## Enterprise Resource Planning (ERP)

**Report**

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**Introduction**

Companies today must deal with both new markets and new competition because of the global market's dynamic. Distinct time frames and geographical dispersion are needed for different decision-making processes. Decisions therefore necessitate timely adjustments to product development, material flows, production planning, and scheduling. Companies must find new ways to maintain the highest standards of operational efficiency, including high levels of adaptability, dependability, and quality. Companies have historically maintained several information systems for various corporate operations, including accounting, production, marketing, purchasing, etc. Based on their requirements, these old systems had their own systems and techniques for gathering and storing information. Although these technologies helped managers make better decisions within a particular functional area, they lacked functional integration and made it extremely difficult for business departments to communicate and work together. As a result, corporation as a whole loses its competitive advantages as a result of its inability to reach its full potential. This paper gives an overview of enterprise resource planning systems, explains what they are and how important they are from a strategic standpoint, and shows how they help operations managers develop coherent business and operational strategies and different types of it with examples and finally pros and cons of ERP.

**ERP Overview**

Companies began using the Enterprise Resource Planning (ERP) system types in the 1990s to replace standalone old systems and build the necessary interfaces between functional areas. These systems included a central/common database and standardized software. ERP system is a strategic information system created to streamline and consolidate corporate business operations. The industry accepts the ERP as a workable method for achieving integrated enterprise information systems since it is an industry-driven idea and methodology. ERP system solutions are currently in great demand by both manufacturing and service organizations due to the fact that it offers a fully integrated solution to an organization's information system needs. Researchers and practitioners from a range of functional areas have paid substantial attention to ERP systems over the past period of time.

## How does ERP work?

In theory, an ERP system operates in a very straightforward manner. It is a piece of software that consolidates all of an organization's data into one location. Depending on their level of seniority, a person can use a complex dashboard to build reports from this information and have full or partial access to it. The ERP software receives data in specified formats from all departments. This information is kept in one central database, where the program runs various analytical operations on it. With just a few

clicks, the leadership may determine the caliber of leads generated by the marketing division, as well as ERP enables HR to create monthly reports for each team in order to monitor the attrition rate.

“An ERP system is a group of tightly interfaced modules that act in cascading layers to facilitate business processes.”

## ERP Modules From Three Vendors

ERP packages are primarily categorized based on their architectural design. The kind of ERP used and how it is optimized for business processes are key factors in

organizational performance. According to Chapter 4, we have this table below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Function** | **SAP** | **Oracle/ PeopleSoft** | **Microsoft Dynamics** |
| Sales | Sales and Distribution, Sales  Opportunity | Marketing and Sales,  Supply Chain  Management | Retail POS, Field  Service  Management |
| Procurement | Purchasing, Supplier  Relationship Management | Procurement and  Supplier Relationship  Management | Supply Chain  Management |
| Production | MRP, Product Life Cycle  Management | Manufacturing | Manufacturing |
| Accounting | Financial Accounting | Financial Management | Financial  Management |
| Distribution | Warehouse Management | Supply Chain  Management | Distribution  Management |
| Customer Service | CRM | CRM | CRM |
| Corporate  Performance  & Governance | Governance, Risk, and  Compliance Management | Corporate Performance  Management | Analytics |
| Human Resources | Human Capital Management | Human Capital  Management | HR Management |

**ERP Top Benefits**

ERP systems are designed to offer multiple modules to handle many of your business processes in one centralized location. Just a few of the most popular applications are in the table below:

|  |  |
| --- | --- |
| **Benefit Dimension** | **Benefit Categories** |
| Operational | 1. Cost reduction  2. Cycle time reduction  3. Productivity improvement  4. Data quality improvement  5. Customer services improvement |
| Managerial | 1. Better resource management  2. Better decision making  3. Better performance control |
| Strategic | 1. Supports current and future business growth plan  2. Supports business alliances  3. Supports business innovation  4. Supports cost leadership  5. Supports product differentiation  .6. Supports external linkages  7. Enable worldwide expansion |
| IT Infrastructure | 1. Increased business flexibility  2. IT cost reduction  3. Increased IT infrastructure capability |
| Organizational | 1. Supports business organizational changes 2. Facilitate business learning and broaden employee skills  3. Empowerment  4. Changed culture with common vision  5. Changed employee behavior with shifted focus  6. Better employee morale and satisfaction |

**ERP Disadvantages**

Although there is no denying the advantages of ERP solutions, there are several disadvantages to consider before attempting to install such enterprise resource planning systems in a particular business organization. If a business owner does not overcome and eliminate these drawbacks, an ERP solution will be ineffective, if not impossible or pointless.

**Costs of an ERP Software**

* Third-party software add-ins
* Implementation costs
* Maintenance
* Initial and continuous training

**Complex Data Conversion**

* Developing a solid data conversion strategy can be difficult
* You have to define, examine and analyze data sources
* Bad data conversion will cause delays and increased costs

**Requires thorough training**

* Training needs to cover all of the ERP system’s features.
* ERP training sessions need to be in line with business processes
* IT users need to be trained for the technical aspects of the ERP System

## Types of ERP

The design of ERP systems is the primary factor used to categorize them. The type of ERP used has a big impact on how successful a firm is and how well its business operations are optimized. Here are some examples of them:

### On-Premise/Legacy ERPs

### On-Premise ERPs, commonly referred to as legacy or monolithic ERPs, are implemented in the company's on-site hardware. In order to do this, the user must set up all necessary hardware components and maintain their proper operation. This also entails having an internal IT team that handles maintenance and simple problem-solving. The company's regular operations are disrupted when they have to wait for the vendor's team to visit their plant in the event of an upgrade or significant problem.

### Cloud-Based ERPs

With a multi-tenant design, cloud-based ERPs use the software as a service architecture paradigm, where all the data storage and processing capacity is installed at a single location for each client organization. Since the data is housed off-site and

could include customer business secrets and intellectual property, this calls for cutting-edge security measures.

### Hybrid ERPs

As they assist in addressing the data security problems of cloud-based ERP solutions, hybrid ERPs are growing in popularity. Here, the private information is kept on the on-site servers, while the other datasets are synchronized with the cloud servers.

**Conclusion**

Finally, every firm has to transfer information between functions and functional areas, and thinking in terms of business processes that integrate the functional areas leads to improvements in communication, workflow, and company success. Because of this, ERP software is able to offer this functionality by utilizing a shared database. All firm information can be integrated using an ERP system, including financial accounting, human resources, supply chain management, and customer information. There are various ERP softwares currently on the market, both paid and open source licensed, however they don't all have the same features.Information technology nowadays drives organizational change in the knowledge economy. The strategic plan of a corporation is greatly aided by ERP systems and other technical advancements like e-commerce. Companies are now required to make decisions in an integrated manner as a result of the increased global competition, shorter product life cycles, ever-growing market niches, and the need to respond swiftly to the shifting external business environment.

**References**

* Gupta, Mahesh, and Amarpreet Kohli. "Enterprise resource planning systems and its implications for operations function." *Technovation* 26.5-6 (2006): 687-696.
* Staehr, Lorraine, Graeme Shanks, and Peter Seddon. "Understanding the business benefits of enterprise resource planning systems." (2002).
* Watson, Edward E., and Helmut Schneider. "Using ERP systems in education." Communications of the Association for Information Systems 1.1 (1999): 9.
* Chapter Four (ERP Systems and Processes) “502510-3/Systems-Integration”