

Support for Business Process Reengineering (BPR)

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In today's world economy it is absolutely necessary to radically redesign processes, the way of organizing a Company and the mentality of the people in a Company. There are three factors that determine the radical modification of the companies' economic environment namely the clients, competition and continuous change. The three factors have several effects on companies and ask for a BPR. In order to achieve a BPR successfully IT has a decisive role owing to the facilities it offers.

The BPR Concept

The literature of specialty proposes several definitions for the BPR concept [Ha Ch 93] [Hey 93] [Jans 92] [Park93] in this way in [Ha Ch 93] BPR is defined as a fundamental rethinking and radical redesigning of economic processes with a view to obtaining spectacular improvement of *indicators* such as costs, quality, servicing and speed which are nowadays considered to be *critical* to evaluating performance.

In [Jans 92] BPR is presented as a modality of achieving a new radical process or an organizational change that companies dream of, in order to better meet the clients' requirements.

Parker defines BPR [in Park 93] as the analysis and redesign of the business and manufacturing processes with a view to eliminating the activities that do not add up value.

These definitions enable us to outline the following *main characteristics of BPR*:

- *Concentration on fundamental problems* and not on departments or other organizational elements.
- *Concentration on processes* and less on activities, functions, people and structures. A process is a total of activities, which take one or several inputs, and creates an output, which is valuable for the client.
- *A radical approach* which presupposes going to the root of things not only making superficial changes of the existing things but

acting by removing what is obsolete and inventing new ways of carrying on the activity.

- *Changes that have a spectacular character* that is achieving spectacular results and not simply effecting marginal or gradual improvements.

- *A strong link of BPR with informatics technologies*, a very important characteristic which cannot be seen directly from definitions. The processes introduced through BPR could not exist without applying informatics technologies.

Why is Business Process Reengineering necessary?

Hammer M. and J. Champy, in their famous work "Reengineering of the Corporation" [Ha Ch 93] remarked that economy's present problem is that it is trying to enter the twenty-first century with enterprises designed in the nineteenth century. The two authors insisted on the necessity of a radical redesigning of processes, of organizing and of mentalities within enterprises. There are three forces that radically change the economic environment of organizations and which make it impossible to apply the old principles of functioning (labor division, managerial hierarchy etc) and these forces are: clients, competition and change (fig. 1). They require the change of economic processes.

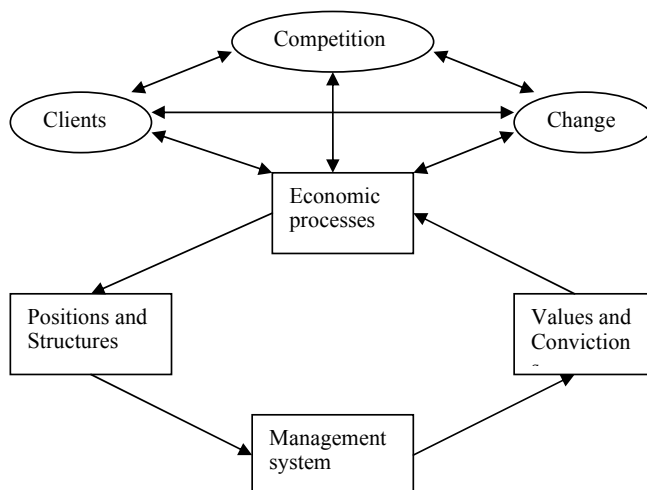


Fig.1. The forces of the economic environment which call for the redefining of economic processes:

- *The decisive role of clients in the manufacturer-client relationship.*

For a long time products were promoted according to a product-based strategy in which the clients were most often treated as an unstructured mass. Mass production gave manufacturers the illusion that their clients were more or less alike and that a standard product can meet the requirements of most clients. Today the tendency is to adopt a client-oriented strategy according to which companies must understand the clients' needs and behavior in order to create products and services to satisfy clients. We can say that at

present in the consumer – manufacturer relationship it is the consumer who has the initiative and is the decisive factor. Clients want to be treated individually according to their own requirements and to be offered high quality goods and services. They want high quality products adapted to their needs to be delivered in time and advantageous payment terms.

