

# RECURSION RELATIONSHIP BETWEEN BPR AND IT\_CLOUD COMPUTING

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## Abstract

*Business process reengineering (BPR) determines the modification of the functions of one organization from an operations focused orientation to a multidimensional approach. The employees, once simple performers, come to take their own decisions, so the functional departments have no reasons for being kept. Managers are no longer supervisors, but more like mentors, while the employees focus on the customers' needs less than on the manager's. Therefore, new organizational paradigms are to be taken into consideration, the most important one being of that of the learning organizations. For the achievement of the business process reengineering and promoting new organizational paradigma, information technology plays a crucial role, as we are about to see.*

**Key words:** BPR economic reengineering, business processee, cloud computing.

**Jel classification:** A12, C82, C88, C89, M15.

## 1. ORGANIZATIONAL CHANGES THROUGH BUSINESS PROCESS REENGINEERING

Figure 1 highlights the factors that strongly influence the economic environment where the economic organization acts and thereof make inoperable old principles of functioning. The forces involved are: customers, competition and the change.

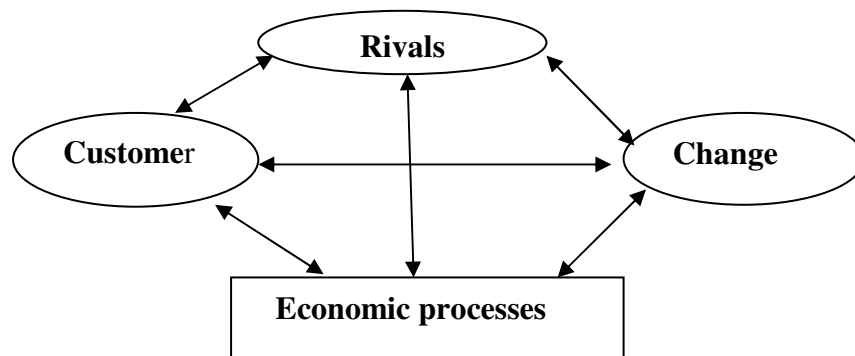


Figure 1. Factors acting on economic processes

- a) The customers have the crucial role for the relation: producer - customer. The companies promoted the products, for a long time the promoting campaigns being focused on products, while the customers were just an unstructured or half structured crowd. Mass production wrongly created the illusion that all the customers are alike. The producers assumed that a standard product can satisfy most of the customers. Even

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those who were not satisfied would buy the product, because they do not have a choice, the rivalry is insignificant or the offer is the same.

Nowadays, there is a tend to adopt a customer focused strategy. According to this strategy, the companies must pay interest in understanding the needs and the behaviour of their customers, in order to supply the products that they need.

b) Competition is intensifying and globalizing.

Similar goods are on the market, on different competition (i.e. on a market based on prices, on another one based on assortment, quality or services before and after aquisition). As the trade barriers disappear, the national market of one firm is no longer protected against the competition abroad.

c) Permanent change.

Not only the customers, but the competition itself changed. Also, this change is different, it became encompassing and unable to be avoided. The rythm of changes is more allert. Together with the globalization of the economy, the competition is more fierce. The rapid changes in technology also promotes the innovation. A product's life is measured not in years, but in months. Therefore the producers must project and use faster the new technology. BPR involves a new approach of the changing management, different from the traditional one, focused on continuous transformations and constant activities. BPR involves total changes, profound and spectacular. Changes' synthesis in one economical organization through processes reengineering is presented below.

Tabel 1. Changes in an organization through business processes reengineering.

| The changing element                                  | the shape of changing                   |
|---|---|
| Work units  | Functional departments – process team   |
| Work units' responsibilities                          | Simple operations – complex works       |
| The role of employees                                 | Subordinates - makers                   |
| Employees training target                             | Qualification - education               |
| Performance measurement and performance establishment | Activities - results                    |
| Promoting criteria                                    | Performance - skills                    |
| Values promoted                                       | Self – preservation - productivity      |
| Managers  | Supervisors - leaders                   |
| Organizational structures                             | Hierarchical structure – flat structure |

## 2. BPR CHARACTERISTICS

Organizational paradigms promoted by the BPR relay on new characteristics of economic processes. (Figure 2).

