Critical Success Factors for an ERP System Implementation

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INTRODUCTION

In a highly competitive market, firms should adopt innovative business processes in order to remain surviving within the market. Indeed, the marketplace recognized drastic changes during the last decade. Thus, these continuous transformations created in return a stimulus to reconfiguring the firm's business processes. Product development, extremely advanced business models, continuous innovations, developed distribution networks, are some of the major approaches adopted by companies in order to better fulfill the customers' needs and to remain viable. In the light of this, the reengineering of the firms' business processes is an important tool that has been used to evolve the activities needed to carry out their strategies. Information technology is considered as the most powerful approaches used to restructure the business process of an organization to achieve higher efficiency and effectiveness, greater quality, and more advanced productivity (Bosilj-Vuksic, Spremic, 2004). Therefore, information technology has a great impact in terms of enhancing the firm's business model, the customers' relationship management, operations, and supply chain network. It must be stressed that Enterprise Resource Planning system are highly embedded in the management of business processes. In response to the high competitive market, many companies opted for the implementation of advanced information system that appears in terms of Enterprise Resource Planning system.

PART1: THEORY AND INSIGHTS:

1) History of ERP system:

Facets' organizations have been impacted by the advanced evolution in terms of information and communication technologies. In fact, the current business environment is more and more necessitating the link of external components of the flow of info needed for the decision making process, efficient and effective inventory management, relevant procurement process, efficient distribution network. In the light of this, firms can compete within the market using efficient information system that allows them to achieve cost leadership, differentiation, or best value strategy (Bosilj-Vuksic, Spremic, 2004).

In fact, Enterprise Resource Planning system appeared in the industry during the end of 1980 and the starting of 1190. Each company adopts the appropriate ERP system that is

known for its complexity, high cost, and advanced proprietary systems. According to Kalakota and Robinson, the development of an ERP system can be alienated in terms of 4 phases: There if the "the manufacturing integration, Enterprise Integration, Customer centric Integration, and finally there is the Inter-enterprise Integration (Bosilj-Vuksic, Spremic, 2004).

As far as the first phase is concerned, the production oriented information system appeared in the 1970s under the name of the manufacturing resource planning or what is called MRP systems These software solutions took place in the market and were initiated mainly for large businesses . In fact, the MRP system aimed to schedule the work orders as well as the purchase orders of manufacturing. During the end the 1980s, the MRP system was expanded under the name of MRP II and was dedicated for the accomplishment of other functionalities within the business such as the distribution process, the manufacturing activities, and finally the order processing. Hence, MRP II has been upgraded because of the lack of the data integration within the whole enterprise and the latter is called Enterprise Resource Planning system (Bosilj-Vuksic, Spremic, 2004).

Furthermore, the second phase of the evolution of the ERP system appears in terms of the Enterprise Integration. The ERP system was at that time the most developed version that deals with the back-end activities such as finance, accounting, inventory, supply chain, and distribution management. In brief, the ERP system aims to integrate the management of the whole business and this by enabling the sharing of information, and the coming up of automated solutions that serve many business processes. Indeed, the purpose behind the integration was to generate from technology the process normalization within diverse units of the business. Thus, this integration enables the evolvement of the efficiency and the return on capital's growth (Bosilj-Vuksic, Spremic, 2004).

Last but not least, the Customer Centric Resource Planning was developed in order to serve more functions of the front office that appear mainly in terms of the sales, marketing, and e commerce. In fact, the traditional ERP solutions aimed to serve the make-to stock; on the contrary, CRP systems are used to fulfill the requirements of the build to order. Indeed, the e-commerce model needs the CRP systems instead of the traditional ERP and this in order to achieve the efficiency in terms of the manufacturing as well as the delivery service (Bosilj-Vuksic, Spremic, 2004).

