

ERP solutions in order Information System strategies for achieving organizational goals

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Abstract

Today, most companies in all industries are fundamentally dependent to their information systems (IS) (1) and reaching to organizational strategies comes to the reality by IS solutions. Existence of IS and its strategies accelerate the achievement of organizational long and short-term strategic goals. The relation of IS to company strategy and the attainment of competitive advantage has been the focus of many discussions during the past decade, and the importance of alignment between business strategy and IS strategy is well recognized. (2)One of the main solutions of Information Systems is the Enterprise Resource Planning implementation. Having SMART strategies and align them to IS of organizational strategy is one of factors of successful implement, which is achievable by knowing well known Information System Solutions and best vendors' strategies, which have great impact on presenting required tools of reaching organizational goals.

Keywords: Information System, ERP, SAP, Strategy.

1. Introduction

During these years, organizations and their environment have undergone many changes, from the time when a company lived just by focusing on producing until now that planning coherent and efficient strategies are essential for their survival. Among all these changes a smart use of technology gives organizations a chance of being competitive by integrating incoherence information and data for reducing costs of operational and headquarters' processes, which increases the satisfaction of customers and staff. Meanwhile, the information technology has great impact on updating data and accelerating processes to achieve organisational goals. The evolution of information technology (IT) in organizations is often portrayed as following three areas—Data Processing, Management Information Systems, and Strategic Information Systems (SIS)—each displaying distinct characteristics regarding the application of IT and having different objectives. (1) According to organizational strategies different Information System solutions are used. One of the most important and common one is Enterprise Resource Planning systems, and especially SAP as the leader of the ERP systems market, which is analyzed from the strategy view in this paper.

1.1 Information system strategies (ISS)

Throughout these decades, the business environment is characterized by great uncertainty and variability. In this environment, information technology has proved to be an important strategic ingredient for the creation of competitive advantage. (2) Information systems (IS) and technologies are used to leverage unique business competence, merge companies, restructure industries, and facilitate global completion. (3) Managing information technology (IT) can be conceptualized as an issue of aligning organizations with their IT to gain competitive advantages. Researchers agree strategic alignment, or the fit between business strategy and IT is the most significant issues of facing IT. (4) But at first it is important to know that "what is the strategy" and "what is IS strategy". Mintzberg defined the strategy from organizational viewpoint as the famous five Ps, a plan (some sort of consciously intended course of action); a ploy (a specific maneuver intended to outperform a competitor); a pattern (a stream of realized actions); a position (matching between an organization and its external environment); and a perspective (which is shared among organizational members, and the content of which consists of not just a position, but also an ingrained way of perceiving the world) (5) Researches on IS strategies have been strongly influenced by the management strategies management. (5) It means that ISS contained the five Ps definitions too. Therefore, all in all it is just about making correct decision through different strategies on IS. It is essential that companies choose SMARTER smart strategies. It means that they choose their strategies smartly by focusing on vendors best practices and strategies and then have plan according to the SMART concept, which say that plans have to be Specific, Measurable, Achievable, Relevant, Time oriented, Enjoyable,

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Recordable and Satisfactory. This is accessible through correct understanding of the IS environment and strategy.

1.2 ISS solutions

The Information Systems are so beneficial for organizations. These give managers ability of understanding key business functions and data, keep business priorities, establish a business framework, develop business plan and move according to organizational goals. Meanwhile, a Strategic information system planning (SISP) is vital for organizations to succeed in today's highly competitive worldwide marketplace. (6) To align organizational strategy and support daily departmental operations, different IS solutions are used such as enterprise resource planning (ERP), manufacturing execution systems (MES), decision support systems (DSS) with business intelligence (BI) technology, and business-to-business (B2B) data exchange systems. (4) In this paper, it is going to discuss about the ERP solution to gain organizational strategy by focusing on SAP vendor.