Some of the most important characteristics of the reengineered processes (3) might be mentioned :

- Combine multiple posts in a single one;
- Decisions to be taken by the performers of the processes;
- Execusion stages in a natural order and place;
- Insurance of several versions for the business process (give up standards);
- Reducing checks and controls;

- Reducing the inconsistencies to minimum;
- Using a single contact point, represented by the person in charge.

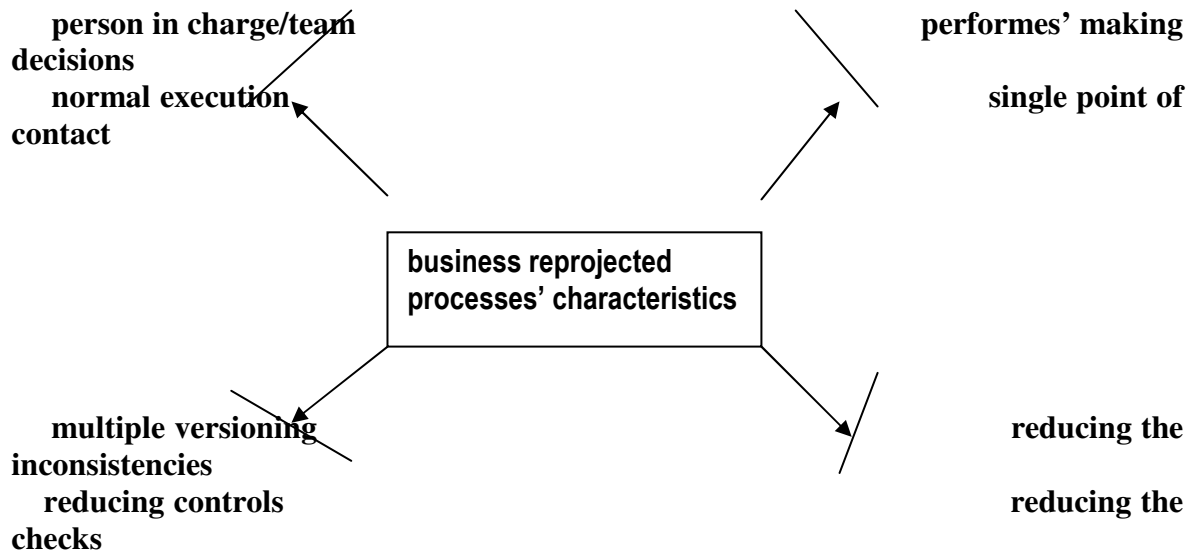


Figure 2. Economic systems features redesigned

### 3. IT ROLE IN BPR

There is a strong interaction between the systems achievement and business processes reengineering and it can be harnessed for the benefit of both approaches. Such an interaction may be regarded as a recursion between those two. (2).

BPR is based on modeling and redesign the economic processes for which the methodologies for achieving systems offer support by methods, techniques and tools. Also, the successful of the BPR depends on the existence of a integration information strategy developed in one organization allowing flexible interrelation activities. Thus, the platform needed for the functional and structural reorganization is created, in order to define and implement the economic processes as intercorelated activities developed for achieving a major organizational goal.

IT, and within the new paradigma CLOUD COMPUTING, has an essential role in business processes reengineering, which cannot be absolutized.

Hammer and Champy think that IT is the major player for BPR implementation. They recommend using IT to achieve the actual way of working, used and inherited long before the IT and communications.

A modern organization's success depends on IT ability architecture to react to informational requiremets, constantly changing, of business' processes. IT architecture represents the necessary platform for the functional and structural reorganization of one structure, also for defining and dynamic imlementation of business processes as sets of intercorelated activities, for achieving a major organizational goal.

The role of the informatic systems (IS) in achieving business reengineering processes has some implications upon specific activities for the fulfilment of informatic systems. The most important implications are:

- Processes' orientation.
- Information orientation.
- Customer orientation.
- A new approach on informatic system accomplishment.
- Expanding skills for the IS specialists.

