

## **CHALLENGES INVOLVED IN IMPLEMENTING OF ERP AND AUDITING**

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### ***Abstract***

*An ERP system allows an organization to integrate all primary processes in order to increase the efficiency and to maintain a competitive position. However, without the successful implementation of the system, the benefits designated for improving productivity and increasing competitive advantage would not be possible. In his definition, the ERP is a system of enterprise-wide information system that integrates and controls all business processes across your organization. Enterprise Resource Planning system (ERP) is universally accepted as a practical solution to get a solution for an integrated information system for the entire organization. ERP implementation is a complex process, and the success or failure depends on many factors, and it is difficult to be planned to avoid any potential pitfalls. Traditional audit model has undergone significant changes over the past decade. Change in financial audit is attributed to market pressures, including competitive prices, saturation and increasing training and technology. The profession moved toward providing additional systems of insurance services. For example, there has been a paradigm shift in insurance services, which focuses on the internal control system throughout the life cycle of the information system. Implementation of an ERP system is usually followed by an increase in internal audit procedures as a result the organisation may reach a higher level of integration in business processes and to improve the quality of the reports.*

***Key words:*** ERP, implementation, audit, controls

***JEL Classifications:*** M15, M40, M42

## **1. Introduction**

Advances in information technology, expand the use of the internet and electronic commerce, and global competition have made running a successful business is a lot harder than ever before. Currently, a popular approach for the development of an integrated enterprise-wide implementation is an ERP system-Enterprise Resource Planning.

Of all the business changes that have taken place throughout history, most explosive were related to information technology (IT), which has become increasingly complex. The explosive growth of it includes computer hardware, databases, networks, telecommunications, internet, extranet, e-commerce, client-server architecture, data repositories, integrated software, accounting systems such as ERP systems, and automated reasoning and software of neural networks (Cerullo, 2003).

An ERP system allows an organization to integrate all primary processes in order to increase the efficiency and to maintain a competitive position. However, without the successful implementation of the system, the benefits designated for improving productivity and increasing competitive advantage would not be possible. In his definition, the ERP is a system of enterprise-wide information system that integrates and controls all business processes across your organization. Enterprise Resource Planning system (ERP) is universally accepted as a practical solution to get a solution for an integrated information system for the entire organization.

Anderson, Banker, Menon, and Romero (2011) have an ERP that defined "database software that automates and integrates information processing in real time, on a large number of business processes and functions within an organization." Significant components of an ERP include human resources, finance, logistics, production, fill orders, and supply chain management (Mehrjerdi 2010, p. 308). The traditional objectives of ERP SYSTEMS were to provide greater efficiency, while contemporary ERP are designed to streamline and integrate processes and information flows within the company.

ERP systems, operational and financial information are linked together through a stream of complex information. Transactions can be automatically introduced without review or pre-check with the ERP system. For these situations, you must control mechanisms designed to prevent the introduction into the system of false or inaccurate information. So audits must be done through the computer in the ERP environment. Accountants and company management must be aware of the risks involved in an ERP system. Today, with integrated ERP systems implementation, internal controls develop itself to support automated operational management. As a result, financial officers and changed its approach and implementing internal

controls automatic enable managers to manage the business effectively by ERP systems.

An ERP system automatically updates the data in the entire system once a transaction has been entered. Because the information is regularly updated, maintained and stored electronically, auditors must understand how modules interact between each other and with the database. The Auditors have to spend more time with lower-level employees in the case of the ERP system in order to determine what they do while entering data, and especially what happens if you make a mistake.

## 2. ERP Implementation

Globally, developed countries have put in place and implemented ERP system for settlement and improvement of business flow in order to face global competition. They had to overcome economic, cultural barriers and basic infrastructure. This applies to large-scale, medium and even small units. The various difficulties and obstacles arise from limitations of capital, lack of availability of resources, mismanagement, etc. ERP is the "childhood" in developing countries compared to developed countries. As shown in Figure 1, the ERP system is essential for every business because it brings standardization, transparency, globalization, automation and integration functions.