According to client – oriented strategy we no longer speak of the notion “client” but of “this client” or “a certain client” (fig. 2).

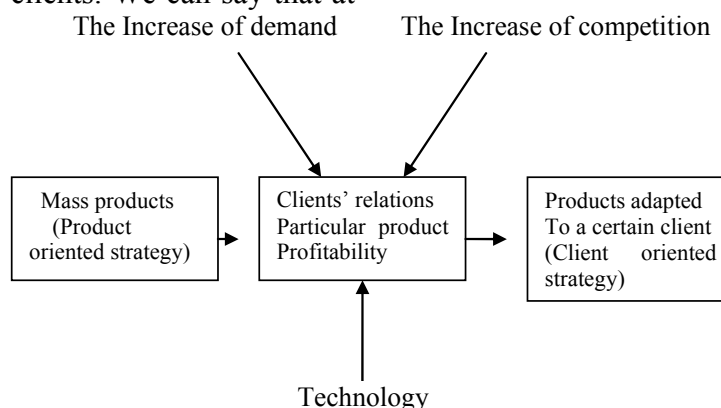


Fig.2. The change of the Companies Strategy

- *Competition increases and is globalized*
Similar products are sold on different markets where competition is totally different, one market being based on price, another on assortment, another on quality and others are based on pre and post acquisition services.

Once the commercial barriers removed, the national market of a firm is no longer protected against competition from abroad.

- *A permanent change*
Change itself affects the entire economic environment and is impossible to avoid. The

rhythm of changes has become accelerated. Owing to the globalization firms are confronted with ever-greater competition. The quick changes in technology make way for innovation. The life cycle of a product becomes months and not years. Therefore firms must design and introduce new products required by client. BPR implies a new approach to the *change management* that is effecting radical and profound transformations in economic processes.

The purpose of reengineering is to ensure a quantitative and qualitative growth of results that can be obtained only through totally new processes and structures. The key to success is giving up most notions that form the basis of the economy today. Today's managers are prisoners of obsolete theories dating from beginning of the industrial revolution (labor division, rigorous control, managerial hierarchy), which are no longer valid in a world of globalized competition and permanent change.

- *The necessity of redesigning the economic processes*

In the world of today's business, activity cannot be organized based on simple operations. Firms must be organized on processes that are whole activities, which together create a result that is valuable for the client. Nowadays in most firms nobody is in charge of processes, in some cases they are not even aware that they exist. Organizations are now made up of vertical structures created for the elements that form a process. For example the person who checks client's account belongs to the financial department. Goods are taken from the warehouse by those who work there who may be under the control of production manager. Shipping goods is made by another department. The people involved in the process are preoccupied with what is inside their departments and report to the manager never having client in mind. Traditional

economic structures are not fit for innovation and creativity. A new idea has to be transmitted to the chief who in his turn has to convey it hierarchically. By assigning operations that make up a process to different departments changes are difficult to be perceived and action is difficult. In order to reunite the components into a process a substantial effort is necessary and more auditors, controllers, supervisors, managers are needed. In most cases the activity of the processes components is less than that of putting together the activities into a process (The so called administrative activities). Inflexibility, absence of preoccupation for the client, concentration on operators, bureaucracy characterize operations most organizations. The radical rethinking of the way of working of the economic organizations may seem a theory, which is risky to put into practice, but it is not risky at all. There are numerous organizations that have successfully applied the new approach, i. e. they have applied the business reengineering concepts, principles and techniques and have been very successful.

New organizational paradigms promoted by BPR.

When a process in an organization is subject to BPR the functions of the organization changes evolving from operation-oriented to a multidimensional approach. The employees, who until now simply did that they were supposed to do, are in the position of taking decisions as to their activity in order to meet the client's requirement. The functional departments are no longer necessary.

Employees concentrate on the client's needs and not so much on their chief's needs.

The changes can be seen in table 1.

Table 1 Changes Caused by BPR within are organize den.

