Process reengineering:
A review of enablers

P.E.D. Love[a], A. Gunasekaran[b],*

[a] *CSIRO Division of Building, Construction and Engineering, Cannon Hill, Queensland 4173, Australia*
[b] *Department of Manufacturing and Engineering Systems, Brunel University, Uxbridge, Middlesex UB8 3PH, UK*

Abstract

In an attempt to improve productivity, performance and overall competitiveness in both domestic and global markets, organisations have realised that there is a need to reform their business practices and become more customer focused. Consequently, these organisations have recognised the need for organisational change, but do not necessarily know how and what to change, to achieve improvements in productivity and performance. Process reengineering has been described as the elixir for achieving dramatic improvements in production time and cost. Process reengineering is not about fixing current processes, but rebuilding them, with the aim of process improvement. This paper will explain what is meant by process reengineering and suggests that before an organisation attempts to process reengineer, a thorough understanding of current practices, procedures and enablers of change are required. Typically, information technology is implemented as the key change enabler of process reengineering implemented as the key enabler without prior consideration to other enablers such as organisational, human resource and total quality management. This paper suggests that the use of information technology as an enabler is rarely sufficient to cause process change. The paper concludes by suggesting that a combination of information technology, organisational and human resource enablers and a total quality management based philosophy are requisite for the effective redesign of business processes.

Keywords: Process reengineering; Process; Enablers; Change; People

1. Introduction

Industrialised economies are encountering an era of transition – from the stability and order of the industrial era to the flexibility and uncertainty of the post industrial future. This period of transition is characterised by radical economic and social change. This era of change is similar to Toffler's (1980) "The Third Wave" where the agricultural and industrial revolutions have been major forces that have shaped the way in which we live. Words being used to describe the associated industrial decline include, de-industrialisation, industrial restructuring and "de-Adam smithising". This transition from industrial to post-industrial society era is occurring because micro-electronics offers us a way of storing, processing and communicating vast amounts of information quickly. Industries, such as the manufacturing and service, are confronting the crisis of restructure; the collapse of

*Corresponding author. Tel.: + 44 1895 274 000, ext. 2634; fax: + 44 1895 812 556; e-mail: emstagu@brunel.ac.uk.

the industrial system as it gives way to the post industrial. Implicit to this is the role of new technologies. Consequently, we are faced with a revolution that will radically change the way we think, the way we perform work, the roles and tasks we undertake. This revolution is founded on re-thinking and focuses on reforming current production processes and workflows, with the aim of adding value to the production process and the product. This period of change is the beginning of a much needed second industrial revolution for the manufacturing/service industry. Furthermore, the first industrial revolution was about breaking packages of work up into small pieces, managers designing jobs and telling people exactly what to do, and then workers doing it. It is time to depart from a functional approach to doing work, by radically transforming the ways in which organisations do business.

2. The nature of process reengineering

Change may be considered to be the only constant in today's business environment. It is a feature in the daily lives of individuals and organisations. Some facets of change are slow and almost imperceptible, while others occur rapidly. The impact of change processes can range from minor to truly radical. Among the most common and influential forces of organisational change is the emergence of new competition, innovations in technology and evolving attitudes to work. This rapid rate of technical change is altering the *tempo* of the environment within which organisations operate. To survive and remain competitive in this rapidly changing environment, organisations must adapt to change, and are now addressing the need to remain or become competitive through dramatic improvements in quality, cost, time and service (Hammer and Champy, 1993). Organisations are doing this by attempting to reinvent themselves, by organising work around processes through the application of process reengineering. The latter can be defined as *"the fundamental re-thinking and radical design of business processes to achieve dramatic performance improvements in critical and contemporary measures*

of performance such as cost, quality, service and speed" (Champy, 1995).

Process reengineering focuses on reversing the industrial revolution and rejecting Adam Smith's[1] industrial paradigm – the division of labour, economies of scale and hierarchical control (Hammer and Champy, 1993). Consequently, current processes are abandoned and new and radical processes are developed. Davenport and Short (1990) define a process *"as a set of logically related tasks performed to achieve a defined business outcome"* and suggests that processes can be divided into those that are:

- *operationally oriented* – those related to the product and customer; and
- *management orientated* – those that deal with obtaining and coordinating resources.

Many processes in the business, as we know them today, have not been designed in an orderly fashion, but instead have evolved *ad hoc* to their present state. Therefore, an organization should first consider engineering a process before reengineering. Moreover, how can we reengineer a process that has not been engineered?[2] Hansen (1994) suggests that most process reengineering approaches, although claiming to represent radical change, are no more than the continuation of the evolution that has led to the processes that exist today. Processes can be engineered and reengineered simultaneously. Whether processes are to be engineered or reengineered is a matter of semantics.

Traditionally, reengineering has utilized non-scientific methods and is a philosophical, people oriented method that emphasized improvements in communication processes. Whereas, the application of scientific methods to process reengineering is seen to be a radical and revolutionary approach to process thinking. Process reengineering can be considered to be a combination of industrial engineering techniques, operations research methods, management theory, and information systems analysis that utilise the power of information technology (IT) to radically change an organizations

---

[1] Adam Smith (1776) *An Enquiry into the Wealth of the Nations.*
[2] Engineering should be understood in this context to be equivalent to design.