



## **BUSINESS PROCESS RE-ENGINEERING TO ACHIEVE ORGANIZATIONAL IMPROVEMENTS**

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### **Abstract**

*Business Process Reengineering increases enterprise's chance to survive in competition among organizations, but failure rate among reengineering efforts is high, so new methods that decrease failure, are needed, in this paper a business process reengineering method is presented that uses Enterprise for modeling the current system and its goal is to improve analyzing current system and decreasing failure rate of BPR, and cost and time of performing processes, In this method instead of just modeling processes, processes with their interactions and relations, environment, staffs and customers will be modeled in enterprise ontology. Also in choosing processes for reengineering step, after choosing them, processes which, according to the enterprise, has the most connection with the chosen ones, will also be chosen to reengineer, finally this met is implemented on a company and As-Is and To-Be processes are simulated and compared by Report and Simulation Experiment.*

**Keywords:** Business Process Reengineering, Enterprise, modeling

### **Introduction**

In 1970s the American auto industry faced with an attack from the Japanese automakers which shook their foundations. The Japanese were able to make high-quality cars at prices much cheaper than the American giants like Ford and Chrysler. Suddenly Ford and Chrysler realized there were something Japanese giants like Toyota and Nissan were doing different which was making them so very competitive. This danger of being displaced as the market leader from their very own home turf led to a severe introspection which resulted in many management paradigms like Six Sigma, , and, Which were based on incremental changes in the organization, and could improve the business processes. In 1990s they knew that those methods could improve the business to some certain levels and something new and more fundamental is needed for taking business to next level, in such times Prof. Michael Hammer wrote his important article .Hammer claimed that "...the major challenge for managers is to obliterate non-value adding work, rather than using technology for automating.

### **Evolution of BPR**

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The term Business Process Redesign, first appeared in the management literature in middle of 1990, the following publication of seminal articles by Hammer and Davenport & Short.

These articles described a new change management philosophy: one which transformed organizational processes beyond mere mechanization of existing tasks, and they had offered quantum performance improvements (Craven, 1991).

Traditional functional management approaches were no longer seen as appropriate in a time where quality, innovation and customer service were of paramount importance (Butler Cox, 1991). There was a real need to implement processes that would enable a business to meet the ongoing demands of its marketplace (Bevilaqua & Thorn hill, 1992).

The apparent plausibility of the approach suggested by Hammer (1990) and others for attaining these goals, has led to the rapid uptake of Business Process Redesign. Just as BPR's effect on an organization is often cross-functional in nature, the approach itself draws on tools and techniques from a variety of well established disciplines such as industrial engineering, quality management and systems analysis.

Rigby (1993) remarks that many of BPR's attributes can be traced back to work done by early researchers of organisational systems and design, and that established incremental change techniques like Activity Value Analysis or Core Process Redesign, are in many respects, earlier incarnations of BPR.

### **Industry Interest in BPR**

Industry interest in BPR has a strong and direct link with any one or more of the motivations noted above. Industry interest levels can also be gauged by the results of recent surveys carried out by two of the major management consulting firms on Fortune 500 corporations in North America. CSC Index's annual survey on IS Management issues in 1992 found that over 70% of 407 respondent organizations were already involved in BPR programs, while a further 14% were discussing the possibility of doing so (Index Group, 1993). Respondents to a recent survey conducted by Dun and Bradstreet Software Services Overwhelmingly nominated BPR as the top priority issue for their organizations.

These findings are consistent with the Australian scene. Broadbent & Others (1993) biennial survey on Information Systems issues amongst Australasian Share/Guide2 members, found that respondents regarded Business Process Redesign as an I/S management issue of rapidly emerging importance. Dun & Bradstreet Software Services annual customer poll of 107



Australasian companies reported that 50% of respondents were either already undertaking or planning to undertake BPR initiatives (MIS, 1993). A major international research project on the role and value of I/T infrastructure currently underway at the Melbourne Business School, found that over half of the 11 Australian firms included in the study were involved in BP activities. Additional evidence of a growing interest in BPR by Australian firms was well supported in 1993, with around 14 BPR seminars or conferences held round the nation. We now review the experiences of Australian firms who have reported implementations of BPR. These reports are taken from a variety of sources which include:

- The authors detailed case analysis of two business groups (Broadbent & Butler, 1993; Butler & Broadbent, 1993)
- The case vignettes of eleven firms who are participating in the Melbourne Business School's I/T infrastructure study funded by IBM Consulting Group Literature reporting Australian BPR implementations.
- Conference and personal reports lodged with the Key Centre for Technology Management. Which acts as an information source for managers who have been involved in seminars? And educational programs at the Melbourne Business School.

