

Business Process Redesign. Introduction

Based on: Malhotra, Business Process Redesign: An Overview,
<http://www.brint.com/papers/bpr.htm>.

Processes

Identified in terms of:

- beginning and end points,
- interfaces,
- organisation units involved, particularly the customer unit.

High Impact processes should have process owners.

Examples of processes include:

- developing a new product;
- ordering goods from a supplier;
- creating a marketing plan;
- processing and paying an insurance claim;
- etc.

Processes

Defined based on three dimensions:

- **Entities:** Processes take place between organisational entities. They could be Interorganisational (e.g. EDI), Interfunctional or Interpersonal (e.g. CSCW).
- **Objects:** Processes result in manipulation of objects. These objects could be Physical or Informational.
- **Activities:** Processes could involve two types of activities: Managerial (e.g. develop a budget) and Operational (e.g. fill a customer order).

(Davenport & Short 1990)

Relationship between BPR & Information Technology?

- IT is the key enabler of BPR (Hammer).
- Use IT to challenge the inherent assumptions from before the advent of modern computer and communications technology.
- Core of reengineering is "discontinuous thinking -- or recognising and breaking away from the outdated rules and fundamental assumptions underlying operations... These rules of work design are based on assumptions about technology, people, and organisational goals that no longer hold."

"Principles of reengineering" (Hammer)

- (a) Organise around outcomes, not tasks;
- (b) Have those who use the output of the process perform the process;
- (c) Subsume information processing work into the real work that produces the information;
- (d) Treat geographically dispersed resources as though they were centralised;
- (e) Link parallel activities instead of integrating their results;
- (f) Put the decision point where the work is performed, and build control into the process;
- (g) Capture information once and at the source.

"The new industrial engineering" (Davenport & Short)

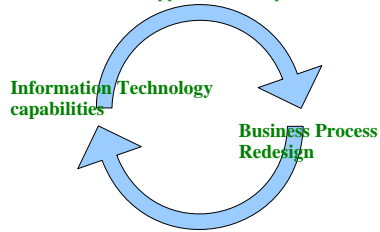
BPR requires broader view of both IT and business activity, and relationships between them.

- **IT** — more than an automating or mechanising force: to fundamentally reshape the way business is done.
- **Business activities** — more than a collection of individual or even functional tasks.

IT and BPR have a recursive relationship. IT capabilities should support business processes, and business processes should be in terms of the capabilities IT can provide.

Recursive relationship between IT capabilities and BPR

How can IT support business processes?



How can business processes be transformed using IT?

“The new industrial engineering” (Cont.)

Business processes represent a new approach to coordination across the firm

IT impact is as a tool for reducing the costs of coordination.

“The new industrial engineering” (Cont.)

Awareness of IT capabilities can – and should – influence process design.

How IT capabilities affect the organisation – 1

- Transactional** – can transform unstructured processes into routinised transactions
- Geographical** – can transform information with rapidity and ease across large distances
- Automational** – can replace or reduce human labour in a process
- Analytical** – can bring complex analytical methods to bear on a process

"The new industrial engineering" (Cont.)

How IT capabilities affect the organisation – 2

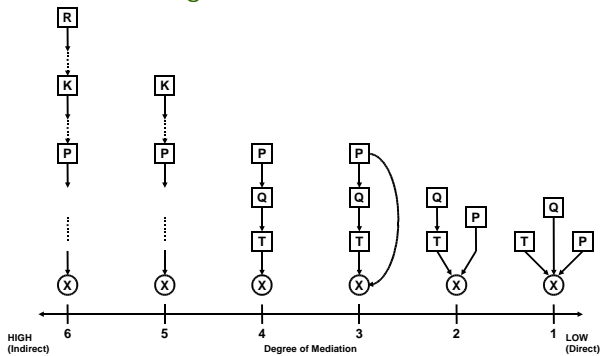
- Informational** – can bring vast amounts of detailed information into a process
- Sequential** – can enable changes in the sequence of tasks
- Knowledge Management** – allows capture and dissemination of knowledge
- Tracking** – allows detailed tracking of task status
- Disintermediation** – can be used to connect two parties within a process that would otherwise communicate through an intermediary

BPR & IT (Teng)

The way related functions participate in a process (functional coupling of a process) can be differentiated along two dimensions:

- degree of mediation - the extent of sequential flow of input and output among participating functions
- degree of collaboration - the extent of information exchange and mutual adjustment among functions when participating in the same process.