Fig 1. ERP is at the center of many business

ERP implementation is a complex process, and the success or failure depends on many factors, and it is difficult to be planned to avoid any potential pitfalls. Comparable to the difficulty of identifying the source of the success or failure of ERP implement is the difficulty of arriving at a clear definition of the term. Despite the fact that this distinction may seem intuitively simple, companies and professionals have not reached an agreement on a definition of success or failure of implementation. Studies from the last period on the progress of the information systems for

enterprises have shown, without just and may, market success of ERP products. The most known companies cheer such integrated systems are Microsoft, Oracle and SAP.

Characteristics of an ERP system are as follows:

- the database is usually centralized and, since you have to meet the needs of multiple users, the system allows flexibility in customization and configuration.

- processing is real-time online data bases are updated simultaneously with the operation of the minimum data entry.

- data input controls are dependent on validation of pre-and is based on balancing transactions. -transactions are stored in a common database, which is accessible from the different modules.

- security control assessment is of paramount importance.

- auditors must spend considerable time with an understanding of data flow and process transactions.

- the system is dependent on large-scale network.

- the risk of failures occurring is greater in the case of ERP systems.

There are 5 main reasons for companies to implement ERP:

1. Integrate financial data - as general manager tries to understand the overall performance of the company will be able to evaluate different versions of the problem. Accounting has its own figures on income, sales also their version and the different outlets can also make their own versions of how they contributed to revenues.

2. Integration of database commands - ERP application can become a customer can place order to "live" in the moment it is received until the goods are delivered, accounting prepares and sends the invoice. With this information in one application and not several independent applications that do not communicate with each other, companies can keep better track of the orders can better coordinate the production, stocks and supplies in multiple locations at the same time.

3. Standardize and streamline the production process - production companies, especially those who want to merge or expand, often make the same mistake - in so many ways using various methods and applications. ERP comes as standard method for automation of some steps in the production process. Standardizing those processes and using a single integrated system can save time, reduce costs and increase production.

4. Inventory optimization - ERP helps the manufacturing process flow smoothly and improves the performance of the order. This can reduce losses, ongoing production and application can help user's better plan deliveries, reduce the stock of finished goods in warehouses.

5. Standardization of information in the department of human resources - especially companies with multiple outlets, the human resources

department might not have a unique method of tracking employee time and communicating with them about benefits and services.

In the race to solve these problems, companies lose sight of the fact that ERP is nothing but a representation of how a normal company operates. While most ERP packages are as complex and detailed, each industry has its specificity that makes it unique. Most ERP applications have been designed to be used for cases abstract production companies (producing things that can be counted) which made those companies with similar type of activity petroleum, chemical and service companies who measure the flow production rather than physical units are not covered by this kind of applications. Each of these companies has struggled with those who sell ERP application to modify and adapt according to their requirements.

Many organizations today opt for ERP in the cloud in increasing numbers, motivated by:

- Do not want to buy servers and hire IT resources.
- Activities are becoming increasingly complex and difficult to be managed.
- Organizations have a complex ERP system and need something easier and more economical.

- Top management does not want to spend on an ERP system.

In practice, there are three models of implementation of ERP:

A Great Big Bang - in this case (which is the most ambitious and difficult method of implementing ERP systems) companies definitely dropped their old systems and install one application at a time integrated ERP for the whole company. Although this was the most common method for ERP implementations first, few companies dare to do so, because it requires synchronized mobilization and change the entire company. The most dramatic experiences of ERP implementation 90s warn us about companies that have done this. Making everyone to cooperate and accept a new system at the same time is difficult, because the new system will not have any supporter. No one in the company has any experience in using it, so no one is sure it will work. Also, ERP inevitably involves compromises. Many departments systems that were molded on how they work. In most cases, ERP offers no comfort or familiarity functionality or a dedicated system. In most cases, the speed of the new system may suffer because not only serves the entire company and department. ERP implementation requires direct approval of the general manager.

