# CURRENT CHALLENGES FOR ENTERPRISES IN APPLYING BUSINESS DESIGN PROCESSES

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**ABSTRACT:** *This paper can be considered a complementary material to other personal studies regarding the ways in which companies can significantly improve their businesses by implementing either radical change processes or continuous improvement strategies. To cope with current changes and challenges, companies can apply strategies and processes based on reengineering principles. These reengineering processes are also known as redesign processes, which can be applied across many levels of change. These levels can range from radical changes applied to business processes to moderate and light changes applied to specific components of the business (at the product level, processes, materials used, information technologies, employee specialization, etc.). In this paper, I will present, based on the specialized literature and practical cases, the evolution of redesign processes, how they are currently understood and applied, as well as the main challenges generated by the current business environment.*

**KEY WORDS:** *business, excellence, processes, change management, redesign, performance, reengineering, technologization, digitalization, AI.*

**JEL CLASSIFICATION:** *M10, M16, M21*

## 1. INTRODUCTION

Change and transformation processes in society, the business environment, and within companies have become commonplace nowadays. We could even say that change has become a "constant" considering that the global economy is surprisingly dynamic, technologies are astonishing, information comes from all directions, its content changes instantly, and companies, managers, and their employees must keep up with these challenges. In the past, radical change processes or redesign processes at the enterprise level were applied occasionally, at long intervals, with very high costs, and only in exceptional situations.

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Under current business conditions, internal change processes - whether major changes in a specific business process or broad transformations involving the entire business - have shifted in applicability context.

This new context is characterized by: a much faster pace of redesign processes, radical changes occurring in nearly all sectors of activity (resource exploitation and agriculture, production, services), the fact that companies implementing redesign processes are not just those in crisis/financial difficulty, and the fact that risk and uncertainty drive these changes, while political, social, and technological factors heavily influence the necessity of such processes.

## 2. BRIEF HISTORY OF THE CONCEPT OF CHANGE MANAGEMENT AND BUSINESS REENGINEERING

Terms such as change management and business redesign processes are frequently encountered today in companies' business strategies. However, these terms originated and gained application in the 1980s-1990s, when several major U.S. companies such as General Electric, AT&T Global Business Communication Systems, Hallmark, Taco Bell, Capital Holding, Bell Atlantic, Kodak, IBM, Ford, Wal-Mart, Procter & Gamble, Fannie Mae, Bank of America, Cisco Systems, etc., implemented new programs for efficient business organization and management, achieving remarkable savings and profits (Hammer & Champy, 1996).

These new programs entailed accelerated transformation of business processes, implemented in several phases within American corporations, with rapid and extraordinary success. Most of these companies were ranked in the "Top 500 Companies" by *Fortune Magazine*. At that time, projects such as "BPR - Business Process Reengineering" and practices like "CM - Change Management" were the hottest trends in management. As renowned management expert Peter Drucker stated: "Reengineering is new and must be done" (Stewart, 1993).

In the 1990s, these business redesign and change management models were primarily accessible through consulting services provided by firms such as Boston Consulting Group, Ernst & Young, Gemini Consulting, McKinsey, and leading IT companies like Andersen Consulting, CSC Index, Symmetrix, IBM, Tech Data Corporation, Intel Corporation, and Digital Equipment. These firms offered consulting on BPR methodologies, with specialists in management and IT, in exchange for significant fees. However, dedicated books and manuals on the topic were scarce at the time (Ghicajanu, 2018, p.10).

Later, articles, books, and even manuals emerged addressing concepts, models, techniques, and tools related to change, business and process redesign, and quality improvements such as TQM. Some pioneering works in Business Process Reengineering are attributed to authors like Michael Hammer, James A. Champy, Thomas H. Davenport, and Henry J. Johansson.

This phenomenon quickly spread to companies across Europe, Asia, and even Africa. In recent years, redesign methodologies and practices have been developed, integrative models created, and, theoretically, a wide variety of BPR-related issues have been presented, analysed, compared, and debated. The key characteristics of

reengineering projects are (Hammer & Champy, 1996): focus on business processes, not individual functions; elimination of non-value-adding activities; use of information technology for automation and integration; radical reconfiguration of business processes.

Furthermore, from the studied works (Davenport, Johansson, Marchand, Sinclair, Al-Mashari, Zairi), it is evident that business redesign processes have evolved in their approach compared to the early literature. The evolution consists of a shift from radical approaches - major, total changes with high investment and spectacular results - to more moderate approaches. These more moderate change approaches are understood and applied through the combination of continuous improvement techniques based on the Kaizen philosophy, total quality management, project management, and enterprise resource planning, involving smaller investments, perseverance, discipline, organization, and very good results achieved over time (Ghicajanu, 2018, p.11).

