

A PERCEPTION OF AN OVERALL CONCEPT FOR E-BUSINESS SYSTEMS IN THE ORGANIZATIONS

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Abstract

The successful management of the information and communication infrastructure of modern companies is increasingly dependent on Internet/intranet network systems and the development and implementation of an effective e-business concept. Based on modern information and communication technologies and e-business models, the purpose of this paper is to analyze the need of today's organizations of the formation and adoption of a comprehensive e-business system concept, which is being constructed for the purpose of transforming traditional business activities into electronic ones by providing secure access for multiple employees, users, partners and contractors to corporate information resources available on the Internet or intranet/extranet in a continuous 24/7 mode. The adoption of such a concept aims to achieve specific business benefits, enhance the sustainability and competitiveness of organizations in the economic market, as well as maintain and establish world leading positions.

Keywords: *strategic planning, corporative management, information and communication technologies (ICT), e-business concept.*

JEL Codes: *D80, L80, M10, M15*

INTRODUCTION

Today's companies face major challenges in managing their information and communication infrastructure. Successful presentation, implementation and development of their business processes is increasingly dependent on the Internet and intranet network systems and the development and implementation of an effective e-business concept. The global network is being used more and more actively as a tool for advertising the services and products offered by enterprises (Turban, 2017). It is a mandatory aspect in transforming a traditional business into an electronic one (Barfield, 2003; Li, 2006; Combe, 2006).

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There is a common belief that the ability of the managers and staff to effectively use information and communication technology (ICT) in their business activities is essential and necessary for the implementation of a successful e-business and for the establishment of the business positions of companies in national and global market niches. So, the managers of the enterprises that are seeking to expand the market and increase their competitiveness are faced with the decision of not whether it is time for such a transformation, but how to do it in the best possible way (Gloor, 2012). At the same time, when organizing and developing their business activities, organizations must comply with the dynamically increasing new solutions for building, managing and supporting information infrastructure, including hardware and software, technological communication between different management applications, software platforms, communication with databases, etc. (Mladenova, 2006; Miltchev, 2015; Neykova, 2017)

A PERCEPTION OF CONCEPT FOR E-BUSINESS SYSTEMS

Based on modern e-business models and the use of ICT, today the concept of an e-business system is being built to transform traditional business activities into electronic ones by providing secure access to multiple employees, users, partners, and contractors to corporate information assets and resources available on the Internet and intranet/extranet in continuous 24/7 mode (Chaffey, 2007; Li, 2006). In this sense, it is reasonable to accept that no business system can function without the minimal elements of e-business (Milchev, 2011), and the proper e-business adoption rests on the definition of the concept of the e-business system, which is regarded as a modular system that is responsible for the functioning of economic operators, performing specific tasks. In other words, building/developing an e-business system requires a well-planned strategy, in which the implemented ICT technologies work comprehensively for the automated organization and management of business processes such as:

- enterprise resource planning;
- supply chain management - supplier relationships;
- human resources management;
- management of technical documentation;
- product and production management;
- risk management;
- marketing, advertising and public relations management;
- sales management and business transactions at any time of the day;
- access to business information resources provided through web applications from a variety of devices;
- exchange of information among employees, customers, suppliers and partners and management of the relationships with them;
- personnel training;

- development activities and obtaining information necessary for strategic and tactical planning, etc.

Therefore, the creation of an e-business concept requires a complete organizational structuring of all the necessary information and communication elements (computer and network devices and technologies, and software management modules), through which traditional business activities can be transformed into electronic ones, expanding the scope of their application among potential users, suppliers, partners and contractors. In order for the chosen concept to be successful it must be planned keeping in mind its multilateral application both in the organization's back-office processing (back-end), as well as in the organization's front-office processing (front-end).

The strategic planning for the e-business concept is based on a set of separate solutions and operations, which are necessary for the formation of an e-business system, such as:

- formulating the purpose and expectations of building/developing an e-business system;
- defining the basic business relationships of the organization with suppliers, partners, clients and government institutions and planning the new information interaction in the electronic environment;
- determining the type and nature of the business processes carried out in the activity of the enterprise that will be transformed into electronic;
- defining appropriate e-business models for the specific economic activity of the organization;
- identifying appropriate e-business categories required for business development;
- configuring the hardware and software supporting the e-business system;
- planning and configuring the network infrastructure and how to connect the individual ICTs - e-business resources on the Internet / intranet;
- determining the need to build an intranet/extranet network infrastructure;
- developing information support for e-business and defining an information security policy by restricting access by means of access levels for employees, suppliers, partners and users;
- planning the amount of financial resources necessary for investing in the establishment of an e-business system;
- planning the financial resources needed for the recruitment of qualified employees that are going to be responsible for the development, maintenance and improvement of key e-business elements;
- planning the financial resources needed for upgrading outdated computer hardware / software resources or additional technological innovations to improve the current e-business system;

- planning the financial resources for upgrading the qualifications of employees so that they can work with the embedded e-business devices and computer software.

