

BUSINESS PROCESS REENGINEERING

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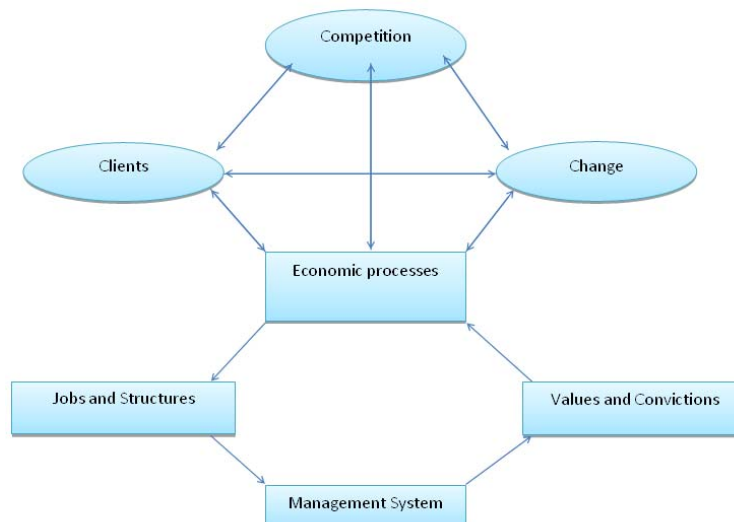
Business process reengineering determines the change of organizational functions from an orientation focused on operations through a multidimensional approach. Former employees who were mere executors are now determined to take their own decisions and as a result the functional departments lose their reason to exist. Managers do not act anymore as supervisors, but mainly as mentors, while the employees focus more attention on customer needs and less than the head's. Under these conditions, new organizational paradigms are required, the most important being that of learning organizations. In order to implement a reengineering of the economic processes and promoting a new organizational paradigm the information technology plays a decisive role. The article presents some results obtained in a research theme ANSTI funded by contract no. 501/2000. Economic and financial analysis is performed in order to know the current situation to achieve better results in the future. One of its objectives is the production analysed as a labour process and the interaction elements of this process. The indicators investigated in the analysis of financial and economic activity of production reflect the development directions, the means and resources to accomplish predetermined objectives and express the results and effectiveness of what is expected.

Keywords: business process reengineering, change management, information technology, information systems, economic knowledge, systems for knowledge management, organizational learning, learning organizations.

1. Organizational Changes Produced by Business Processes Reengineering

Dynamics of change produced by business processes reengineering can be followed using the so-called "rhombus model" of economic processes, shown in Figure no 1. The forces that radically change the economic environment in which old economic organizations act which determine inoperable the former principles for operating are: customers, competition and change. These forces create pressure to change the economic processes.

Fig. 1 – The "rhombus model" of economic processes



The processes determine the work structure and jobs within economic organizations. Traditional fragmented processes lead to highly specialized jobs and organizations based on the functional departments, while integrated processes create multi-dimensional jobs. In order to assure employees for these jobs it must be recruited people who need to be assessed and paid with a corresponding management system. In other words, jobs and work structure determine the type of management system which must be implemented. Management system is the key element that determines the system of values

and beliefs of employees. Finally, values and beliefs that dominate in achieving the organization support the accomplishment of the processes as they were redesigned. Changes that occur in an economic organization through reengineering are shown in Table 1.

The subject of change	The form of change
Work units, functional departments →	Process teams
Units responsibilities, simple operations →	Complex works
Subordinates employee, role →	Decision makers
The objective of employee training, qualification →	Education
Measuring performance and determining performance	
Activities carried out →	Results
Criteria for promotion, performance →	Skills
The values promoted preservation →	Productivity
Management supervisors →	Lieders
Organizational structures, hierarchical structures →	Flat structures

A *process team* is a unit naturally gathered to perform and complete an activity, a process. Process teams can be:

- *case teams* (several people working together to perform a routine repetitive work)
- *virtual teams* (groups of people who gather together during the episodic execution of specific tasks, for example creating a new product)
- *general transaction processing person* representing teams from a single person who fully cares to execute a particular activity.

Business processes reengineering determine the change of job duties from simple operations to complex multifaceted works. As the process teams have the responsibility to perform an entire process, they possess the authority to make necessary decisions. Thus, there is a change of the role of people through the transition from subordinate through decision making. Objective and content of people training are changed also to ensure proper qualification and continue education.

