

# REENGINEERING – THE STRATEGIC ALTERNATIVE OF A SME TO ADAPT TO THE XXI CENTURY

Theoretical  
articles

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## Keywords

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Reengineering typology  
BPR influence factors  
BPR key success factors  
BPR causes for failure  
BPR methodology

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## JEL Classification

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## Abstract

*In the context of twenty-first century trends, reengineering is a strategic alternative for the adaptation of organizations (SMEs) to changes imposed by the external environment, but also for the improvement of performance and to gain competitive advantage. Thus, this theoretical article argues the veracity of the claim in the previous paragraph, by submitting the following concepts: the concept of reengineering, types of reengineering processes, BPR influence factors, BPR key success factors and causes for failure of the implementation of such processes in SMEs and its own methodology of process reengineering.*

## Introduction

The organizations (SMEs) shall be able to apply reengineering in order to adapt to the changes imposed by the current trends (the knowledge based economy, society, organization and management), with the aim to ensure their survival as well as their development in the twenty-first century.

In this context, the organizations (SMEs) can choose to redesign the business processes to include in their management the views formulated by the knowledge based organization and management.

Henceforth, in order to understand the above statements, the reengineering concept shall be presented.

## Reengineering. Concept, typology, influence factors

The “reengineering process” concept (Business Process Reengineering – BPR) can be found in the specialty literature under multiple denominations (McKay & Radnor, 1998): “process innovation”, “business process redesign”, “business engineering and process engineering”.

The BPR concept has been defined and analysed for the first time by Michael Hammer and James Champy who considered that this process represented a fundamental reassessment and redesign of the business processes that take place in an organization, with the purpose to monumentally improve the representative indicators for performance measurement (cost, quality, service and client servicing speed).

BPR requires a restructuring of the mode in which the organization (SME) runs its activity, which enforces both a radical change at organizational level as well as impressive results after its application.

“Reengineering sets that which the organization must do and then how to proceed. Ignore that which already is and concentrate on that which must be.” (C lin & Aldea, 2000)

BPR represents a method through which an organization (SME) can solve its problems, by redesigning the business processes that involve changes at the level of the management system, of the human resource, of managerial thinking, of the means of running the operational mechanisms and of the organizational culture. For this purpose, BPR uses a diversified managerial set of instruments (management science and borrowed from other fields extended systems, methods and techniques).

The characteristics of the reengineering process are:

- It focuses on orientating the organization (SME) towards the business processes;
- It promotes team work;

- It requires order and leadership;
- It targets focusing the organization towards the client;
- It requires the application of a cross – functional organization;
- It uses the IT in order to increase the efficiency of the operational management and in order to obtain a competitive advantage.

Field experts (McKay, Radnor, C lin, Aldea, Gore Jr., Verboncu, Motwani, Kumar, Jiang, Jeston, Nelis, T n soaica, Tetrevoa, Com nescu, Chan, Peel, Nicolescu etc.) could identify more objectives corresponding to the BPR process: productivity development, increase the efficiency of resource usage, production costs diminishing, products/ services quality improvement, increase the number of offered post-sale services, processes flexibility improvement, innovation capacity development and added-value increase using a small quantity of resources and a low number of employees.

Experts identified more types of reengineering, as follows:

- A. Ivanov – 3 types of reengineering:
  - transformation – implies rethinking and issuing a new missions and strategies at organization (SME) level; key-word: rethinking;
  - integration – implies the design of a new vision and achieving a new organization (SME) architecture based on processes orientation; key-word: review;
  - rationalization – implies a simplification in the mode of running the processes or some major organization (SME) components with the purpose of increasing the quality; key-word: redesign.
- J. Veber – 3 levels of BPR:
  - total business reengineering – implies the organization adaptation to the variations of the external environment by implementing some changes within the entire organization;
  - business process reengineering – implies obtaining the synergy effect in the same time with implementing some changes that target organization architecture modification;
  - work process reengineering – implies the implementation of some changes that target a field, a process, a major organization component.
- W.H. Davidson (Biazzo, 1998):
  - micro reengineering: implies changes at the level of a single process, which

triggers an increase of the organization's performance;

- macro reengineering: implies changes that redefine more correctly, more accurately the business, with the purpose of orientating the organization towards amplifying competences and offered services.

