

BUSINESS PROCESS RE-ENGINEERING- AN OVERVIEW

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Abstract- Business process reengineering (BPR) is the result of a new process-orientation that is trying to overcome some of the problems raised with the growth in size and complexity of business into a set of management approaches for enterprises to face unpredictable and uncontrollable circumstances. The concept of Business Process Reengineering (BPR) gained recognition as an innovation process in the early 90's as it is flexible to adapt to changing global and competitive environment. Business process reengineering transforms an organization in ways that directly affect performance. Organizational processes today are markedly different than they were several years ago. BPR is now one of the most popular catchphrase in the business. In this paper first part covers definition of BPR, principles, main idea, benefits and objective of BPR. Second part is concerned with the review of the relevant literature on business process reengineering which gives clear picture of present business process environment and also provides better understanding of BPR technique which is emerging technique in organization improvement in recent years.

Keywords-Business Process ,Re-engineering, research review, innovation, Implementation and Continual improvement.

1. INTRODUCTION

Business Process Reengineering (BPR) is defined as a radical redesign of processes in order to gain significant improvements in cost, quality, and service. Firms have been reengineering various business functions for years, ranging from customer relationship management to order fulfilment, and from assembly lines to logistics. Business Process Re-engineering becomes an offshoot of Business Process. Hammer and Champy (1993)

argued that “the fundamental reconsideration and radical redesign of organizational process, in order to achieve drastic improvement of current performance in cost, service and speed enjoys a fair measure of consensus [1]. It stresses the radical change of processes concerning different departments. However, the redesign of processes is only one aspect of the management of business processes. At least three different kinds of process management can be identified: the management of ongoing business processes, the improvement of business processes and the reengineering of business processes [1]. One can then assume that Business Process Re-engineering connotes the analysis and design of workflows and processes within and between organizations (Davenport and Short 1990) [2]. Business Process Reengineering has risen during the early 2000s as an approach mainly developed by practitioners. Business process can be defined as “a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer” or “a specific ordering of activities across time and place, with a beginning and an end with clearly defined inputs and outputs” [3]. Despite the growing popularity of BPR in 1990s, different management consultants used the term as a way to promote their proprietary methods, which led to confusion and disagreements [4]. Responding to the claims made for BPR and the resulting confusion, the academic community criticized BPR for having no sound theoretical basis [5]. Deakins and Makgill [6] argues that the original literature on BPR was essentially anecdotal, lacking rigorous research to support its assertions. More recent literature suggests that the first generation of BPR, which suggests radical changes in business processes, is evolving in to a modest process management, which is softened by the lessons learned

from successes and failures in the course of implementations. The contemporary definition of BPR, therefore, encompasses a continuum of approaches to process transformation that may include both radical and incremental improvements, depending on the nature of the problem. In fact, many studies have been published in the literature in order to explain and promote this new approach to BPR, including Davenport et al. [7], Hammer [8], Hammer [9], Becker et al. [10]. Despite the growing popularity of BPR in 1990s, different management consultants used the term as a way to promote their proprietary methods, which led to confusion and disagreements [11]. Responding to the claims made for BPR and the resulting confusion, the academic community criticized BPR for having no sound theoretical basis [12]. Deakins and Makgill [13] argues that the original literature on BPR was essentially anecdotal, lacking rigorous research to support its assertions. More recent literature suggests that the first generation of BPR, which suggests radical changes in business processes, is evolving in to a modest process management, which is softened by the lessons learned from successes and failures in the course of implementations.

1.1 Definition

Hammer and Champy noted that in the business environment, nothing is constant or predictable—not market growth, customer demand, product life spans, technological change, or the nature of competition. As a result, customers, competition, and change have taken on entirely new dynamics in the business world. Customers now have choice, and they expect products to be customized to their unique needs. Competition, no longer decided by "best price" alone, is driven by other factors such as quality, selection, service, and responsiveness. In addition, rapid change has diminished product and service life cycles, making the need for inventiveness and adaptability even greater [1, 2, 3]. According to Hammer and Champy, reengineering is defined as —The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service and speed.[1] In other words, they proposed a radical shift: rather than defining a business by the products or services it produces, businesses are defined by what they do well. They believed such a view of business barriers to growth as businesses found new ways to adapt what they did well to new markets. It also eliminated the gap between strategy and implementation since senior management no longer simply set goals but had to understand exactly what goals to achieve. Reengineering, like restructuring,