#### 4. CLOUD USER IN BRP CONTEXT

Cloud user is the last part which cloud service gives support.

Tabel 2. Provider and user of cloud

| Service models                      | User activities  | Provider activities  |
|-------------------------------------|--|--|
| SaaS<br>Software as a Service       | Uses an application /service for business processes operations                             | Installes, administates, ensures maintenance and suport for clud software  |
| PaaS<br>Platform as a Service       | Develops, tests, implements and administrates applications in a cloud sistem               | Provisions and administrates cloud substruction and middleware for plattform users. Offers development, apposition and administration tools for users. |
| IaaS<br>Infrastructure as a Service | Creates/installes, administrates and monitors services for operations with IT substructure | Provisions and administrates physical processing, data storage, network connections,hosting environment and cloud substructure for IaaS users.         |

A cloud user is a person or an organization having a business relationship with a cloud provider. Depending on services required, there are some scenarios activities and uses, as presented in Tabel 2.

Broadly, a cloud user asks certiaand services from a cloud provider, sets the conditions by an agreement and starts using the services. A cloud user might pay for the services that he required and might plan the payment depending on services used, such as number of users, using time, bandwidth consumption, etc.

SaaS applications are implemented, usually, as hosted services accessed through a network between users and providers of SaaS. SaaS users may be organizations that allows their members to use the softwares, final users that directly use the applications, or administrators of software who configure applications for final users. As for PaaS, cloud users use tools and execution resources from the cloud providers for development, testing, implementation and administration of the cloud applications. PaaS users may be developers of applications that design and implement applications, software testers that run and test applications in different cloud backgrounds, implementators that presents their applications in a cloud background or administrators of applications that configure and monitors application on a cloud platform. This kind of users might pay a tax depending on the users' number, resources used time of using the platform.

As for IaaS, users have the capacity of accessing virtual computers, network available media storage, network infrastructure parts and other basic sources, through which users can implement and run any kind of software. IaaS users might be system developers, systm administrators, IT managers seeking to create, install, administrate and monitore services for IT infrastructure operations. IaaS users can access these resources and may pay a tax depending on how much they used the services provided.

#### BIBLIOGRAPHY

1. Gh.Sabău, C.Bodea, C. Ioniță – Studiul principalelor direcții de reingineria proceselor economice – aspecte teoretice și metodologice. Evaluarea impactului sistemelor de

- management al cunoștințelor asupra reingineriei proceselor economice (Faza 11.2.2.1). Revista Economia, Ed. ASE, București, noiembrie, 2000. ISSN 1454 – 03 – 20.
2. Gh.Sabău, C.Bodea – Noi paradigme organizationale promovate de RPA (2). Revista Romana de Statistica, Nr.5, 20006. ISSN 1018 – 046X
  3. Hammer, M., Champy, J. - Reengineering the Corporation: A Manife for Business Revolution, New York, N. Harper business, 1993.
  4. C. Bodea, Gh. Sabau, C. Ionita, V. Bodea – Reingineria proceselor economice si noile paradigme organizationale.Revista Informatica Economica, vol. IV, nr. 16, 2000, pag. 90-96.
  5. Alin Titus Pîrcălab, *Sisteme de Gestiune a Bazelor de Date – Aplicații Microsoft Acces*, Editura Vasile Goldiș” University Press, Arad, 2015.
  6. Knud Brandis, Srdan Dzombeta, Knut Haufe, Towards a framework for governance architecture management in cloud environments: A semantic perspective, Future Generation Computer Systems, Volume 32, March 2014, Pages 274-281, ISSN 0167-739X, <http://dx.doi.org/10.1016/j.future.2013.09.022>.
  7. Jesús Montes, Alberto Sánchez, Bunjamin Memishi, María S. Pérez, Gabriel Antoniu, GMonE: A complete approach to cloud monitoring, Future Generation Computer Systems, Volume 29, Issue 8, October 2013, Pages 2026-2040, ISSN 0167-739X, <http://dx.doi.org/10.1016/j.future.2013.02.011>.  
(<http://www.sciencedirect.com/science/article/pii/S0167739X13000496>)