Finally, there is the enterprise Integration (XRP) that started in the beginning of the 2000s. The later deals mainly with the interconnection of businesses that includes mainly the value chain of the business, their suppliers, partners, as well as customers. Indeed, XRP system aims to offer the capabilities needed to carry out the decision support and this in order to minimize the inventory levels, broaden pricing sheet methods, evolve the timing process flow, and enhance the customer

satisfaction. Thus, the XRP system goes hand in hand with the integration of the activities related to the internal and external processes (Bosilj-Vuksic, Spremic, 2004)

2) Definition of ERP system:

Enterprise Resource Planning system is a term that appeared during the 1990s in order to highlight the development of the MRP software. In fact, several are the definitions given to an ERP system; according to Jacobs and Bendoly, "an ERP is seen as a model and a system". Enterprise Resource Planning systems can be defined as software adopted by businesses to carry out their management and support all their functional areas. These functional activities appear in terms of "the planning process, sales and marketing, distribution network, manufacturing, inventory management, accounting, financial, human resource management, transportation, and e business" (Okrent, Vokurka, 2004). Moreover, the definition of an ERP system can include the integration of a firms' activities or what is called business processes that goes hand in hand with the improvement in terms of the management and control, relevant and timely inventory's information, enhanced process flow and supply chain network, and finally efficient normalization of the firms' practices. Furthermore, an ERP system is designed based on technological processes required to enhance its practical capabilities and thus, turn it into a reality. In brief, we can say that Enterprise Resource Planning systems are seen as information systems packages that aim to integrate the core capabilities of a business and this by enhancing the workflow of information and enabling its sharing within the different units of an enterprise (Simpande, Jakovljevic, 2003).

According to Thomas Davenport, the Enterprise Resource Planning systems are software packages which integrate seamlessly the entire flow of information within a company. The information flow appears in terms of the financial and accounting activities, human resources information, supply chain network, and finally information related customer. Furthermore, the scope of an ERP system appears in terms of integrating the data flow adopted in the whole organization. In other words, the system that was a dream and become a reality drives the organization to be fully integrated even in some cases when the separation of its business unit is considered as an added value or what is called a competitive advantage. Moreover, the system drives the company to adopt common business processes even when the customization may be in its interest (Davenport, 1998).

Indeed, the ERP system is the one that enforces its own line of reasoning on the whole organization including the strategy adopted as well as its internal culture. In other words, the

business is the one that should be changed in order to fit the characteristics of the system. Thus, an efficient enterprise system is a "tour de force" that enables the company to adopt a comprehensive database instead of having fragmented systems (Davenport, 1998). Therefore, the centralized database enables the collection of any information existing within all business activities. Thus, the data is nourished throughout a streamline of application that sustains the business functions across its units and across the whole world. The diagram below illustrates the anatomy of an ERP system when one new information. Thus, once new information is entered in one single business unit, it is automatically shared throughout the whole business. We can say that inside any enterprise system, a central database exists that enables the collection of data and information from diverse business units and activities, and then feed the whole company. Therefore, this single database enables a drastic streamline of the process flow of information across the whole organization (Davenport, 1998).
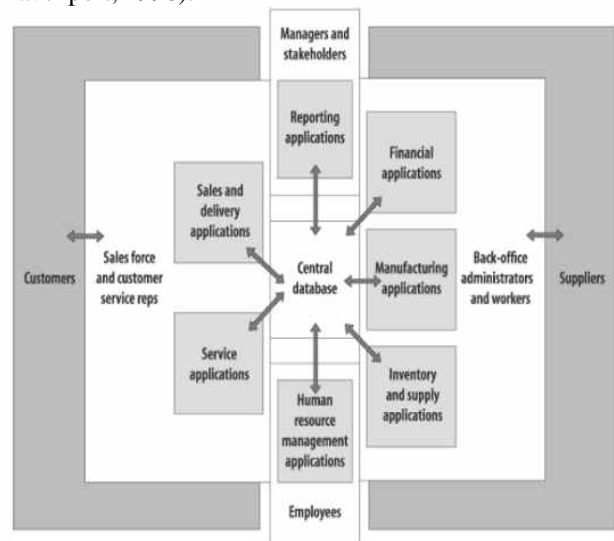
3) The Giants of the ERP system:

There are five main commercials worldwide that supply the Enterprise Resource Planning system. These giants are dominating the industry and appear in terms of SAP, Oracle, PeopleSoft, Baan, and J.D.Edwards. In fact, each one of these suppliers is focusing on a specific specialty because of some historical facts. As an illustration, Oracle provides financial systems, Baan is focusing more on the manufacturing processes, SAP focuses on the logistical network, finally PeopleSoft supplies software that deals with the human resources management. Furthermore, the ERP market recognized the entry of about 50 other smaller and medium firms which supply these systems. In today's extreme competition, ERP vendors are continuously offering innovative products with advanced features (Rashid, Hossain, Patrick 2002).

a) SAP AG–Flagship Products R/3:

Systems, Applications, and Products is an integrated firm that sells application software related to the manufacturing process. The enterprise supplies more than 17000 customers within 100 countries. SAP offers ERP systems that carry out many functionalities such as Customer relationship

management, supply chain management, data warehousing, and finally sales force automation. Furthermore, SAP launched newer versions of ERP solutions that emphasize the use of internet functions as well as and other advanced features (Rashid, Hossain, Patrick 2002).

b) Oracle Corporation:

Oracle is a corporation that have been set in 1977 and known for its advanced software and applications. This corporation came after Microsoft in terms of database software and serves more than 5000 customers within more than 140 countries. Oracle is known for its ERP systems that serve many areas such as finance, human resource management, supply chain network, and the front features. Moreover, Oracle is specialized in other advanced software that deal with the flow of work, application development tools, as well as consulting tools **(Rashid, Hossain, Patrick 2002).**

c) PeopleSoft Inc:

PeopleSoft is a corporation that was launched in 1987 well known for its expertise in the human resource management domain as well the financial tools. PeopleSoft has many strengths that appear in terms of its flexibility and cooperation. The latter offers consulting services as well as electronic business uses that enable the management and operations of more than 4000 firms located in different countries. Indeed, PeopleSoft is ranked the third firm that supplies ERP system with 10% market share **(Rashid, Hossain, Patrick 2002).**

d) Baan Company:

Baan Corporation is specialized in the development of software designed for the manufacturing sector. The firm emphasizes that internet and technologies are the key enablers that permit businesses to adopt the pull based supply chain. Indeed, it offers solutions to many areas such finance, distribution network, integrations, sales, business portals, and manufacturing. Furthermore, Baan's enterprise resource planning system is mainly used in the electronic as well the aeronautic industries.

PART 2: PRACTICAL AND EXPERIENCES

1. Characteristics of an ERP system:

Even if the commercial enterprise systems are considered relatively as modern and new businesses, companies in diverse industries have opted for their packages. According to Andrew McAfee and Erik Brynjolfsson, consultancy Gartner Group confirmed that these commercial enterprise system achieve a revenue of 190$ billion (McAfee, Brynjolfsson 2008). From this standpoint, we can clearly state that these advance software convey drastic advantage for its adopters. Indeed, there are several characteristic attributed to an ERP system. Indeed, the characteristics tend to be grouped into three main areas in order to facilitate their understanding (Uwizeyemu, Raymond, 2012). The first dimension appear in terms of the technical one that illustrates the capabilities and strengths that businesses can achieve if they use an ERP system instead of traditional systems. Indeed the technical characteristics appear in terms of the flexibility as well as the openness of an ERP system. The second dimension is the organizational one that illustrates the positioning on an ERP system within the business. In fact, the organizational factors

are the ones that highlight the way an ERP system affects the structure as well as the applications adopted by a business. Therefore, this dimension includes integration, completeness, homogenization, transversality, and benchmark. Finally, the informational dimension is the last one that includes the quality and usefulness devoted by an ERP system. These characteristics are mainly the business the real time and stimulation (Uwizeyemu, Raymond, 2012).
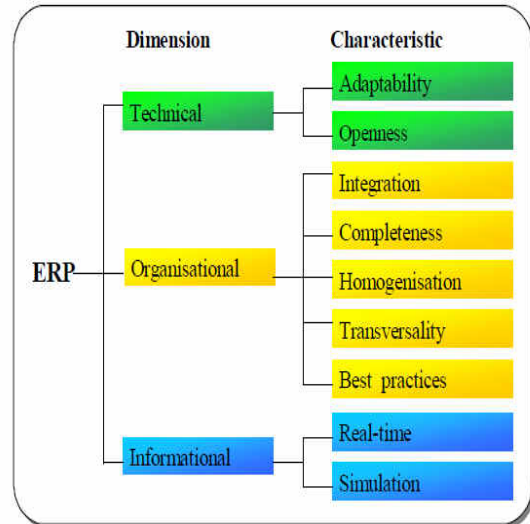