B. Strategy franchise - this approach lends itself to a variety of large companies or big, not common tasks in working points or departments. Independent ERP systems are installed in each unit and accounting within the company they are interconnected. This strategy has become the most common way of implementing ERP systems. In most cases, each site has its

own ERP system, consisting of a system and database independent. The systems are connected only to be present at group level information so as to create an overview of all sites (revenue per center for example), or for processes that do not vary much from a working point another (ie bonuses HR). Typically, these implementations start with a demonstration or pilot installation in a place of business where if something wrong happens not affected the company's activity. Once the project manager manages to put up the system and fix all the problems can be installed in other outlets of the ERP, using the first reference implementation over time.

Slam dunk C. (the fast) - in this case, the ERP system implementation process dictates that focuses on a few basic processes, such as those contained in a financial way of an ERP system. This method is viable for smaller companies are expected to increase with ERP application. The goal is to put on your feet fast application and lasting quit modeling in favor of a dedicated ERP system. Few companies have implemented such a manner ERP benefited from the advantages. Many companies use the system as an infrastructure to help future implementation easier. Yet many find it less viable quick installation instead of a dedicated system does not force older because end users (employees) to change mode. In fact, it is more challenging to adapt to install than a something that does not exist in any system, because at that time anyone in the company would not feel the difference.

The typical ERP system is shown below:



Although different companies will find different "me" in the budget, those that have implemented ERP agree that certain costs were mostly

omitted or were underestimated by others. Armed with understanding the business, ERP supporters vote following activities as those that will exceed your budget:

1. Training - is almost unanimously voted ERP implementers experienced as the most underestimated budget item. Training expenses are high because employees must learn a new set of processes, not just using a new software interface. The courses are focused on telling people how to use the software, not on educating people about certain features of their business, requiring Develop an outline of the different business processes that will be affected by ERP.

2. Integration and Testing - Testing the links between ERP packages and other software company. A typical manufacturing company may have additional applications for major type - eCommerce and supplier-buyer chain, to the minor - calculation of taxes on sales and administration barcodes. All this requires integration with the ERP system links. If you can buy additional applications (ready-integrated) from vendor ERP systems is best. As training, testing ERP integration must be made from a process-oriented perspective. Veterans recommend that instead of introducing fictitious data that move them from one application to another, to run a real control process throughout the system, from order entry to delivery and receipt of payment - the whole process command-payment - preferably with the participation of employees who will then these daily chores.

3. Configuration - Additional applications are just beginning ERP integration costs. More expensive, and something to be avoided altogether, if possible, is effective configuration of the central ERP system. This happens when the ERP can not solve one of your business processes and the company decides to walk the ERP software to do what he wants. Configuration can affect all ERP modules that are closely interlinked. Updating ERP system is like a walk in the park; in the best case becomes a nightmare because you have to restore all configurations over again in the new version. Maybe it will work, maybe not. In any case, the seller will not be there to help, but people will be employed to make configuration and maintenance.

4. Data conversion - costs to move information about customers, suppliers, product design and the like, from legacy systems into the new ERP system. The majority of managers admit that most of the data from the old systems are not very helpful. Companies deny that the data would not be accurate until you need to move them to new setups client / server ERP packages are required. Consistently, these companies underestimate the cost of moving data. But even correct data need some adjustments to fit with the ERP.

5. Data analysis - usually data from ERP systems must be combined with data from external systems to be analyzed. Users who require large and complex analysis should include budgeting, cost of data retention - and should expect a bit of work to make the system work properly. Users are in trouble when updating all data from the ERP system every day in a big company is difficult and ERP systems do a good job when it comes to tracking data were modified from day to day, making selective updating data hard to do. An expensive solution is customized programming.