Business redesign practices have been grouped into five classes based on the degree of change, from strong to low: radical reengineering (redesign); moderate reengineering (redesign); redesign process; moderate change process; light change process. In recent years, most business redesign, business process management, enterprise resource planning, and project management projects have been accompanied by modular, integrated, high-performance software programs available to managers, under names such as: Change Management (CM), Business Process Management, Enterprise Resource Planning (ERP), Management by Project (MP), and Total Quality Management (TQM).

This evolution in redesign process implementation was driven by the reality that companies faced numerous issues during such major transformations. Theoretically, BPR processes, contextual frameworks, redesign solutions, and success models from the 1990s - applied by consulting firms to major U.S. corporations - looked extraordinary and impressive. In practice, however, things were not quite so simple. Most companies aiming for results through redesign processes struggled with various aspects, such as very high costs, major technical problems, resistance to change, and organizational and managerial culture.

On the other hand, some companies only desired moderate or light changes - and this category still includes a significant proportion of businesses today. Many managers believe that good things should be preserved and only certain business components should be changed. These companies implement change processes alongside continuous improvement techniques, using methods such as: JIT, KANBAN, HEIJUNKA, Bucket Brigades, JIDOKA, POKA-YOKE, the 5S suggestion system, Single Minute Exchange of Die, Lean Manufacturing, Value Stream Mapping, Six Sigma, etc. (Imai, 2004).

## 3. INTERNATIONAL ATTITUDES AND EXPERIENCES IN REDESIGN AND CHANGE PROCESSES

This section presents relevant characteristics regarding how redesign programs have been implemented in various companies and organizations across different regions of the world. Most studies and research on how reengineering processes have been applied in companies from different countries were conducted up until around 2010. The

relevant studies belong to associations such as: the Association of Business Process Management Professionals (ABPMP), the American Society for Quality Directory, the European Foundation for Quality Management, and the European Association of Business Process Management; consulting firms like ProSci (2013); and experts such as Majed Al-Mashari and Zahir Irani (2001), Yang and Chang (2003), Mahorta (1998), Mohamed Zairi and Sinclair (1995).

**Table 1. Famous Cases of BPR (Business Process Reengineering) Project Implementation**

| Company | Location and Diagnosed Problem | Implemented BPR Project | Spectacular Results |
|---|---|---|---|
| Ford Motor Company | Procurement Department<br>- Overstaffed<br>- Slow, bureaucratic document flow | Changing the way documents are managed and their flow by implementing an integrated IT system based on shared databases | - Reduced time in departmental operations<br>-Cost reduction by cutting departmental staff by 75%<br>- Increased efficiency and effectiveness |
| IBM Credit | Credit Department<br>-Excessive time required to analyze and approve loan applications | Accelerating the credit approval process through the implementation of a digitalized workflow system | - Improved effectiveness by shortening the credit application processing time from 7 days to 4 hours |
| Taco Bell | Operational Unit - Restaurants<br>- Focus shifted toward the restaurant's core personnel - the chefs | Transforming the organization and operations of restaurants<br>- outsourcing the kitchen to a central unit | -Faster customer service (customer-oriented approach)<br>-Dramatic increase in sales (by 35%)<br>- Reduced operational costs |
| General Electric | Finance Department<br>- Financial processes were fragmented, slow, and costly | A combined system of BPR and digitalization of financial operations with continuous improvement techniques from Six Sigma | - Billions of dollars in savings and increased efficiency in financial operations |
| Dell | Goods Warehouses<br>- Large product inventories<br>- High storage costs | Redesigning the supply chain<br>- Direct-to-consumer supply model, eliminating distributors and optimizing supply based on received orders | - Significant reduction in the cost of delivering products to customers<br>- Reduced customer supply time<br>- Lower costs for customers as well<br>- Increase in the number of customers |

*Source: Hammer &Chamy, 1993*

After this period, very few studies have been recorded, and most are focused on isolated cases within institutions or public organizations. A significant part of these researchers' work refers to the principles and conditions necessary to create the optimal framework for implementing business redesign processes within organizations, while others have identified best practice techniques for these processes.

Although there are considerable regional differences in how these programs and strategies - requiring major or minor internal changes - are understood, approached, and implemented, some general elements can be established, such as: success factors, common challenges, frequently used techniques and tools as best practices, and methodology for approach and implementation.

The best-known examples of BPR process implementation are the iconic cases of American companies (Ford, IBM, Taco Bell, General Electric, Dell, etc.), presented by Hammer and Champy in their seminal book (Hammer & Champy, 1993). At the time, these cases served as success models for the business world in carrying out radical transformation projects of how businesses are conceived and managed. As the change projects were presented, they seemed very easy and simple to implement. Let's briefly examine what these radical changes entailed and what spectacular results were achieved in the examples analysed by Hammer and Champy.