Figure 3: The characteristics of an ERP system under 3 dimensions ((Uwizeyemu, Raymond, 2012)

Since ERP system is considered as a source of competitive advantage, adaptability and flexibility are important given the high investment required as well its extensive coverage on the whole business. Thus, flexibility is considered as a drastic factor of the ERP system in order to enable the business to be developed within a highly moving market. Moreover, openness is a technical characteristic of the ERP system and seems to be redundant toward the adaptability. Indeed, the openness of the system appear in terms of its modularity and portability. Furthermore, one of the drastic characteristics of the organizational dimension is the integration. In fact, integration is the core competency of an ERP system; the ERP system ensures a seamless integration of the organization instead of performing as a set of island where communication the process flow is lacking. In addition, completeness is another functionality of the enterprise system. The completeness of ERP systems can be identified by the ability to have a broad functional scope enabling to link multiple business processes for a better functionality of the entire system platform free of bugs and errors and assuring a long term performance. Also, the completeness of the ERP consists of the smoothness of the operations done by this latter and the outstanding results provided. Also, homogenization of the ERP system makes reference of consistency of the interfaces, the uniqueness of the application system. Last but not least, there is the transversality of the enterprise system which is linked to its process flow. In fact, an ERP system is a set of efficient module that are basically fulfilled one by one vertically. Finally, the real time capability and simulation are informational characteristics of the enterprise system. Indeed, the latters are considered as results of the efficient integration of the system that enable the process flow of information within the whole organization in a real time. Also, the

integration enables the simulation of the inputs across the business (Uwizeyemu, Raymond, 2012).

2. The strategic value creation of an ERP System

In fact, businesses are spending huge amounts of money in the information system in order to generate extremely tactical values. Nowadays, the market is more and more dynamic in terms of efficient innovations and continuous strategic knowledge. Thus, the firm should have effective and efficient mechanisms that enable it to create value. In today's competition, any firm should adopt specific value makers in order to create and capture value. According to Eslam Nazemi & Mohammad Jafar Tarokh, for a firm to remain sustainable within a competitive market, the later should combine between the knowledge generation with one or both of the other value creators. These value generators appear in terms of an effective transaction processing and efficient process of the organizational operations. The figure below highlights the contribution of an ERP system in creating a strategic value for the firm. Indeed, the ERP system is considered as a value enhancer that should be planned in advance, very organized, and implemented in the correct manner. Thus, the ERP system is considered as a powerful tool that enables the enhancement of the three value drives stated before. Thus, these value drivers in turn enable the company to create a strategic value (Nazemi, Tarokh, 2012).

Indeed, the strategic values created by the organization are tied to the appropriate processes of the planning and implementation of the ERP system. In other words, these phases of planning and implementing the ERP system should be executed very carefully in order to avoid unexpected negative effects. In fact, many scholars pointed out that the ERP system should be combined with appropriate planning and implementation processes since they are considered as highly important success factors (Nazemi, Tarokh, 2012).
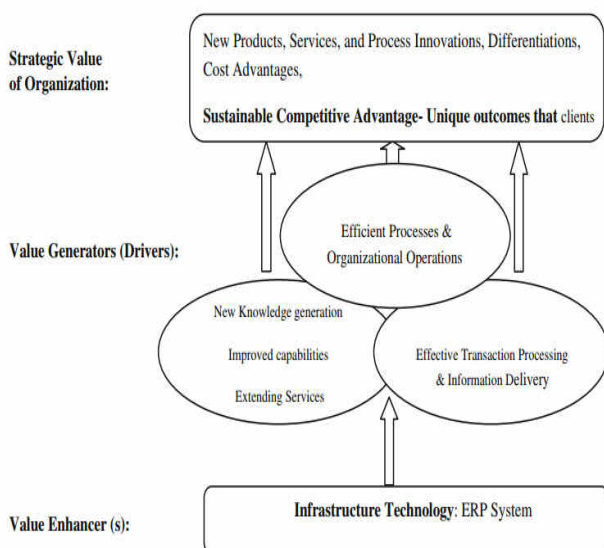