6. Consultants indefinitely - when users fail to deliver, consultancy payments soar. To avoid this, companies should identify objectives that should follow when making personnel training. Measurements should be included in contracts consultants, for example, a specific number of users of the company's employees should be able to pass a test project-manager.

7. Replacement of the best - is accepted as wisdom that the success depends on hiring ERP project of the best and most enlightened business and IT department employees. The software is too complex and changes in business too big to entrust the project to anyone. The bad news is that the company should be prepared to replace people when the project ends. Although ERP systems market is not as hot as other time, consulting firms and other companies that have lost the best people will hunt with higher salaries and bonuses that the organization has not finished implementing allow - or that human resource policies do not allow.

8. Implementation teams can not stop - most companies tend to treat the implementation of ERP system implementation as any other software. He figures that once installed software implementation team will be sent home each will resume daily activities. But after installing ERP can not to leave home. Implementers are too precious. Because they worked so deep into the ERP system know more about sales than sales people and know more about the production process than people from production. Companies can not afford to send people involved in the implementation back to business as there are so much to do after the ERP software is installed. Just write the reports that out of the new information system will keep ERP project team busy for another year. Unfortunately, few systems integration planning departments craze after ERP implementation activities; of them, and less a budget plan when I start ERP projects. Many are forced to ask for more money and people immediately after they finish implemented before the ERP system to demonstrate the benefits.

9. Waiting for ROI (Return on Investment) - one of the most misleading legacies of traditional software project management is that companies expect to gain value once the software is installed, the project manager while waiting for a break or a pat on the back palm. Any of these

expectations do not apply to ERP. Many of these systems do not show value is used only after a longer period of time and focus on improving business processes that are affected by the system. And the project manager will not be awarded until after the software will show its benefits.

10. Depression Post-ERP - ERP systems creates often damages the companies that install them. In a research firm Deloitte Consulting on the 64th of Fortune 500 companies; one in four admits that he suffered a decrease in performance when their ERP system came alive. Percentage really is undoubtedly much higher. The most common reason is performance decreases turn, prevents that everything looks and works differently than look and work forward. When people can not do the job as they were used to and still do not know very well the new way, panics and business is harder.

As seen from the above described, ERP systems are those systems that integrate functional business processes, leading to improved reporting to management and the adoption of decisions within the organization. Tools to exploit the information stored by ERP system but have limited functions, geared mainly to facilitate user access to a single source of data, the share and fast, with the aim of analytical information and less of the synthetic.

Making complex analysis of data stored in databases of ERP systems requires a special effort to the organization's processes and results are visible and can be sold only at this level. Another drawback is that these tests are not systematic and are not correlated with predefined requirements for performance measurement processes, lines of business or organizations work efficiency as a whole.

Planning and automatic monitoring and evaluation of performance measurements in processes specific and can only be achieved through strategies and tools for Business Intelligence. Only by Business Intelligence solutions an organization can obtain all the information dispersed integrates and builds necessary to support decisions and assessment their effectiveness.

A Business Intelligence system processes helps managers to take informed decisions based on data from in-depth analysis of business processes, capitalizing on top of a large volume of information, the automatic calculation and evaluation of pre-defined performance indicators in general organizational knowledge correct and complete.

Integration of Business Intelligence components of ERP systems in an organization brings a number of benefits to the business such as:

a) the superior possibility of a large volume of data gathered from sources dispersed and heterogeneous virtual and a deposit unit of information that is visible to all employees with access rights and allows aggregating, filtering and transforming these data, the analysis in Useful information and improve business development;

b) The use of flexible working interfaces (in Romanian language and in other languages) which provide a series of user satisfaction: the elimination of routine; use of advanced software tools that provide access to relevant information and quasi-instantaneous real and sophisticated analysis tools for information; monitoring of critical indicators or those that define business performance; flexibility in formulating requirements analysis also, depending on context; facilitating business modeling or simulation complexity scenarios or business development trends;

c) Recovery of search engines High Yield Business Intelligence applications equipped with search / retrieval that can quickly manipulate an impressive amount of multidimensional data structures, heterogeneous relational database or other databases, providing work opportunities using tools zoom in or out or rotate and control the level of detail of the information displayed;

d) The use of modeling and analysis functions of the business incorporated in BI applications and tools and mechanisms of advanced / sophisticated logical modeling of information, based on collections of predefined entities and visible or stored data the organization.