The conclusions of the BPR projects implemented in the presented examples show that although Hammer encourages the idea of "don't automate, obliterate" - meaning the elimination of non-value-adding activities - most change projects were in fact based on the introduction of activities carried out by machines, namely computers with the help of IT programs. So, the elimination of those non-value-adding activities, which led to high time and cost consumption within a business process, was still achieved through automation to some extent. Even though some operations or steps were eliminated, the radical transformation occurred through the contribution of information technology and other advanced technologies of that time.

Other studies present cases of business redesign projects applied to companies in the U.S. and Europe (Mashari et al., 2001), (ProSci, 2013), Asia - China (Xin James He, 2005), (Yang &Chang,2003) and Africa (Samali et al., 2007). Research conducted on a representative number of companies, such as the studies by Mashari and Xin, or within public institutions, like those conducted in African countries (Kenya, Uganda, Ethiopia), mainly pursued the following research objectives:

- The predisposition of companies or organizations toward BPR-type projects;
- Identification of the degree of change - level of radicality;
- Techniques and tools used in business process redesign;
- Efforts undertaken in redesigning business processes according to the degree of change;
- Particular implementation characteristics depending on organizational culture, leadership, the development level of the business environment, etc.;
- Methods of integrating BPR-type business redesign processes with improvement techniques such as CM (Change Management), TQM (Total Quality Management).

From the study of these works, a few conclusions can be drawn regarding the experience and attitude of managers toward business change projects in companies across different countries and regions of the world (see Table 2).

**Table 2. Characteristics of BPR Projects by Global Regions**

| Region characteristic | Region: U.S. Companies (America, especially the United States) | Region: Asian Companies (China, India in particular) | Companies from Africa | Region: European Companies (including Romania) |
|---|---|---|---|---|
| Predisposition toward implementing BPR projects | Higher predisposition (over 60% of investigated companies)<br>Extensive experience in BPR projects | Low predisposition in implementing of some projects of type BPR (under 30%) | Very low predisposition, almost unknown Projects mostly attempted in public institutions | Moderate to low predisposition (under 40%, and in some countries under 30%) |
| Degree of change | Predominantly radical changes in business processes | Predominantly medium-level change | Isolated BPR cases with major change objectives | Moderate change and light change projects |
| Integration with other processes and techniques | Mainly integrated with TQM techniques | Mostly integrated with Benchmarking and Kaizen techniques | Many projects were inconclusive or left unfinished | Primarily using Benchmarking techniques, followed by TQM |
| Objectives pursued | Customer orientation<br>Time reduction and overall process efficiency | Cost savings and reduction<br>Minimization of losses | Automation of some public services using IT | Customer orientation<br>High-performance management processes<br>Flexible structures |
| Strengths | Support for new ideas, leadership, flexibility, innovation, and entrepreneurial spirit | Patience, perseverance, work discipline | Ability to learn and be trained | Openness to education and knowledge assimilation |
| Weaknesses and obstacles | Poorly grounded decisions regarding the type of change (revolutionary vs. evolutionary)<br>Very high costs | A culture resistant to change and new ideas<br>Lack of performance-based motivational systems | Strong resistance to change<br>Strong organizational culture (rigid/traditional)<br>Insufficient financial resources<br>Untrained personnel | Resistance to change from both employees and managers<br>Inflexible structures<br>Lack of leadership-based management processes |
| Results | Spectacular results in terms of cost, time, and speed | | Good results in terms of performance, efficiency, and effectiveness | |

*Source: Mashari et al., 2001, ProSci, 2013, Xin James He, 2005, Samali et al., 2007 and Ghicajanu, 2017*

The most relevant characteristics regarding the main problems and obstacles in implementing business redesign processes were (Ghicaianu, 2017, p.405):

- For companies in America, these projects, as they were implemented, required major financial efforts, with costly specialists and equipment. On the other hand,

there were also difficulties in establishing a clear connection between the areas targeted by BPR and the vision and development of a well-planned business strategy.

- European companies faced greater difficulties in managing the scale of changes related to management systems, organizational culture and structure, and employee attitudes.
- Among Asian companies, the biggest challenge and influence is represented by organizational and managerial culture. Common cultural issues encountered in the implementation of BPR processes included: attitudes toward power and power distance, collectivism vs. individualism, approaches to uncertainty, gender-related aspects (masculinity), and how performance is addressed in employee professional development.
- In Africa, most BPR-type projects were initiated after 2000-2004, predominantly in public sector organizations: ministries, government institutions, and universities, where even within these entities, some projects were not successfully completed. The main issue in these cases was the incorrect understanding of what business process redesign entails and how it should be implemented. Additionally, lack of experience, the complexity of management and organizational problems, and limited access to IT were all contributing factors to the failure of some BPR projects in these organizations.