Figure 4: The contributions of ERP system to strategic value creation (Nazemi, Tarokh, 2012)

3. The impact of Enterprise system on an Organization: Enterprise resource planning system impacts the organization and the culture of the business in a direct way and a paradoxical one. On one hand, the fact that the enterprise system offer real time and timely access of the information flow; thus, this enables businesses to ensure the streamline of their management structures in order to be more adaptable, flatter, and more democratic (Davenport, 1998). On the other hand, the implementation of an ERP system enables businesses to centralize the information management and standardize the business processes. Thus, these qualities go hand in hand with hierarchical organization with identical cultures. Furthermore, other companies, especially the ones that have a continuous increasing high tech, use enterprise system to adopt more discipline across the business. From this standpoint, we can say that the adoption of the systems are considered as lever for adopting more control, more identic processes based on full access, and extremely entrepreneurial culture. According to an executive at a semiconductor company, "we are willing to adopt SAP in order to make the culture across the company more independent"(Davenport, 1998). On the contrary, other companies use the ERP system for another purpose that appear in terms of collapsing the hierarchical structure within the business and pushing people to become creative and elastic. In fact, some leaders of the ERP system project plan deeply to enable low level managers, employees, customers, partners, and suppliers to have access to operating information. On the other hand, Multinational Corporation such as Dow chemical is more ambitious to adopt enterprise system in order to introduce a global lean production model. In other words, the fact of adopting the system implies forcing shared processes across all the different units. By doing so, businesses will be able to have an efficient coordination and shift the manufacturing, the procurement, the distribution tasks according to the fluctuation of the demand and supply. Thus, they will be able to reduce both shortages and excess inventory (Davenport, 1998). Finally, some companies adopt the enterprise system from a different approach called the Federalist model. Indeed, this approach emphasizes the implementation of different versions of the enterprise system across each single unit rather than implementing a global one. In other words, they adopt a single ES for the financial information and collect and control information about customers locally. Therefore, it is highly important to make the appropriate decision in terms of balancing between the unity and the variability of an ERP system implementation.

4. Management within ERP system:

Most of the companies in the implementation phase of an ERP system think mainly its cost and complexity. However, companies that did not plan ahead or did not think about the full business implications are the ones facing real disasters. Indeed, managers should adopt quick decisions in order to compete in the continuous changing market; however, "a speedy decision of implementing an ERP system may be considered as a very judicious decision, but a rash implementation is not considered as a wise one" (Davenport, 1998). Therefore, there are some crucial questions that any manager should answer before making any decision. First of all, the manager should know how the implementation of an ES can enhance the business competitive advantage. Secondly, it is highly important to know how the implementation of the system will affect the structure of the business as well as its culture. Furthermore, the manager should make the right decision of either implementing the system across the whole organization or only in some specific modules. Last but not least, a good manager should be sure

that there is no better alternative that implementing an ES (Davenport, 1998). From this standpoint, we can clearly state that chief executives should focus more to the management rather than focusing on the technological challenge. Thus, they should avoid abdicating the responsibility to the system and assuming that the information system is a magic bullet. In other words, technology is considered as a double agent weapon that could erode the company's strategy in case it is not managed efficiently. Thus, the manager is the only one that has the right to act as the mediator to balance between the requirements of the system and the necessities of the organization (Davenport, 1998).

