

Applications of Production Engineering Techniques to Business Process Re-Engineering

Sreejith.B.¹, Lini.V²

¹PG student, Department of Management Studies, Sivaji College of Engineering and Technology.

²Assistant Professor of Management Studies, Sivaji College of Engineering and Technology.

Abstract— This paper assesses the rise of Business Process Re-engineering (BPR) as a new approach to managing and organizing work. Organizations wishing to implement BPR may either choose a set of generic business processes or devise a set of processes specific to their own situation. An approach to developing enterprise specific business processes is then proposed, based on an analogy with the introduction of group technology to manufacturing organizations. The techniques used by production engineers to implement group technology are reviewed and amended for use in a BPR context. A new methodology for information flow analysis is described and a short case study presented where the methodology has been applied. The paper concludes that re-discovering the techniques used by production engineers is a useful starting point for those considering a BPR project.

BPR is the procedure which can be apply to any association. Effective execution of BPR significantly enhances the association approach which enhances the competitive advantage of the organization. It also analyze and illustrate the needs and expectations of the industry from a newly hired engineering candidate for an entry-level position involving business process reengineering (BPR). The methodologies, its new role, and emergence of a value of BPR, which has been redefined paper aims to highlight the changing role and the new emerging face of business process design, analysis, and management, its relevant contents.

Keywords--Applications of Production, Engineering Techniques and Business Process Re-Engineering

I. INTRODUCTION

A major process redesign aimed at achieving appreciable cost, quality, and service improvements is known as business process reengineering, or BPR. For years, businesses have been reengineering a variety of business processes, from assembly lines to logistics, and from customer relationship management to order fulfillment. Business Process gives rise to Business Process Re-engineering.

According to Hammer and Champy (1993), "there is a fair degree of consensus regarding the need for fundamental reconsideration, rethinking and radical redesign of the organizational process, in order to accomplish drastic advancements in current performance in cost, service, and speed [1]." Thus, it follows that business process re-engineering refers to the evaluation and creation of workflows and processes both inside and between enterprises. In the early 2000s, practitioners were primarily responsible for developing the method known as business process reengineering. A business process is "a particular sequencing of activities across time and place, with an opening and an end with clearly defined inputs and outputs" or "a group of activities that takes one or more kinds of input and creates an output that is of value to the customer."

Even though BPR gained popularity in the 1990s, other management consultants misrepresented it and exploited it to market their own proprietary techniques, which caused misunderstandings and arguments. The academic world chastised BPR for lacking a solid theoretical foundation in response to the claims made for it and the confusion that followed. A contends that the early study on BPR was primarily anecdotal and lacked thorough investigation to back up its claims. According to more recent research, the first generation of business process reengineering (BPR), which called for drastic changes in business processes, is giving way to a more moderate form of process management as a result of the lessons gained from implementation successes and failures. Therefore, the modern concept of BPR includes a range of methods for process modification that may as a result, based on the nature of the issue, the modern definition of BPR covers a spectrum of process transformation strategies that may involve both drastic and gradual

changes. Actually, a number of research have been released in the literature to support and elucidate this novel method of BPR.

Even though BPR gained popularity in the 1990s, other management consultants misrepresented it and exploited it to market their own proprietary techniques, which caused misunderstandings and arguments. The academic community attacked BPR for missing a solid theoretical foundation in response to the claims made for it and the confusion that followed. It contends that the early literature on BPR was primarily anecdotal and lacked rigorous research to back up its claims. According to more recent research, the first generation of business process reengineering (BPR), which called for significant modifications in business processes, is giving way to a more moderate form of process management as a result of the lessons gained from implementation successes and failures.

1 Objective of study

This research evaluates business process reengineering, which improves comprehension of business procedures in the building sector.

II. METHODOLOGY

The aim of this research is to ascertain the level of awareness and implementation of business process reengineering, as well as to attempt using the BPR approach in a real-world project. For that questionnaire survey, information was gathered from a variety of builders, contractors, and owners of construction companies. The questionnaire consisted of structured, closed-ended questions with a list of possible answers. A grading system allowed the researcher to pick an appropriate response and obtain thorough information. The purpose of the questionnaire is to gather awareness data and assess its validity and reliability in relation to business process reengineering research.

The rating is given as

1. Extremely low degree—the lowest rank that is assigned is fifth—then
2. The fourth rank is awarded to a low degree.
3. Moderate is ranked third, and
4. High range is ranked first. This survey's primary

goal is to find out how widely known BPR is and how often the approach is being used in the construction sector.

Expected objectives for this survey are-

- 1) How much BPR is used in the building sector?
- 2) A plan for the implementation of project
- 3) The formation of the BPR team and its organizational roles.

The questionnaire had 4 sections, comprising of

- Section 1: General information,
- Section 2: - Extent of use of business process reengineering in organization performance improvement,
- Section 3: Extent of use of complete implementation plan-,
- Section 4: Extent of use of business process reengineering in efficiency and productivity, Questionnaires were administered to the respondents.

III. RESULTS AND DISCUSSION

According to predetermined goals, data was gathered and examined. The work was primarily descriptive and was completed with Excel software. Averages and frequencies are computed. Additionally, content analysis will be applied. The methodical qualitative description of the items or research materials' composition is called content analysis. In order to ensure the validity and reliability of the questionnaires included in the study, they were built with snares.

The majority of workers knew about business process reengineering, and they also realized how effective it is at improving customer satisfaction, employee performance, and operating efficiency. Workers also realized how effective business process reengineering is at increasing productivity and efficiency within the company, as performance management tools are used to drive organizational change, for strategic planning, and for regular management reviews that rely too heavily on financial measures.

Chart no.1 Section 2. Extent of use of business process reengineering in organization performance

improvement

Chart no.2. Section3: Extent of use of complete implementation plan

Chart no.3. Section 4: Extent of use of business process reengineering in efficiency and productivity.

IV. CONCLUSION

This research examines the re-engineering of the procurement division within the organization of building projects. The BPR Methodology, which consists of process identification, redesign, implementation, and continuous improvement, as well as information on the organization's performance and awareness of BPR's implementation level, are gathered through questionnaire surveys. The attitude of the respondents toward accepting BPR was good. This study demonstrates that employees are the most precious resource for any company, and as a result, encouraging employees to improve their performance may lead to highly productive, profitable businesses. Although the response to BPR has been favorable, respondents still want more clarification in order to improve BPR strategy. The BPR approach is adaptable to any type of company. The organization approach is significantly improved by the successful application of BPR.

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