### **3. Audit of ERP**

The traditional model of audit has undergone significant changes over the past decade. Change in financial audit is attributed to market pressures, including saturation, competitive prices and increasing training and technology. The profession has shifted to providing additional systems of insurance. For example, there has been a paradigm shift in insurance services, which focuses on internal control systems throughout the lifecycle of the information system.

The implementation of an ERP system is usually followed by an increase in internal audit procedures as a result the company can reach a higher level of integration into business processes and improve the quality of reports.

Given the integrated nature of ERP systems, they can add additional risks or challenges:

- Industry and business environment
- User behavior or manager
- Processes and procedures
- Operating system
- Application security
- Infrastructure
- Data conversion and integrity
- Business Continuity



Risks associated with implementation and continued use of an ERP system can not be determined or controlled by examining applications or technical risks in isolation, but must be considered in conjunction with the control of the company objectives. Auditors challenge is to obtain an understanding of the business and regulatory environment in which the organization operates and to identify technical risks and less quantifiable procedural or behavioral.

Computer assisted audit is good, but has some disadvantages. In addition to changing audit functioning and activities, computer assisted audit involves distributing different files in different locations, making it even more difficult and complicated audit especially for those who do not have sufficient knowledge of technology. In addition, many ERP systems involve logging. This means that those who are not involved in the operational department may not be able to identify the personnel responsible for some data, they may need. Another setback may be that IT staff also can change the figures, because they have access to the database. This could cause economic losses to companies that can not be identified right away (Chang et al. 2008).

The challenges of internal audit regarding the use of an ERP system aim to:

a. Parameters audit

ERP systems have many parameters such as process parameters, operational parameters, control parameters, parameters of financial integration, cost-sharing parameters and so on. These parameters only affect the effectiveness of internal controls, but the accuracy and consistency of financial data. In particular, during the ERP implementation should ensure the integration of financial data with data control, accuracy of the data source, parameter settings and financial data validation.

2. The audit data security

Computers and network technology allows the widest range of accounting information that is shared between users of information, but this is based on a common access to data security. As computing, and human impact will increase the risk information in the network, especially in the ERP, where data are used in electronic mode Streak of alteration or falsification. So lowers reliability of the information available to the auditor and their authenticity is threatened.



Therefore, auditors should treat it as important data security audits in response to the ERP environment.

### 3. Software Audit

Manual audit practices are difficult to adapt to the needs of electronic accounting data. Building internal audit information must be simultaneous with the development of information systems, accounting, audit techniques. Therefore, the current need is to synchronize information technology audit requirements by developing audit software has features intelligent integrated network versatility and practical applications. Software Audit ideal must have financial analysis capabilities, testing functions, calculation functions, features auditing functions, statements and notes, automatically generate audits, help functions instantly and network access capabilities. In addition, audit software audit should provide also audit plans, summary information such as the list of commonly used tools, templates and regulations.

### 4. Conclusions

Implementation of an organization of an integrated (ERP) involves processing transactions in a manner performance advantage of storing data giving a non-volatile manner historical and dedicated to collecting information for decision-making environment. Market Trends Management database is represented by incorporating tools for data analysis, as facilities management systems database solutions mainly developed by Microsoft, Oracle and SAP.

When you need to purchase an ERP, it is necessary to define realistic expectations and a thorough analysis of the issues that need to be resolved, users and technology application.

Most existing ERP systems on the market offer about the same features and choice of the solutions must take into account many factors, among which the most Important are price, knowledge users and preferences for certain platforms and technologies.

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