5. The business model of an ERP system:

An ERP system is considered as a dream that had been realized. This strong mean of leveraging the business operations enables the company to support its planning as well as sustainability in the short and long term. In fact, the implementation of an ERP system enables the business to enhance its operational efficiency (Adam, 2010). Thus, the fact that an ES pushes a company to achieve an efficient integration goes hand in hand with developing efficient and effective functioning of the business. Therefore, the business will be able to have real time sharing and access of information across the whole organization using any access mode including the web and mobile. Moreover, the use of an enterprise system enables the company to minimize its cots including the direct and indirect ones. In fact, companies adopting many systems engender them many sunk for storing, rationalizing, and reformatting the data. Furthermore, the indirect costs can affect the business in case there is no integration between the sales system and the production schedule system, hence; the operational efficiency of the firm and the customer responsiveness will be harmed. From this standpoint, we can say that an ES enables the company's system not to work as fragments (Davenport, 1998). Moreover, the enterprise system enables its adopters to streamline the information across the business and then delivers the management throughout a direct and timely access of an extremely wealthy effective information. Thus, companies use this wealth of information to support the decision making and translate this into the achievement of dramatic gains (Hammer, 2004).
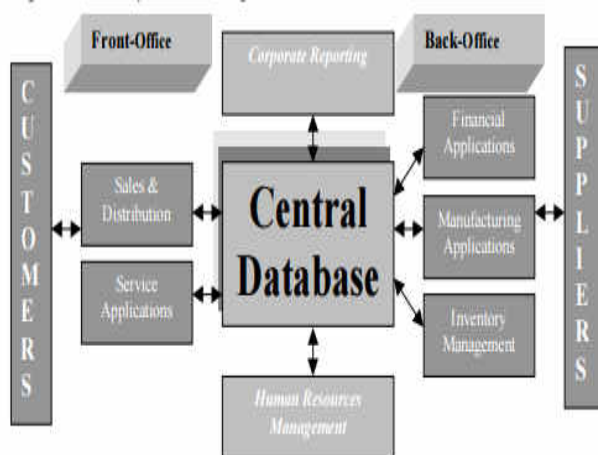
6. Functionalities:

Figure 5: ERP system concept (Rashid, Hossain, Patrick, 2002).

ERP system functionalities consist of a central database where all the information are stored and considered as an inbound platform when it comes to sales and distribution exchange of data from the customer as it is shown in the above diagram moreover, the central database provides an outbound provider of data since once the data manipulation is performed in the central database, the feedback is then returned to the sales department to be forwarded to the customers. Also, the central database plays a prominent role regarding the corporate reporting feature because all the reports are generated through the central database since it is the source of truth to provide reports about sales and or revenues to top level management. As far as human resources management is concerned, the central database stores all the records about employees such as hiring date and compensation package and there is a strong link between the two functionalities because interaction is happening whenever employees are concerned (Rashid, Hossain, Patrick, 2002).

On the other hand, the central database is involved with the financial applications and manufacturing applications where all the financial data is secured for future use that can be either for tax purpose or forecasting the demand or what is more important is in case the company is audited. Moreover, the inventory management functionality can provide a strong help to the organization as far as numbers and quantity sold and produced and it also provides a high visibility of the stock status and when a replenishment process needs to be started to fill out the type of product needed and be on the top of each missing product which will help on meeting each order on time from the customers (Rashid, Hossain, Patrick, 2002).

The back office of the ERP system has a direct contact with the suppliers especially between the manufacturing applications and the suppliers where the raw material is involved and high volume of orders is taking place which needs to be monitored and stays up to date to avoid any error and again the central database comes into picture since all the invoices and bills have to be saved there for follow ups and other purposes (Rashid, Hossain, Patrick, 2002).

From a front office perspective, the ERP system consists of 2 applications dealing with directly with the customers regarding orders and payments but the platform where all the details go to is one more time the central database as the dominant in this system by providing to each service or department what they need for all purposes. Therefore, the central database acts as a source of all the needed documents or data. It also serves as a platform for documentation that fits the purpose as a share point server (Rashid, Hossain, Patrick, 2002).

7. Key business Processes of an ERP system:

There are 6 key business processes for ERP implementation according to some organizations.

1. Quote to cash: consists of steps needed to be part of the market place and be able to make till the end and it starts from the ability to identify customers with needs passing by the firm's products and services to address those needs and get the work done by collecting the payment from those customers after making the sale of the good and/or service.

2. Procure to pay: that can be either a procurement of, and a payment for all the materials required by the order fulfillment process and this process can be handled by VMI (vendor management inventory)

where the procurement part is based on an agreement that automatically provides the company with the raw material needed and the payment is done once the ordered material is received.

3. Plan to perform: it includes the planning process needed to forecast the demand and resources will be needed to fulfill the need and these resources can be human resources or raw material and/or facilities.

4. Manufacturing operations: it starts from receiving the order from the customer till the packaging phase and the product is ready for shipment to the final customer.