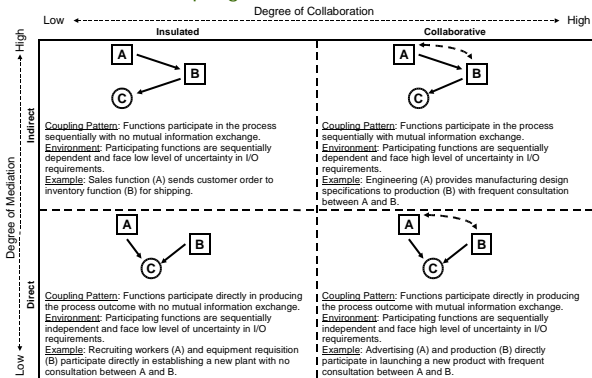
Degree of Mediation (Teng)



Degree of Collaboration

- Frequency and intensity of information exchange between two functions ranges from *none* (completely insulated) to *extensive* (highly collaborative).
- Many process can be improved by increasing the degree of collaboration.

Functional Coupling Framework of Business Processes



BPR & IT (Teng)

- IT reduces the Degree of Mediation and enhances the Degree of Collaboration.
- Innovative uses of IT leads many firms to develop new, coordination-intensive structures, enabling them to coordinate their activities in ways that were not possible before.
- Such coordination-intensive structures may raise the organization's capabilities and responsiveness, leading to potential strategic advantages.

BPR Methodology. (Davenport and Short)

five-step approach to BPR:

- **Develop the Business Vision and Process Objectives:**
 - + prioritise objectives and set stretch targets
- **Identify the Processes to be Redesigned:**
 - + Identify critical or bottleneck processes
- **Understand and Measure the Existing Processes:**
 - + Identify current problems and set baseline
- **Identify IT Levers:**
 - + Brainstorm new process approaches
- **Design and Build a Prototype of the New Process:**
 - + Implement organisational and technical aspects

What is Business Process Redesign?

- "the analysis and design of workflows and processes within and between organisations" (Davenport & Short 1990).
- "the critical analysis and radical redesign of existing business processes to achieve breakthrough improvements in performance measures." Teng et al. (1994)

What is a Business Process?

"a set of logically related tasks performed to achieve a defined business outcome."

structured, measured set of activities designed to produce a specified output for a particular customer or market.

Implies a strong emphasis on how work is done within an organisation" (Davenport).

Processes have two important characteristics:

- (i) They have customers (internal or external),
- (ii) They cross organisational boundaries, i.e., they occur across or between organisational subunits.

How Does BPR Differ from TQM?

- In recent years, increased attention to business processes is largely due to the TQM. TQM and BPR share a cross-functional orientation. (Teng)
- Quality specialists tend to focus on incremental change and gradual improvement of processes, while proponents of reengineering often seek radical redesign and drastic improvement of processes. (Davenport)

BPR vs. TQM

- *Quality management* (TQM or continuous improvement), refers to programs & initiatives that emphasise incremental improvement in work processes & outputs over an open-ended period of time.
- *Reengineering*, also known as business process redesign or process innovation, refers to discrete initiatives that are intended to achieve radically redesigned and improved work processes in a bounded time frame. (Davenport)

Process Improvement (TQM) versus Process Innovation (BPR)

From Davenport (1993, p. 11)

	<u>Improvement</u>	<u>Innovation</u>
Level of Change	Incremental	Radical
Starting Point	Existing Process	Clean Slate
Frequency of Change	One-time/Continuous	One-time
Time Required	Short	Long
Participation	Bottom-Up	Top-Down
Typical Scope	Narrow, within functions	Broad, cross-functional
Risk	Moderate	High
Primary Enabler	Statistical Control	Information Technology
Type of Change	Cultural	Cultural/Structural

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