## 4. CURRENT PROBLEMS AND CHALLENGES IN APPLYING BUSINESS MANAGERIAL REDESIGN PROCESSES - DIGITAL REENGINEERING

Currently, the major problems and challenges faced by companies and their managers are related to sustainability, innovation, digitalization, and more recently, the presence of AI. As a side note and personal opinion, I can say that we hear these terms more and more often, and the term *sustainability* is sometimes even abused by some companies in their strategy and strategic objectives, even when it has no real connection to their actual activity. It is used simply to create a good impression in the business environment or among their business partners (especially clients or funding authorities).

Continuing from the above idea, these challenges are present not only when implementing managerial redesign projects, but also in achieving strategic objectives that companies set for themselves. While four decades ago, a BPR project could not be successfully implemented without the contribution of IT systems and information technology, today that contribution is indispensable in order to remain competitive in the market. This evolution has led to a new form of redesign - digital redesign or digital reengineering.

### 4.1. The Contribution of Digitalization and AI to Business Redesign Processes

Artificial Intelligence (AI) and digitalization play a crucial role in radical change processes through the automation, optimization, and fundamental redefinition of business processes. Digital reengineering does not involve merely incremental improvements, but a radical rethinking, based on advanced technologies.

The table below summarizes the most relevant contributions of AI and digitalization to such BPR processes (Table 3).

**Table 3. Contributions of AI and Digitalization to BPR**

| Application Area | Content/Description |
|---|---|
| 1. Automation of repetitive processes | **Robotic Process Automation (RPA)** - replaces manual activities such as document processing or data entry. *Example:* Patria Bank and Transilvania Bank have implemented RPA for processing credit applications, reducing approval times from days to just a few hours (similar to the IBM Credit example from 1993). |
| 2. Decision-making based on expert systems and AI | **AI analyzes large volumes of data** and identifies patterns to optimize processes. *Example:* Amazon uses AI algorithms to optimize its supply chain and anticipate customer demand. |
| 3. Personalized customer preferences | **Chatbots and virtual assistants** reduce the need for human intervention and improve services. *Example:* Mobile service providers, online commerce, etc. |
| 4. Simulations and Digital Twins | **AI creates digital models** of processes to test optimizations without disrupting operations. *Example:* Siemens uses Digital Twins to optimize factory production lines. |
| 5. Blockchain for transparency and security | **Blockchain helps secure transactions** and eliminates intermediaries in complex processes. *Example:* Maersk uses blockchain to track maritime shipments in real time. |
| 6. Integration of IoT (Internet of Things) | **IoT connects equipment and devices** for real-time monitoring and automated optimization. *Example:* LG Electronics (LG) or General Electric (GE) uses IoT for predictive maintenance of industrial equipment. |

*Source, adapted from: https://www.piatafinanciara.ro/, https://www.bancatransilvania.ro/, https://sifted.com/, https://www.chatlab.com/, https://manufacturing-today.com/, https://www.maersk.com/, https://profeshh.com/, https://processgenius.eu/, https://lgcorp.com/*

## 4.2. Benefits of AI and Digitalization in BPR

The benefits brought by AI and digitalization to BPR are the same as those identified by Hammer and Champy in the projects they implemented in the early 1990s - only now they are amplified, namely:

- Much higher execution speed of a process, or extremely fast delivery of a product/information/service to the customer;
- Much more accurate and precise execution of certain processes or operations;
- Elimination of losses and costs related to correcting errors or non-compliant products;
- Very high level of flexibility and adaptability to market demands, customer preferences, and business partner requirements.

## 5. DISCUSSIONS

Of course, the application of Artificial Intelligence, robotics in industry and services, and digitalization in any type of business raises numerous topics for discussion, such as:

- Solving financial and resource-related challenges
- Ethical and integrity issues in business
- Security and safety of business processes, especially regarding financial components and personal data
- Accurately measuring efficiency, digitalization costs, and the financial results obtained, etc.

## 6. CONCLUSIONS

International experience in implementing BPR-type projects has shown that there are both similarities and significant differences in how business redesign processes are carried out across different world regions and countries. These differences are driven by cultural factors, the type of management applied, and the level of experience in business management.

Business redesign programs have undergone significant evolution and development over the past four decades, both theoretically and practically. The concept of business process redesign has become increasingly widespread, and more and more companies are open to processes that involve changes in the way businesses are organized and managed. Whereas in the past, such projects were optional and only large corporations engaged in them, today they have become a necessity. Companies that fail to understand that change is an essential part of how business must be conducted will not be able to survive in the long term.

Nowadays, these redesign/change projects are measured by the degree to which AI, digitalization, and automation are integrated into business processes.

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