5. Product life cycle: consists of the steps needed from the creation of the product or service to the stage when that product or service is no longer wanted even though it might be in good working order. During the product life cycle, enhancements and upgrades are present to better serve many areas in the supply chain where options, product shape and other features are identified however, at the end of the product life cycle, the elements and parts are retiring.

6. Financial management: It is more related to reporting as a whole process and sub processes such as account receivable and accounts payable keeping in mind the taxation side which is part of the element too (Okrent, Vokurka, 2004).
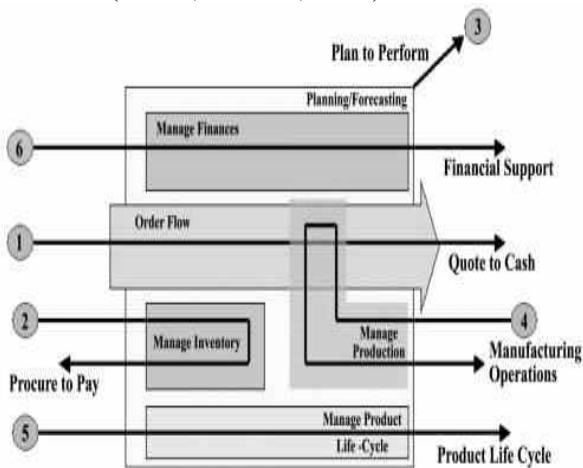

Figure 6: ERP key business flows (Okrent, Vokurka, 2004).

8. Implementation:

An ERP system implementation can be one of the most expensive and critical thing a company might think of since we are talking about a total or a partial transformation of the IT platform in that specific organization. Therefore there are some tips that should be considered while moving from the current system into a new one.

Top level management support: In fact, we are moving into a new system that is involving a high budget in terms of liquidity and also a costly resources to move forward with the change successfully. Top level management participation will be more into a follow up part or status report requests to monitor the progress of the project and make sure the latter is going toward the right path. Thus, it will be obvious that they will not be more interesting to know about the technical aspects or the technical features of the system but they are there to ensure the work is done correctly (Rashid, Hossain, Patrick, 2002).

Make a clear and extensive list of requirements before you start looking at vendors since it is very critical to pick up the right vendor, highly recommended to analyze the list of requirements after an effective, and a well-structured requirements elicitation based on kick off meetings and walk through meetings from the management side to make sure we are gathering the right ones. Once this process is completed, the organization shall start the process of vendor selection based on the previous step. Also, the company should not make the selection based on the price only but it is more on to the needs are trying to fulfill (Rashid, Hossain, Patrick, 2002).

Do not forget mobile users: As we all know, it is becoming more common that users would like to consult their reports or data from the mobile because of the fast move we are facing in technology. Moreover, this is due the smart phone initiation which enables the flexibility to perform many tasks using a mobile phone. For that reason, the organization should highly consider the implementation of the mobile usage besides the desktop usual one. Mobile users will mainly welcome the idea and approve this feature immediately keeping in mind the security side that is also important (Gibson, Levi, 2009).

Carefully evaluate your options before selecting your ERP system: The selection of the ERP system is very prominent step because this might lead to a poor implementation that is a disaster for the organization and will automatically cause an ill-acceptance from the users that's why the selection phase should involve the stakeholders and the executive team before finalizing the decision. Moreover, the selection of the ERP system will be based on the type of the industry involved. In fact, it is recommended to consult with vendors specializing in the company's industry (Gibson, Levi, 2009).

Get references: During the process of ERP product selection, organizations should ask the vendors for references and past experiences such as implementations done for other clients and ask feedbacks about the performance of the system. By doing this, the organization can, at least, have an idea about past experiences and feedbacks.

Think before you customize: It is highly important to think deeply before deciding to customize the ERP system and the concerned team should show strong evidences that the requirements have to have a customized ERP system instead of a standard one even though many subject matter experts prefer to use the simple version and avoid any customization since it is coming with extra expenses such as upgrades, fixes and maintenances. Moreover, there should be resources that can identify any risks associated with the customization which might put the entire platform on jeopardy (Gibson, Levi, 2009).