is a method of revolutionary change and thus embodies all general features of such radical changes [4]. BPR has contributed to the provision of techniques for continuous improvement [4]. Since technology is constantly advancing, and the business environment is constantly changing, processes and the systems supporting them are in need of methods to facilitate and guide their parallel improvement. This in turn enables businesses to focus on the customer and adapt to the customer's changing requirement [5, 6, 7]. In a business environment, where the customers 'needs are driving forces, BPR provides business organizations with the opportunity to adjust dynamically to customer demands [8]. Business process reengineering (BPR) began as a private sector technique to help organizations fundamentally rethink how they do their work in order to dramatically improve customer service, cut operational costs, improve productivity, optimize costs and become world-class competitors. A key stimulus for reengineering has been the continuing development and deployment of sophisticated information systems and networks. Leading organizations are becoming bolder in using this technology to support innovative business processes, rather than refining current ways of doing work [9, 10, 11]. Transformation involves changing many of our assumptions and principles of management and reexamining the nature of work and workers. Jobs should be organized around outcomes, not tasks. Individuals should be empowered to use discretion and judgment in performing their duties and obligations. Control, accountability, and processing must be built into the work process so that individual efforts contribute directly to the success of the organization [21]. Other authors, such as Vantrappen (1992) , focused on the rethinking, restructuring and streamlining of business structure, processes, work methods, management systems and external relationships, through which value is created and delivered[34]. Petrozzo and Stepper (1994), on the other hand, believed that BPR involves the concurrent redesign of processes, organizations, and their supporting information systems, to achieve radical improvement in time, cost, quality, and customers' regard for the company's products and services [35]. Loewenthal (1994) described the fundamental rethinking and redesign of operating processes and organizational structure; the focus is on the organization's core competence to achieve dramatic improvements in organizational performance [36].

BPR	Definition	Reference
	"fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed"	[1]
	"methodologies to change their internal business processes in response to environmental change requirements or internal needs"	[23]
	"an approach used to create a computer-based system for the management of the supply chain traceability information flows"	[24]
	"Information system development can often be addressed as a business process reengineering practice, either because it automates some human-based processes or because it replaces an existing legacy system"	[25]

Fig.1.1 Table of definition

1.2 The nature of business process reengineering

An increasing number of firms are applying business process re-engineering (BPR) to alter many age-old procedures, to reduce costs, and to improve competitiveness. Business process re-engineering sets out to make a step change improvement in competitiveness and then maintain and improve on that competitiveness. Why BPR? Because there is need for a company to have processes that minimize delays, eliminate errors, promote understanding and reduce excesses. These processes must be adaptable to the changing needs and provide the organization with a competitive advantage. The first principles and elements of business process re-engineering can be found in Taylorism (task optimization) and the scientific management theory. Some authors have highlight four

lay words in this definition, which enable us to understand the character of BPR. The first key word is 'fundamental' which means that re-engineering begins with "no assumptions and no givens", [1,5,6,].Fundamental rethinking returns to basic questions and identifies which activities add value to the product or service being delivered. Having answered the 'fundamental' questions the next stage is to take 'radical corrective action. Consequently, the second keyword is 'radical'. Organizations are encouraged radically to restructure their operations. Existing structures that are not compatible with the new vision should be dismantled. The expectation is that radical changes will be accompanied by 'dramatic' benefits, which is the third keyword. Thus, re-engineering is not about making marginal or incremental improvements but about major improvements in performance. The last keyword is 'processes' which is very important since all BPR activity is based on process change. BPR starts to envision new ways of working and organizing business processes.

There are four points of interaction in this framework. The first point is related with the business processes and the second point is concerned with structure of the jobs and the people needed to fill them. The third point of interaction refers to the role of managers, the working relationships and the measurement systems and, finally, the fourth point is related with the employees' values and beliefs. Consequently, re-engineering a company's processes affects all aspects of that company. These four points are linked together and re-engineering involves the redesigned-planning of each of the four points on an ongoing basis. Other authors presented the Business System Diamond model, which indicates the changes that occur when a company re-engineers its business processes (figure.1.2).

More specifically, the first point is business processes, which affects structures and jobs. The ways in which work is performed determine the way people's jobs are organized. For example, the integrated processes give rise to multidimensional jobs and the best way of supporting such jobs is to organize the employees into teams. Consequently, different structures and jobs require people who have the abilities to adapt themselves in the new working conditions. This interaction changes the way that employees are recruited, evaluated and paid. The third point, which is the change of management and measurement systems, determines the fourth point, which is related with values and beliefs [1, 6, 10,16].

1.3 Reengineering management

In his book 'Reengineering Management' has admitted that Reengineering is in trouble. Reengineering works up to a point. The obstacle is management. The only way we are going to deliver on the full promise of reengineering is to start reengineering management by reengineering ourselves, changing the managerial work, the way we think about, organize, inspire, deploy, enable, measure, and reward the value adding operational work. It is about changing management itself. Reengineering prescribes action, not words, and difficult, long term actions at that, not just one shot expedients like downsizing or outsourcing. Reengineering involves a voyage that will last years, possibly our entire management lifetime. For us managers, nothing seems sure anymore, neither our professional know how nor our career paths and certainly not our job security. It also raised four issues addressed for reengineering to succeed. They are:

- Issue of purpose
- Issues of culture
- Issues of process and performance
- Issues of people

Nothing is simple anymore, nothing is stable. The business environment is changing before our eyes, rapidly, radically, perplexingly. The change will go deeper than technique. It touches not merely what managers do, but who they are. Not just their sense of the task, but their sense of themselves. Not just what they know, but how they think. Not just their way of seeing the world, but their way of living in the world. Peter Drucker has put it just as bluntly: "Every organization has to prepare for the abandonment of everything it does [1, 3,15,18,24,33,].