2. Literature review

1.3 Strategic Information systems

Strategic Information Systems researches are classified in 3 main area of (1) IS for Strategic Decision Making, (2) Strategic Use of IS and (3) Strategies for IS Issues". The content of each area is contain, Strategic Planning, Information Planning and Decision Support (DSS, EIS, GDSS) in area one; Alignment of IT and Business, Lifecycle of an IS for Strategic Use, IS and Globalization, E-Commerce, IS for Competitive Advantage, IS for Internal Strategic Efficiency and Knowledge Management Use in area 2; and IS Management, IS Planning, IS Organization (include Outsourcing), IS Development Methods, Application Service Provision, IS Implementation, IS Evaluation and IS Adoption in area 3. (7) Henderson and Venkatraman developed a model for conceptualizing and directing strategic management of IT, which is defined in terms of four basic domains of business strategy, information technology strategy, organizational infrastructure and processes, and information technology infrastructure and processes. (3) A key outcome of IS strategy planning is a portfolio of IS that will assist an organization in executing its business plans and realizing its business goals. (8) Richard Cardinali said that IS covers three main organizational strategies of the internal, competitive, and business portfolio strategies. Internal strategy is about improving organizational structures and processes to achieve goals and objectives. Competitive strategy works on competitive moves within the industry environment. Business portfolio strategy focuses on the factors of choosing the kind of industry and how to work on the industry. (9) Venkatraman summarized six perspectives of alignment: moderation, mediation, matching, co variation, profile deviation, and gestalts. (3)

1.4 Enterprise Resource Planning Systems

Nowadays many organizations in different industries tend to implementing ERP systems to improve their efficiency. But smart implementing is an important issue to have successful implementation. One of the aspects of the smart implementation is to know vendors' strategies of designed systems. Also, ERP systems increase business performance when implementing companies strive for alignment between their strategic needs and the ERP system. (10) . ERP systems combine business processes and IT technology of the implementing organizations in order to ease the flow of information through business functions. Nowadays ERP systems provide the business infrastructure in a large percentage of organizations, and any change in business strategy needs to be supported by the ERP system. (10) ERP systems are presented by major ERP vendors include SAP (www.sap.com), Oracle (www.oracle.com), J.D. Edwards (www.jdedwards.com) and PeopleSoft (www.peoplesoft.com), which are designed to reflect 'best practices. (11) standardization are factors of IT, but the underlying motivation for ERP is to improve business processes. That is, an ERP system is generally adopted to improve the firm's overall productivity, not just to solve an IT problems. (11) In the next paragraphs it is going to discuss ERP systems with focusing on SAP views. SAP is a leading company in the term of Information Technology and especially ERP. Hasso Plattner, Dietmar Hopp, Claus Wellenreuther, Klaus Tschira, and Hans-Werner Hektor were the IBM employees that established the SAP Company in 1972, when the concepts of ERP systems didn't exist. At 1980 ERP systems were introduced to the world and SAP had broken new ground in this area and became the market leader. Now it has various corporations all over the world and presents this idea that integrated processes led to increased efficiency and reduced reaction time to unexpected events. (12)

3. Enterprise Resource Planning as the ISS solution

An ERP system is an integrated information technology (IT) that uses common databases and consistent cross-functional information flow to allow organizations to integrate information from different departments and

locations. (13) The ERP system has been shown to be able to provide significant improvements in efficiency, productivity and service quality to lead to a reduction in service costs as well as to more effective decision-making. (14) One of Information systems' solutions is Enterprise Resource Planning, which is a generic term for a broad set of activities supported by multi-module application software that helps organizations to manage their resources. (14) Successful ERP realization has many benefits and profits such as reducing cycle time, having faster information transactions, facilitate better financial management, making tacit knowledge, explicit lower total costs, better customer service, improving quality and efficiently and coordinating globe demand, supply and production (15) (16) All these profits are accessible if IT alignment continuously with changes in the environment, strategy, organizational structure, or technology itself. (4) According to SAP view the potential benefits of the SAP-ERP system are as bellow.

Increased competitiveness with integrated, fast, and flexible business processes;

Accelerated time to market with innovative, individualized products and services;

Simplified corporate structure, market channel, and business scenario management;

Improved corporate resource and asset utilization – and greater customer satisfaction

Consolidated foundation for the latest mobile, cloud, and in-memory technologies (17)

It shows that the SAP strategy is according to clients' requirement of both today and future for having agile organizations.