Factor in change management: ERP is one of the factors impacting management since many changes will happen at the level of management due to the fact of a new ERP implementation some changes might occur within the organization such elimination of jobs and changes in the job descriptions or sometimes the timing of the job might move from day to night or vice-versa (Gibson, Levi, 2009).

Provide the necessary time and resources for training on the ERP system: the learning curve should be good enough to enable employees to learn and master the ERP system to get the expected results from them. For that reason, it is mandatory to allocate the qualified people to train the new users of the system to overcome the challenges and reduce the burden on them (Rashid, Hossain, Patrick, 2002).

9. Success factors:

For a successful implementation of an ERP system, several factors come in picture during the end to end process.

Top management support: this is considered the first element of the successful factors since the top level management will provide the budget needed to move forward with the change needed related to ERP. Moreover, top level management will provide guidance and leadership in terms of decision making process that can be about time and/or location (Garcia-Sanchez, Perez-Bernal 2007). In fact, the involvement of a credit manager is required in order to succeed since they should know minutely the functionalities of the system (Lahman, 2015).

Business plan and vision: to make the ERP system successful, an effective and detailed business plan is required for great deployment of ERP where all the steps and deliverables will be included for tracking and monitoring purpose. Moreover, the plan should also be aligned with a well identified vision that is the outcome of the business plan items (Garcia-Sanchez, Perez-Bernal 2007).

Re-engineering business process: is another successful factor since it is considered as an improvement of the process, functionalities and flows for better service or better quality provided to the customers. In fact, each organization should welcome to the idea of re-engineer the process to fit with the new software proposed as an ERP. Moreover, it is highly important to align the business process and the ERP infrastructure strategy in order to succeed in terms of this initiative (Bosilj-Vuksic, Spremic, 2004, p.4).

Effective project management: to make the ERP transition smooth, the project management skills are required since it involves planning, monitoring and controlling of the new change. Also, an efficient use of both human resources and material such platforms and tools is highly required. Also, a qualified project manager should perform the tasks needed to make the new project successful by meeting expectations of the top level management when it comes to budget and due date. Finally, the final outcome should meet the organization's expectation (Garcia-Sanchez, Perez-Bernal 2007).

Team work and composition: each new change either related to a new software or an upgrade of existing software requires the involvement of qualifies resources than can not only understand the software but also the business requirements and process flows for implementation. Therefore, a strong selection is needed before kicking off the project to assure the progress of the project and this will include resources with technical background and business skills to have a strong combination since ERP involves the entire organization which means there will be cooperation between all departments for completion of the project.

ERP system selection: This factor is one of the most leading factors to success because a wrong selection of the appropriate system might cause a crash in the current system due to the ineffective implementation or a budget crash if the company invested in the wrong tool. With that being said, the organization should bring in qualified consultants for the ERP selection and that should be based on studies such as feasibility and high level analysis like gap analysis to identify any risks might occur between the current and proposed system. Also, the organization's data should be safe when selecting the new system because the data stored might be lost after moving to the new ERP if no back up was set up for that purpose (Garcia-Sanchez, Perez-Bernal 2007).

User involvement: This factor is among the successful factors because users will be the final users of the ERP after installation. In fact, they should be very familiar with it to perform their daily operations and to be able to do so, they should master all the functionalities associated with the ERP (Garcia-Sanchez, Perez-Bernal 2007).

Education and training: once the ERP is fully deployed in the organization system, training should be provided to the users of the new tool for daily transaction use. Furthermore, it is extremely important to ensure that guidance, follow up, and training sessions took place regularly and there is a providence of answers to all the questions. Moreover, there should be an initiation of a hotline number technical support for all the issues related to ERP.

Reconciliation of the technological imperatives with the business needs: In fact, it is highly important to avoid focusing just on the technical challenging side of the system. Thus, companies should make sure to adapt the system imperatives with the business needs. According to Thomas Davenport, "an enterprise system imposes its own logic on a company's strategy, culture, and organization" (Davenport, 1998).

The alignment of the system with the business strategies: In order to avoid the crash between the system and the class, it is highly important to ensure that the business fits the system. Indeed, the business sometimes should modify its processes in order to fit the system (Davenport, 1998).

SOURCES

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