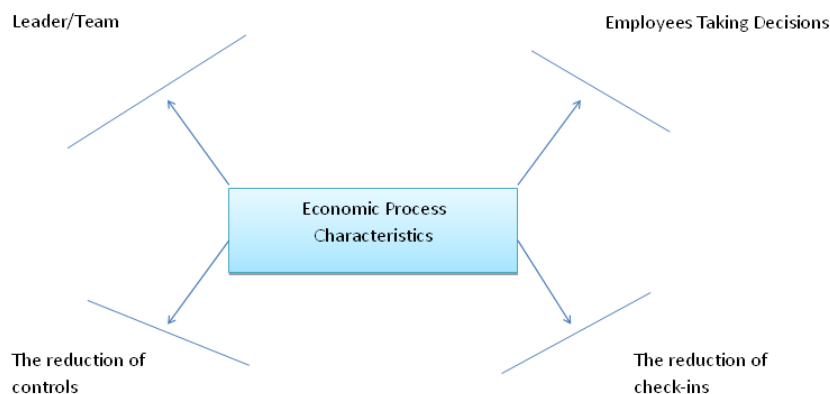
When work is fragmented into simple operations, the only way to measure the effectiveness of the activity and rewarding the employees is the measurement efficiency with which workers perform individual operations. Process reengineering determines the change of how performance is measurement and settled by targeting through results and not through the actual activities achieved. In this context, the *criteria for advancement* are changed from *performance through ability*.

Advancement in another position/job is due to the ability not to performance. So the advancement is a change, not a reward. In an economic organisation business process reengineering leads to significant shift in the culture of that organization, as employees are convinced that they are working to the benefit of clients not of bosses. Managers become mentors (leaders). Generally speaking, a manager must supervise, monitor, control and verify. Now process teams made the activities by themselves. In the companies that have achieved processes reengineering, organizational structure gets plate form because the work is organized around processes and teams which execute them.

2. The Features of Business Process Reengineering

Organizational paradigms promoted by process reengineering are based on a series of new features of economic processes.

Fig . 2 - Features of Business Process Reengineering



Among the most important features of the business process reengineering can be mentioned:

- combining multiple jobs into one;

- executors making decision of the processes;
- execution stages in a natural order and natural places of realization;
- providing multiple versions of business processes (giving up the standardisation idea);
- reduction of checks and controls;
- minimize inconsistencies;
- the use of a single point of contact, represented by the case handler;
- using operational hybrid (centralized / decentralized).

3. The Role of Information Technology in Business Process Reengineering

Implementing the business process reengineering requires practical involvement of all working groups within the organisation; a major role is one the information systems team. There is a strong interaction between information systems and business process reengineering which can be harnessed for the benefit of both approaches.

Strategic planning of information systems should be subordinated to achieving the major objectives of organization such as increasing profitability, attract and retain customers, increase the quality of services offered. In order to achieve these goals a process-oriented approach should be achieved by the activities of the organization. Business process reengineering relies on modelling and redesign for which the economic methodologies for achieving the information systems offer support methods techniques and tools. At the same time, the success of business process reengineering largely depends on the strategy for information integration of the activities in the organization enabling flexible interrelation of activities. In this way it is created the necessary platform for functional and structural reorganization, namely to define and implement dynamic business processes as sets of interrelated activities performed to achieve a major organizational objective.

Information technology (IT) plays an essential role in business process reengineering but this role should not be absolute. IT is part of any reengineering effort, is a catalyst that enables organizations to reorganize their internal processes. Introducing IT to solve a background problem does not necessarily mean business process reengineering. IT inadequate use may totally block process reengineering by consolidating and automating the old way of thinking and old behaviour patterns.

General error which is committed by the majority when introducing IT in organizations is that they seek to improve existing processes and not to change them. In fact, it is needed to explore what IT can offer all the possibilities to reach entirely new purposes. One of the most difficult aspects of business process reengineering is to recognize new possibilities, unfamiliar technology. The real support offered by IT is not the fact that can make the old processes to work better, but that it enables organizations to identify new ways of working. The success of modern organizations depends on the ability to respond to IT architecture information requirements in ever changing economic processes.