In the process of e-business development and implementation, organizations should take into account the need of adequate solutions for information provision that have to comply with the specifics of the already established and functioning corporate information system as well as its connection to the system responsible for automation and control of main business activities such as: management of the content of the organization's website, management of relationships with customers, suppliers, partners and contractors; management of e-commerce and electronic payments; management of resource planning systems, management of marketing and sales; management of production and supplies, etc. Despite the numerous innovative solutions for transforming traditional business activities into electronic ones, unfortunately today most of the enterprises in Bulgaria apply only individual applications and modules, which automate only part of the business processes, which in turn is the reason for inefficient management in the conditions of Information Economy (Varbanov, 2011).

In the present article, the overall concept of an e-business system is being considered as based on the creation of a virtual organizational infrastructure which must closely correspond to the organization's network information infrastructure by integrating separate management software modules. This infrastructure must be built secure, flexible, reliable and scalable, as the main objective is to raise the awareness of management staff and its business partners when making adequate management decisions and managing information flows to employees, suppliers and customers.

The building and launching of an e-business infrastructure and the applications through which it interacts is based on hardware, software and related services for their standardized work environment. In this sense, recent studies have shown the increasing role and importance of corporate information systems thanks to the application of business software that serves different levels of management of the organization and automates specific functional business areas. So in recent years among the implemented integrated organizational applications that provide comprehensive information services in various functional areas, the most preferred are:

- ***Enterprise Resource Planning Systems (ERP)***. ERP systems are a collection of software modules that automate an organization's core business processes such as production management, supply chain, logistics, accounting, finance, marketing, specialized business analysis, delivery and sales, warehouse management and human resources and more. These systems are multifunctional and enable effective strategic management and competitiveness of the company through a complete look at corporate resources. ERP solutions provide centralized control over a large part of business processes by integrating all data and business processes into a single information space

and ensuring data exchange and consistency between them. The introduction of ERP systems enable minimizing operational and administrative costs, optimizing business processes, improving the quality of production, distribution and customer service, providing additional competitive advantages, etc.

- ***Customer Relationship Management Systems (CRM)***. CRM systems monitor, store, process and analyze the entire flow of information from and to every customer of a company. They provide sales specialists with the opportunity to accumulate, monitor and manage all contacts with potential and existing customers based on electronic forms. Thus, they are carried out in close relations with consumers and their specific requirements, requests, complaints, etc. CRM systems support operational business processes in areas such as: optimizing sales processes and highlighting the most profitable products and services; providing access to information received from affiliates and others divisions; providing remote access to a central data warehouse; providing additional services to clients and enabling them to actively participate in proposals for new initiatives. CRM systems support the automation of corporate marketing by providing information about the business environment (competing organizations, market trends, etc.). At the same time, they also help to automate sales, keeping consumers' preferences, their shopping habits, demographic data, and increasing staff productivity, directly related to sales.

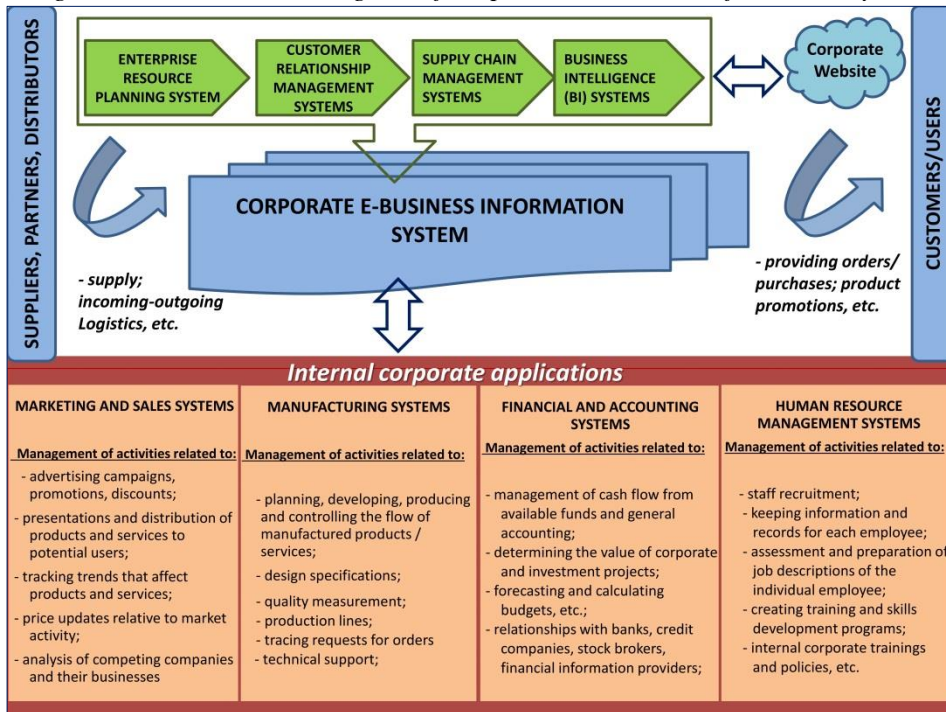
- ***Supply Chain Management Systems (SCM)***. The SCM system is a strategy for implementing a supply chain by integrating the activities of marketing, distribution, manufacturing and commercial organizations. At the same time, they are integrated organizational applications that use information technology to manage the relationships between an organization's core business processes and the business processes of its suppliers, distributors, customers and partners, to reduce costs, time and storage prices. After all, regardless of whether the company is a manufacturer or not, its supply chain must ensure the reliable and cheap acquisition of raw materials and components. There is a wide variety of SCM products designed for manufacturing enterprises and companies, which differ in their complexity in the provision of services in all industries.