Davenport offers a different perspective of the topic. Davenport refers to the term 'business process re-engineering' as 'process innovation' and business process redesign', which is an indicator of the plethora of BPR definitions, approaches and methodologies. Consequently, according to Davenport's business process redesign and later process innovation, an organization is aiming at achieving major reductions in process cost or time, or major improvements in quality, flexibility, service levels, or other business objectives. The organization is trying to achieve this goal through the use of innovation tools and work design which will lead to radical improvement of business process performance [30]. In the literature there are many variations in the usage of terms for describing the concept of reengineering. All referring to process changes large and small. Some of them are:

- Business Process Improvement
- Core process redesign
- Process Innovation
- Process Transformation
- Structured analysis and improvement
- Organizational reengineering
- Organizational change ecology
- Business Process Management

The term 'fundamental' refers what and how. What refers the performance? It refers to the key operations that an organization is required to perform to accomplish its objectives. How refers the sequence of performance. The key operations identified are to be performed in a meaningful sequence to accomplish its objectives[2,14,36,40]

2. AN OVERVIEW OF BPR

In order to capture the topics covered in the reviewed articles, it is important to capture the attributes in four important views – the people view, the process view, the resource view, and the customer view. The critical success factor for implementing and sustaining BPM in the organization depends on its ability to understand the changes and effects across all four dimension [40]. The people view typically comprises components including organizational structures, culture, roles, responsibilities, accountabilities, competencies, jobs and communication. The process view comprises elements such as the way of planning, control and changes in business processes. The resource view spotlights on resources used within an organization and the way organizations integrate resources into business process to their respective performances and utilization levels. Finally, the customer view deals through the requirements in a customer's perspective such as customer segments, service characteristics and design in addition to customer feedback. Framework shown in Table 2.1, which contains the critical component of the BPM in order to achieve a successful process-based organization [40].

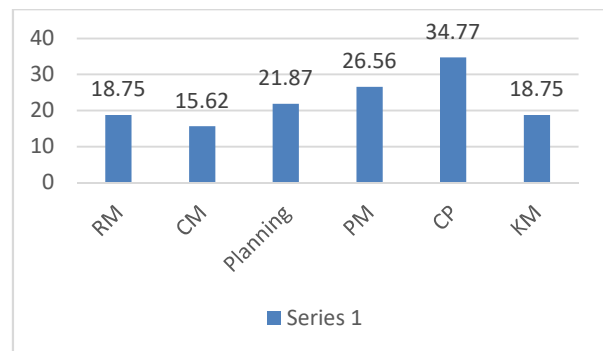
Covered topics	Goals	Objectives
Resource Management Obtain	Manage operational activities of the organization	performance levels Measure deviations
Customer Management	Integrate and focus value delivery on the customer	Identify needs/wants Develop product /service profile Obtain constant customer satisfaction feedback
Planning	Plan value and the delivery of value thereof to the customer	Establish goals (policies) Define capabilities Develop product /service features
Performance Management	Evaluate performance of the organization	Reward and recognize people, Collate relevant performance levels
Change Process	Change the organization in order to meet customer requirements	Develop solutions through innovation Re-establish control
Knowledge management	Grow organization knowledge Create	knowledge In-source plans, controls, and solutions

Table 2.1. Business Process Components

The article reviews were classified based on the coverage of the above components. In order to get a detailed analysis, we capture the frequency of publications covering the above components over the years for both AIS basket of top journal articles and Science Direct database articles. Table 2.2 summarizes the finding as shown below. It is interesting to see that both AIS journal articles and Science Direct database articles covered topic on knowledge management the most (28 articles, 43.75%), followed closely by covering the topic on change process (22 articles, 34.77%), performance management (17 articles, 26.56%), and planning (14 articles, 21.87%). resource management (12articles,18.75%) & the lowest is the customer management(10 articles, 15.62%).

Covered topics	No. of articles	References
Resource Management	12	[12,14,37.38,33,35 36,41,42,61,63]
Customer Management	10	[63,64,72,45,46,47, 48,49,50,51]
Planning	14	[21,1,2,3,4,5,8,10,6, 32,33,34,35,41, 54]
Performance Management	17	[26,35,36,37,38,39 61,63,6,62]
Change Process	22	[22,23,36,38,40,42,41 ,43,51,52]
Knowledge management	28	[1,2,3,4,5,6,10,11- 20,30-35]

Table no.2.1 Classification based on topics covered



3. CONCLUSION

In this study re-engineering of the procurement division in construction project organization is studied. The BPR Methodology that is Identification, Redesigning, Implementation.

BPR is the methodology which can be apply to any organization. Successful implementation of BPR dramatically improves the organization methodology. In this paper an overview on business process reengineering gives through knowledge and understanding of overall business process reengineering. This enables us to understand the success and failure rates and attempt to overcome the “theoretically grounded” elements surrounding BPM, BPR. This study emphasizes on reengineering that

requires looking at the fundamental processes of the business from a cross functional perspective. In short, a reengineering effort strives for dramatic levels of Improvement.

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