Architecture of IT is the necessary platform for functional and structural reorganization of the organization, namely to define and implement dynamic business processes as sets of interrelated activities, carried out in order to achieve a major organizational objective. Implementing and developing the IT architecture requires a strategic vision which can be provided by information systems (IS). Without know-how and support offered by IT business process reengineering is inconsistent. The IS experts are those who can achieve the holistic technical frame of the components to be implemented gradually in order to support new business processes. The IS group has the competence power needed to transform the vision of business process reengineering into an IT architecture.

The role of information systems³⁰ in achieving business process reengineering has a number of implications for the specific activities. The most important implications are :

1. *Process based orientation.* IS must adapt their objectives to the requirements of the of business process reengineering. IS team must modify technical orientation and to be subordinated to the strategic objectives of the organization, putting first the informational requirements not the technical infrastructure.
2. *Information based orientation.* Information is a key resource of the organization. The management of the information flows within business processes and between them is imposed to ensure successful business process reengineering. IS team is responsible for developing the information integration architecture that interconnects business processes
3. *Customer based orientation.* Customer based orientation and is an essential requirement for the success business process reengineering. This new paradigm involves the use of innovative technologies. Domestic customers require systems that can assure the integration tools they use, interfaces for application integration within the organization and outside. They need applications oriented through working group in order to provide support for teamwork. Creating a workgroup type environment requires smart stations , computer networks, client- server architectures.

³⁰ Capatina A., Schin G., „Minding the cultural gaps between different countries - a real challenge for the international managers”, Review of International Comparative Management, Vol. 14, Issue 5, ISSN 1582-3458 <http://rmci.ase.ro/no14vol5/04.pdf>

4. *A new approach in achieving IS.* Practical systems development uses largely the concept of automation as a way to simplify them. New guidance on processes requires a radical rethinking of how information systems development and abandonment of the traditional methodology of life - cycle. Business process reengineering requires not only faster information delivery systems but also the ability to create such systems in a new way that need to respond to the new design requirements.
5. *Extension of specialist IS skills.* SI team needs specialists who can understand process based orientation to understand the processes and the systems integration requirements imposed by process reengineering. The role of a systems analyst must include in a greater extent, responsibilities such as assessing strategic information systems in relation to the requirements and objectives of economic processes, recognition of the relevance of systems for the progress of the organization, determine the architecture, standards, methodologies, tools that the organization uses to develop the software.

4. Creating through Reengineering of Learning Organizations

One of the most important organizational paradigms promoted by business process reengineering is the learning organization. The characteristics of such organizations are:

- knowledge, which is a critical resource of the organization;
- computer network/networks which are the nervous system of the organization.

In any economic organization knowledge sharing is required. But not all knowledge is or should be individual. Some knowledge are intrinsically common and social. This knowledge is produced and stored in common. The knowledge can therefore be qualified as both a cognitive process, as well as organizational one. When becoming a member of a community, a person participates in sharing the collective knowledge of that community. For that person it has the meaning of a process of *acquiring knowledge*. For the community, knowledge acquisition is achieved by learning processes distinct from those of individuals. Work in a corporation should not be routine but assume learning processes. Employees need to think creatively how to improve work procedures. In the corporate learning creates new knowledge, thus ensuring a competitive advantage. Organizational learning can be considered as a process of acquisition of knowledge that takes place :

- *top -down.* Information is collected (e.g. through market research), data is analysed and inserted into the database and are offered to various decision makers;
- *bottom -up.* Those who performed the processes through which learning is realised are the employees. In this approach, employees decide what should be in the database. The content of database reflects collective understanding of the issues, knowledge produced by participants.

Among the most important *organizational issues* of organizational learning are;

- *the need of knowledge relocation.* Knowledge does not come immediately where they are needed, because the need is not immediately recognized , knowledge is not discovered immediately whenever the need, this knowledge and informational channels are not always operational
- *the poor collaboration within the same profession.* In organization collaboration between different professions is encouraged as a rule less the cooperation between specialists in the same area. Information technologies offer dense forms of communication, interaction.

There are two main models of organizational learning:

- *learning in a single cycle.* It refers to learning that occurs when there is a mismatch between intent and what are effectively co-signed. This inconsistency is corrected by changing the behaviour or the actions
- *learning in double cycles,* when values are changed , causing new actions

The main *tools and techniques* for organizational learning , through which individual thinking of a person can change the collective understanding and interpretation of the data are: mental models, collective vision, learning in group (team), systemic thinking.

P. Senge the creator of the theory of learning organizations considers that within economic organizations these types of learning are done: individual learning, collective learning, organizational learning.

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