- ***Business intelligence (BI) systems***. Business analysis information systems are software solutions for analyzing and forecasting processes in a company based on large amounts of unstructured data accumulated from its activities. BI technologies are basically tools for extracting the maximum value from the accumulated information by summarizing it and organizing it according to certain key performance indicators. BI systems extract recurring patterns from the data, regularities and cause and effect relationships in the form of reports, references and visualization tools. In this way, they help managers in different management positions to monitor change in the development of business processes in order to be able to take fast and adequate decisions for realizing business benefits or correcting inefficient activities. BI systems are also used as a tool for

predicting future trends for which necessary business development measures should be taken.

The process of reflecting the integration of the main business processes and relationships of the organization in the overall system for information assurance of the e-business is represented by the schematic diagram in Figure 1. Suppliers, partners and distributors are located at the entrance of the scheme, and customers and users are at the exit. The input is connected to the output by coordinating the main software modules implemented and corporate applications in the overall e-business information system.

Figure no. 1. Schematic diagram of corporate e-business information system



Adopting a similar concept for an e-business system and integration of their relevant organizational applications enables customers, partners and suppliers to interact and transact through the corporate Internet/intranet. The management modules implemented in the information support system reflect the movement of different business processes, such as supply, distribution, planning, accountability, etc., in order to direct and provide data and information flow to functional units directly related to their processing, implementation and analysis.

The implementation of business software systems is a complex and difficult process that requires significant financial and intellectual resources from organizations. It

is influenced by various factors, some of which cannot be predicted in advance. Therefore, the realization of a successful project depends on the accomplishment of many tasks, each of which is a source of potential risk for failure and collapse of the process. Therefore, corporate managers should have a clear idea what the possible dangers and difficulties are, as well as a sufficiently objective basis for comparing the solutions available on the market and what they can expect from the service provider to implement the system and integrate its management modules. At the same time, it should be taken into account that with the dynamic development of the e-business management system, the infrastructure has become increasingly complex, based on various technological innovations in the field of hardware and software, multi-layered interconnected information architectures, various management modules, etc. As a consequence, some management staff may react inappropriately and inefficiently, therefore further training is required to acquire the necessary competences. Time is also required for the introduction and adaptation of employees, partners and users to the new technologies and innovations, which in turn can lead to a lag in the competitiveness and development of the business activity of the organizations and the probability of missed business benefits.

CONCLUSION

The formation of a clear concept for integrating an e-business system in organizations directly influences the achievement of specific business benefits, the faster and more efficient start-up, functioning and proper positioning of the organization on the Internet (intranet / extranet). This approach aims at enhancing the sustainability and competitiveness of economic market organizations, as well as maintaining and establishing world-leading positions. Therefore, organizations need to be constantly acquainted with the variety of modern methods and solutions for organizing, developing and improving an e-business system, as well as to take concrete measures for improvement. Otherwise, the lack of knowledge and qualification of the key importance of new technologies and innovations in enhancing the resilience of the e-business system and its security in the web space may, on the one hand, lead to dissatisfaction, failure or the collapse of the planned e-business transformation. In this case, the potential missed business benefits and large losses incurred from the investments made by the enterprises must be taken into account. On the other hand, insufficient competencies are pushing organizations to turn to outsourcing companies to develop strategic solutions and e-business management, which is associated with additional financial costs, risks and threats to the information assets (loss of know-how, intellectual resources, confidential data, etc.) of various-sized organizations.

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