There are several types of organizations (SMEs) that can approach reengineering as follows:

- those organizations (SMEs) that face with a great deal of problems while running their activity and whose only solutions is implementing a BPR;
- those organizations (SMEs) that do not yet face problems while running their activity, but whose management anticipates some events that could create difficulties in the future;
- those organizations (SMEs) that do not face any problems, but whose management wants to develop in the future (to be leaders or to remain market leaders).

The studies by experts determined several factors of influence acting on the organizations (SEMs) when a BPR is to be implemented:

- Internal factors:
  - Optimizing the technology: if the organizations improve their technologies, they could ensure their market competitiveness;
  - Increase organization efficiency: by increasing the performance of all activities developed within the organization, improving the human resource, reducing the products' life cycles, etc.;
  - Reducing the expenses: with the purpose to guarantee the organization's survival on the market;
  - (Re)formulating the organization's visions and determining its strategic directions: with the purpose to align the organization to the requirements of the external environment.
- External factors:
  - clients: in order for the extended range of products/services on the market to correspond to the consumers' needs, the manufacturers must adapt to their requirements with reference to the desired product/ service, its quality, price, payment method, etc.;
  - competition: competition intensified, diversified and globalized;
  - change: irrespective of the categories of changes with which the organizations deal with (changes that take place within the industry/ on the

market, changes regarding government regulations / political pressures, technological changes, etc.), they have to accept that the nature of the change itself withstood/ withstands metamorphoses processes, which requires the organizations to adapt to the new conditions, precisely in order to ensure their continuity.

Thus, BPR represents a method through which the organization (SME) can adapt to the changes imposed by the external environment, but, simultaneously with its implementation, organizational changes must also be carried out.

### **BPR key-factors for success and causes for failure**

Within a research on perfecting the business processes, Samia Siha and Germaine Saad identified several key-factors for success regarding BPR implementation:

- "Testing the main hypothesis of a process;
- Integrating BPR in the corporate strategy;
- Total leadership agreement;
- Good communication within the team that participated in BPR implementation;
- Set some ambitious objectives for process reengineering;
- Integrating the most talented, competent and creative employees within the BPR project;
- The process chosen for redesign must be in the centre of attention with the organization precisely in order for its improvement to be felt;
- Efficient use of information and communication technology". (Siha & Saad, 2008)

The studies (Ten Bos, 1997; Siha & Saad, 2008) indicated that there are several (critical) causes for failure regarding BPR implementation, as follows:

- Lack of acknowledgement of the BPR methodology;
- BPR projects not awarded due importance;
- Inflexibility of the elements that form the organization's infrastructure;
- Omitting the external factors with designing the processes;
- Address a view regarding the human resource that is not its development, but the decrease of expenses involving the personnel;
- The exaggerated cost of the BPR projects;

- Slow adaptation of the managerial thinking to BPR requirements;
- Superior management's lack of interest regarding initiating BPR within the organization;
- Anticipation of obtaining some extraordinary results following the implementation of BPR;
- Strong resistance from the personnel, or even from the organization to the changes imposed by BPR;
- Grant an increased faith to the IT (how it can help solve problems and the speed to solve them, etc.);
- Most often, the BPR projects incorporate an organization mechanist engineering mentality;
- The organization's knowledge regarding project management does not exist or is low;
- The manifestation of the organization's management wish to apply certain processes which are considered "good practices", even if they do not help fulfil the organization's objectives;
- Many times, BPR is considered as an organizational restructuring process, etc.

### **BPR methodology**

Even if the experts (Hammer, Harrington, Underdown, Pratt, Harrison, Mayer, Whitman, Dewitte, Klein etc.) proposed a multitude of BPR models, they did not indicate a standard methodology for implementing the method.