### **Implementation of BPR**

The framework presented in Figure 1 has been derived from the literature and the experiences of Australian firms. The framework includes 10 steps which appear to provide a sound basis for the implementation of BPR. In the discussion that follows, examples from Australian firmware used to illustrate these steps. Caveats on this framework are presented in later sections of this paper.

### **Articulate Vision and Objectives**

The operative word in BPR is redesign - to change a business process to the extent that it will deliver the strongest possible competitive advantage (Carr & others, 1992). This is most likely to succeed in firms which exhibit a consistency of mission or strategic intent. In 1991, BP Australia and BP New Zealand linked their operations to form the BPOAZ region. A significant part of Phase 1 of BPOAZ's BPR project involved determining a business vision that would integrate two quite different businesses. The vision moved BPOAZ "from being volume driven to being profit driven, from being transaction processors to being knowledge workers, from being functionally managed to being process managed" (Broadbent & Butler, 1993). Digital Australia's Quantum project focused on a major redesign of its supply process. Digital regarded the setting of a vision "with the ability to motivate the organization towards



### **Ensure Executive Committee Sponsorship**

Because of its high risk, often radical nature, BPR requires the full support and commitment from top management if it is to succeed. Hammer considers it essential for any re-engineering effort to have an high level champion to sponsor the project and see it through (Alexander, 1993). BPOAZ's BPR project started to have an impact when executive level sponsorship was evident (Broadbent & Butler, 1993). Digital Australia considers strong, visible support and visionary sponsorship from senior management vital for success in BPR (Alexander, 1993).

### **Develop High Level Process Map**

Develop a high level view of existing business processes. Part of Melbourne Water's business design study has involved defining high level business processes critical for meeting business objectives. The 10 processes identified and the interactions between them, constitute Melbourne Water's business process model (Lynch, 1994). Caltex Australia developed a business process map which acted as a guide for its BPR implementation. BPOAZ conducted a number of Process Definition workshops in order to document how the region currently conducted its business in terms of the Order Management Cycle (OMC). The workshops produced a series of flowcharts which mapped the stages and individual elements of the OMC, and charted the interactions and levels of involvement between various business units (Broadbent & Butler, 1993). Once the process approach was accepted, charting of all major processes was undertaken.

### **Identify Processes for Redesign**

Identify critical or bottleneck processes. In 1991, Australian transport giant TNT suffered its first loss for 30 years and faced strong competition in its traditional markets. TNT's new change program has involved the company identifying and reassessing its core processes, and has realized a need to substantially upgrade the existing technology base to support these processes (Kelly, 1993).

### **Understand and Measure Existing Process**

Use IT tools or other modeling techniques to document and/or understand existing processes. After using the SimView computer-aided process modeling package to evaluate current freighting procedures and prototype new alternatives, Queensland Rail found ways to cut A\$10 million from the process and substantially streamline operations (Mitchell, 1993). Australian car manufacturers Mitsubishi and GMH have also used SimView for simulating their production processes (Mitchell, 1993).



## Conclusion

Conceptual and consulting frameworks emphasize the inter-linkage of strategy, technology, jobs, structure, values and beliefs and management systems (Scott Morton, 1992; Hammer and Champy, 1993). Each of these needs has to be aligned to bring about and sustain successful process change. The experience of Australian firms outlined in this paper demonstrates the complex nature of BPR. For many of these firms, BPR has been a change approach which was politically, managerially, and often technically difficult to implement. However, those which have implemented process change successfully, and put in place an ongoing process change strategy, find that they are well placed to handle competitive business pressures.

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