4. Risks of strategies failure in ERP implementation

Knowing risks of failing implement is so important for having smart decisions. Critical Success Factors are meant to determine which information is important for the management control system. Various strategies call for different information, and, to that end, the management control process starts with the identification of CSFs. CSF can be used for strategy formulation by supporting the strategic planning process. (17) It is essential to have a SMART plan of implementing. An important objective in IS planning is to ensure senior management commitment for implementing the selected projects and create a partnership between IS and user groups for successful implementation efforts. (8) Davenport divided the major elements of a rational approach to implementing an ERP system to two parts of preparing the people, and preparing the technical system. (15) It shows that the most failure risks are in these views too, which need to face smartly with defining appropriate strategies according to these two areas. Miller said that failure was often caused by people problems rather than technical problems and managers often disregarded the impact of such technology decisions on organization structure and performance measurement, and they underestimated the role of manufacturing in the company's competitive strategy. (15)

Norris named the top 10 risks to the SAP R/3 implementation as Inadequate sponsorship; Poor/slow decision making; Poor/no scope definition; Inadequate attention to change management; Lack of cooperation between business areas/departments; Poor use of consultants; Inappropriate resources; Unrealistic expectations; Inadequate knowledge transfer to your people and Poor project management, (18) which highlights the important of our view point on necessity of having the SMARTER smart decisions on choosing strategies.

5. SAP Strategies

SAP is a market leader in enterprise business intelligence by making information easily accessible and consumable with simplified user interfaces. SAP is integrated, process-oriented software supporting best practice processes. (12) Based on the SAP view, the decision to implement SAP fits in an overall business strategic program derived from the company's business vision. The SAP implementation is based upon a combination of more or less compelling operational features that are mentioned in follow.

Legacy systems need to be replaced; more integration of information is required; better integration of the IT landscape is needed; common ways of working need to be implemented; the supplier of current systems doesn't provide proper support; organizations integration is required; Up-to-date software functionality meeting the needs of a modern organization is needed; to improve continuity and enhance disaster-recovery planning. (19)

SAP's User Interface (UI) strategies are written bellow, which can support organizations to make their smart decision about strategies.

1. Optimize & simplify SAP development processes.
2. Agility through More Efficient, Flexible Processes.
3. Consolidate and offer consistent UI Portfolio.
4. Provide clear option for implementation.
5. Utilize modern & open UI standards and make them available to customer.
6. Seize new opportunities by leveraging technologies like cloud, in-memory, and mobile computing.
7. SAP Enterprise Portal - to access all SAP applications from a Web Browser.
8. Accessibility Support.
9. Approach to build professional Web UIs for business applications.

10. Low cost of ownership.
 - a. Thin Client / Desktop
 - i. No need to buy new front-end hardware / network
 - ii. Use new software on existing customer platforms
 - iii. Usage of thin communication protocols
 - b. No need to re-train frequent users
 - c. Easy to maintain
11. Enjoy SAP user experience on all platforms.
12. Fully integrated approach to extending enterprise applications to mobile devices. (20)

6. Successful factors of reaching ERP_ISS strategies

Many organizations are convinced they must have an ERP system to replace their legacy systems to remain competitive; however implementing an ERP system is very expensive and time consuming. (15) Therefore, many research studies were done on Critical Success Factors (CSFs). Although, there is no general agreement on which set of factors are the key ones. (14) Some of researchers' viewpoints of CSFs are shown below.

Umble showed four CSFs of Clear understanding of strategic goals, commitment of top management; excellent project management and organizational change management are the keys of the successful goal live system. It is also believed that the existing organizational structure and processes are not compatible with the structure, tools, and types of information provided by ERP systems. Even the most flexible ERP system imposes its own logic on a company strategy, organization, and culture. (21) Tsai grouped success factors in two parts of Pre-implementation consideration factors and Information System model. (13) Ngai said that top management support, project champion, ERP teamwork and composition, project management, change management programmer and culture were the most critical to the successful implementation of EPR. (14) Chang predicted success and failure value for 7 categories of Project procedure time, Function of information system, User's cooperation, the senior manager support degree, Coordination, Organizational, Cost. (16) Sun said that People and Data have the highest priority of ERP implementing. (22) Munir classified CSFs in three categories of organizational and cultural, operational and technical and neutral factors. (23)

The important thing about CSFs is that organizations have to know them for understanding their strengths and weaknesses according to SWOT -Strength, Weakness, Opportunity, Threat- analyzing.

7. Conclusion

Results showed that the more the ERP system strategy was aligned with the business strategy, the more likely that the ERP project was completed on budget and on time. In the long run, changes in business strategy must be coordinated with those available in the ERP system. (10) Having a successful ERP implementation is related to make smart decisions and having aligned plan based on the organizational strategy. Knowing vendors viewpoints, factors of previous successful implementation and threats of failing the ERP systems can lead organizations to choose correct strategy to make their companies agile by using Information System Solutions.

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