The element subject to change	The form of change
Working Units	Functional Department =>Process Teams
The tasks of working units	Simple operations =>Complex activity
The role of employees	Subordinates =>People who make decisions
Employees Training Objective	Qualification =>Education

Performance measurement and performance targets	Activities effected =>Result obtained
Promotion criteria	Performance =>Abilities
Promoted Values	Self complacency => Productivity
Managers	Supervisors => Leaders
Organizational Structure	Hierarchical structures =>Flat structures

The fundamental changes, which BPR triggers with regard to business processes within an organization, have a deep impact on all the coordinates of that organization. Practically each aspect of the organization is transformed and it often becomes impossible to recognize. Processes determine structures and positions. The way work is done determines the kind of positions and the way people who have those positions are grouped. In traditional firm jobs have a narrow specialization and such firms are based on functional departments while with integrated processes multidimensional jobs are characteristic.

The people for multidimensional jobs must be recruited, evaluated and paid using a correspondingly motivating management system. In other words structures determine the type of a firm's management system. The management system is the prime element, which models the employees systems of values and convictions.

After all the values and convictions that dominate an organization must be the support for the designed processes performance. BPR affects first of all the processes. The changes mentioned spread all over the organization covering all its aspects: jobs, people, values, managers.

The Information Technology as support for Achieving BPR

The Information technology (IT) play an essential role in redesigning the economic processes though it should not be made absolute. IT is part of every BPR being a catalyzen which allows the organization to reorganize its internal processes. The introduction of IT to solve a basic problem does not necessarily presuppose a BPR. An inadequate utilization of IT may block completely the process of reengineering by consolidating

and automatizing the old way of thinking and behavioral models.

The error made by most of those who introduce IT in organizations is that they try to improve the existing processes instead of changing them. What IT application should really aim at is exploiting the possibilities offered by IT in order to achieve totally new goals. One of the most difficult aspects of BPR lies in understanding and accepting the new unfamiliar technologies and not the ordinary familiar ones. The real support offered by IT is not given by the fact that it can make old processes work better but by the fact that it allows organizations to identify new ways of working.

Hammer [HAMM 90] considers IT to be the main agent of implementing BPR. He recommends the use of IT to cause the change of the present day way of working. He argues that the essence of reengineering is "discontinuous thinking" or recognizing and getting rid of old ways of working. These rules are based on technological conditions, people and objectives of the organization which no longer exist.

Hammer formulated the following principles regarding the reengineering process [HAMM 90]

- The organization of economic units starting from their objectives and not from the activities to be done.
- The Subordination of information processing to the activity of information production.
- Dealing with geographically dispersed resources in a centralized way.
- Establishing new links between parallel activities not simply integrating their results.
- Establishing the decision points at the place where the activity is carried out and developing a process control system.
- Capturing some information from the direct source only once.

Davenport and Short [1990] say that in achieving BPR an important role is played by relation between IT and economic processes. IT means more than automatization, it is a force capable to change the way of achieving the economic processes fundamentally.

The relationship between IT and economic processes is recursive. IT facilities should be a support for economic processes and economic processes should be stated in terms of facilities offered by IT. Davenport & Short call this recursive relationship "the new industrial engineering". They identified the following roles of IT within BPR: transactional, communication, automatization, analytical, informational, knowledge management, checking and intermediation.

The Leader role of Informatics Systems in Achieving BPR

The success of a modern organization depends on the ability of IT architecture of meeting the ever changing informational requirement of economic processes.

IT architecture is the necessary platform for the functional and structural reorganization of an organization for the defining and dynamic implementation of economic processes as sets of intercorrelated activities carried out to reach a major organizational objective.

IT development and implementation presupposes a strategic outlook which is to be ensured by the Information Systems (IS). Without IS know how the IT support in BPR is weak. IS experts are the ones who can achieve the holistic framework of technical components which must be implemented gradually to offer support to new economic processes.

The IS group is competent to transform the economic processes reengineering into an IT architecture.

Most specialist admit the role of leader of the informatics systems in achieving BPR. Besides the technological outlook which informatics systems must ensure, they play an important role in achieving the actives in the life cycle of BPR projects.

The methodologies of achieving of the IS offer support for the modeling and redesigning

of the economic processes through methods (structured analysis, functional hierarchy, process modeling, data modeling etc), techniques and instruments.

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