Following the analysis of these models and of the theoretical concepts of change management and project management, will be presented my own BPR methodology that contain the following stages:

1. "Preparation stage:
  - Evaluate the organization's current situation;
  - Identify the need to change;
  - Understand the BPR concept;
  - Decision from the superior management to support the BPR project;
  - State the organization's vision and its strategic objectives.
2. Preliminary stage:
  - Set the purpose of the BPR project;
  - Identify the factors that influence the organization in view of implementing BPR;
  - Assign the project manager;
  - Determine the teams that shall substantiate, develop and implement BPR ("cross – functional teams").
3. Diagnostics stage:
  - Identify the processes that take place within the organization;
  - Map the processes;
  - Analyse business processes development within the organization;
  - Set those processes that represent gaps that could result in not fulfilling the established objectives;
  - Determine those processes which by their operation itself create added value to the organization.
4. Planning stage:
  - Set the objectives of the BPR project, starting from project purpose and the results obtained following the diagnostics stage;
  - Set the BPR project deadlines;
  - Set the tasks that should be fulfilled in order to achieve the proposed objectives;
  - Set the project structure („cross – functional organization");
  - Plan the resources necessary for BPR project achievement;
  - Set the planning techniques and instruments.
5. Redesign stage:
  - Develop several alternatives for redesigning the processes that present gaps, by using the benchmarking method and the techniques to stimulate the personnel's creativity;
  - Simulate the alternatives by using IT solutions in order to determine the measure in which they fulfil the project's objective, their performance and the requirements necessary for their fulfilment;
  - Choose an alternative that best fulfils the organization's strategic objectives;
  - Plan the development of the newly designed process(es).
6. Implementation stage:
  - Inform the employees regarding the organization's need to change, the importance of implementing this change, that which rests on these changes at organizational level and the means to achieve them;
  - Adapt the organizational culture to the new values set through the BPR project;
  - Prepare and train the employees in order to adapt to the newly designed processes;
  - Introduce and use leadership;
  - Minimize the employees' resistance to change by setting a new

- motivational system and by empowering them;
  - Use the IT in order to support the changes imposed by the redesigned processes;
  - Operationalize the newly designed processes;
  - Dissolve the project team;
7. Evaluation, monitoring and control stage:
- Monitor the project's evolution (of the processes that have been redesigned);
  - Measure, evaluate and control the results that should be obtained following the implementation of the BPR project and, also, of the mode in which the project develops (project quality);
  - In case of deviations from the initial planning, the causes should be identified and measures taken so that the BPR project's purpose to be fulfilled.
8. Conclusion stag:
- Elaborate a document that contains the lesson learned by implementing this BPR project;
  - Draw a post-factum analysis that shows the mistakes and malfunctions within the development of the BPR project." (Cruceru, 2012).

The BPR methodology can be implemented in any type of organization, irrespective of the object of activity, should the following criteria be met:

- Minimum number of employees – 20; at least 4 must hold management positions;
- The top-management must be willing to promote innovation within the organization and must demonstrate their strong commitment to this issue;
- The organization's IT infrastructure must be well developed.

The successful implementation of BPR within an organization (SME) can be achieved using the BPR strategies determined by M.J. Earl, J.L. Sampler and J.E. Short (Biazzo, 1998):

- engineering strategy: has as result an increase in work efficiency, an optimization of organizational coordination and an enrichment with new ideas of the program that contains the activities and tasks required for running the organization's activities;
- systems strategy: targets the analysis of the systems used within the organization, using expert information systems;
- bureaucratic strategy: focuses on establishing the procedures for the innovation projects and the selection of those projects that prove the idea

confirming that the key-element for the business units is represented by the process's capabilities;

- ecological strategy: has as result the design of new processes for decision-making within the organization, taking into consideration a holistic approach of a cultural point of view.

### Conclusions

Based on strategy classification, BPR process characteristics, BPR own methodology, but also the analysis of the concepts of change management and strategy management and the knowledge based organization and management, we can acknowledge there is a strong connection between strategy and BPR which allows expressing the idea, according to which, reengineering represents a strategic alternative for an organization (SME) to adapt to the XXI century.

Furthermore, this theoretical article has been extracted and improved from my own doctor's degree thesis entitled "The Breakthrough Of Project Management In A Knowledge Based Organization".

In order to understand and deepen the subject discussed in this article, it is recommended to browse the specialized books containing the theoretical concepts mentioned in the first paragraph of this section.

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