costs for employee training in enterprise resource planning. Employees may misuse the technology and lose valuable information as a result of their lack of knowledge about the particular Enterprise Resource Planning vendor package being used.

Degree of Customization: The ERP systems' adaptability to your company's specific requirements is yet another drawback. Because some systems offer more customization options than others, the level of customization that is available can be limited and typically depends on the brand of software chosen. However, the majority of ERP systems either don't allow for much customization or charge extra for features that are requested. Therefore, when considering ERP systems, it is essential to take into account both your company's requirements and the standard features.

High Implementation Times: Any business can find it challenging to implement a new operating system. The duration of the implementation and training can exceed a year, depending on the complexity of the business operations. ERP software implementation times and costs must be taken into consideration because they could disrupt the organization's normal operations and result in a loss of business during that time. Therefore, when evaluating various ERP or other software that must be implemented, it is essential to take into consideration the time required for implementation to guarantee significant profits returns.

Departmental interconnectivity: Despite the fact that it may appear to be a benefit, having departments that are connected to one another can have negative effects on a business. This is especially true if one department is inefficient because it will cause other departments to be inefficient as well. The company's overall efficiency may be impacted if one department becomes ineffective. It is subsequently critical to pick a product that will enhance your organization and work on its effectiveness to try not to create some issues in various divisions.

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