

ERP

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Many times we hear the word **integration** (from different mass-media sources), either related to the integration in UE or the NATO structure, or more recently the informative integration.

An ERP, “**considered the most loyal expression of the interdependence between the economic and the informative technology**, represents a software infrastructure, multi-modular which offers manage support and coordination of different structures and processes in the company, in order to achieve business objectives”. (Doina Fotache, Luminita Hurbean - -, „Soluții informatice integrate pentru gestiunea afacerilor-ERP”-Capitolul 1, pag 10). The point of ERP – system of integrated management for the business processes – is to achieve a better communication in the company, improved cooperation and interaction between different departments such as production planning, acquisitions, production, sales and public relations. In short, a manage system for a company type ERP represents planning the 4 determinant factors for a success business : the 4 M – man, money, machines, materials.

For the technological developed countries, ERP represents over 4 decades of evolution of the economical manage techniques for the informative technological support. The main purpose lies in the integration of all the economic processes and optimization of the available resources.

In the globalization era, the characteristics promised by ERP are very tempting for the companies that want to extend their activities worldwide, without losing control over them. A research of the ERP market made by “Computer

Economics” magazine shows a 20% percent for the organizations that already have installed integrated suites, in all their branches of activity, mainly the ones with production activity. The same research indicates that the popularity of the subject will maintain the same high quotation, knowing that 34% of the questioned firms are working an ERP project or are in the incipient faze of a similar project. The high interest for ERP systems comes from the promised benefits. **Mainly, we are talking about the functional integration, the incorporation of the best economical-technological practices, the insurance of the informational wealth and assurance of the direct access to information in real time (the advantage of unique database) for all the members of the organization.**

The ERP projects are often associated to the important organizational changes, meaning the improvement of the way the activity develops, what the special literature named Business Process Reengineering (BPR).

Solutions from the Business Process Management (BPM) allow the integration of all the extremely different systems, making sure it has advanced funtions for the influence and automatization of the business fluctuation around the company. The BPM solutions have visual instruments which clearly simplify the way the complexe business processes are defined and integrated which assume the access to variate datas and the interoperability of a large number of application. Through the BPM solutions the business processes will the modelated directly by the financial and economical analists, without the suport of the IT departments.

Applications included in the BPM assure a full integrity between business and IT, the demanding of the business being adapted to the actual business environment. Taking in consideration the fact that the actual business

environment is characterized by a more accentuated vitality, using a BPM solution can assure a faster alignment to the resulted changes.

The integration of the BPM solutions is based on the technologies and the fundamental standards, web services and XML. Web services are a standardized way to distribute application that use Internet and fundamental technologies that lies at the base of this network. Also, web services offer the interconnect possibility of a large palette of applications available on different platforms and in different locations in the world. This way, you can say that web services were created to help the communication between applications, the new technology opening the gate to a new era of informatics ruled by applications with a very high level of intelligence, capable in taking decisions and searching information on the Internet as a support for more sensible decisions.

Because the ERP systems offer integrity, it is obviously that they represent more then the software projects.

ERP integrates all the economical processes : production, distribution, accounting, financial, human resources, stocks, service and maintenance, logistics, projects management, offering accessibility, visibility and informational consistency in the whole organization. ERP means integrating all the applications in a global solution, covering all the related processes which materialize the activity of the organization, eliminating the borders between departments and functional boundaries also organization and environment, offering the possibility to multi-user, multi-purpose and multi-space.

By definition, an ERP system represents a complex software solution, based on the client-server architecture which has elements integrated in a common platform used to manage company resources, to work the transactions and ease the integration of all necessary processes in a business, gathering them, facilitating the spread of data and eliminating redundancy (Doina Fotache, Luminița Hurbean – „Soluții informatice integrate pentru gestiunea afacerilor-ERP”-

Capitolul 1). Every ERP package offers different functions for different industries.

The main challenge is the integration of all the economical processes and the optimization of available resources.

At implementation, the ERP systems include a series of base characteristics. They are installed on a **database manage system**. The base platforms used in general are : Oracle, DB2, Informix, MS SQL Server, SQL Base and Sybase. The database requires an initial setting according to the organization processes and needs to assure direct access to information in a real time (the advantage for unique database), for all the member of the organization. Once the install in finished, the users introduce the data, the information being transferred through processes to other modules. Finally, the ERP systems include periodically or instant realized report instruments.

The ERP applications are realized with the help of **CASE instruments**, which simplify the programmers work, taking over the rules and auto-generating the source code. The advantages are : development time reduction and the obtain of a quality product, by minimizing errors. Also, using CASE instruments helps the consistency of applications and the standardization under functional aspect.

The important benefits of ERP come from the changes made to the economical processes, the organizational structure, the roles and the skills owned by the members of the organization and also from the management activities.

The big problem raised by an ERP is the high price and risk, and the transition to this system is laborious. The costs, meaning software, hardware, consultancy and instruction are bigger then similar projects.

As for the risks, it happens that given budget and/or terms are way passed.

It's estimated that almost half the ERP project can't reach the goals. Famous cases, like Boeing, Panasonic or Siemens, show the failure of the projects, meaning they failed their goals or they went over the budget. Consequences of

these failures are severe, if you count the money spent and the time invested.

The producers of the solutions are, for few years in a process of research and adoption of the e-business platforms to their own solutions. Therefore the ERP's were rewritten and transformed essentially to include all the Internet advantages and to give new function to the Internet.