

# Business Process Re-Engineering (BPR)

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# BPR Case Study#1

## □ Ford Motors: Reengineering the Accounts Payable Department

### Results of BPR effort

- ✓ Reduction of paper flow  
(iinvoiceless processingî)
- ✓ Up-to-date data
- ✓ Personnel reduction by 75%
- ✓ Accurate financial information

# **Ford: Reengineered Procedure Enabled by IT**

**iProcess: Accounts Payable**

**iAccounts Payable Department: 500 Personnel  
(400 after improvements, vs. 15 at Mazda)**

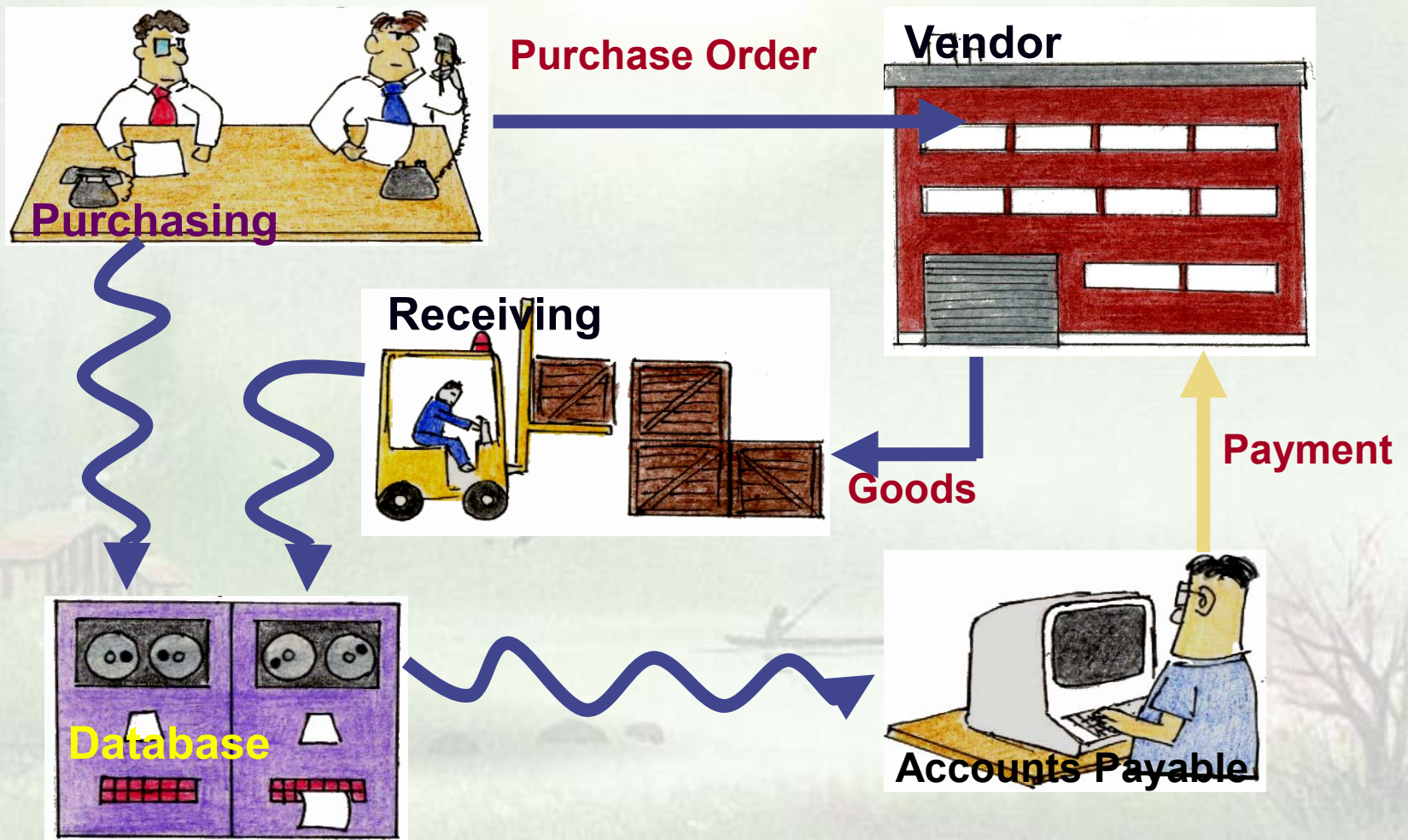
**i Enormous paperwork, non-matching data  
Purchase Order, Receiving Document, Invoice**

**BPR → Just-in-time Purchasing**

**Eliminate Non-value-adds**

**→ Handle Exceptions (5%)**

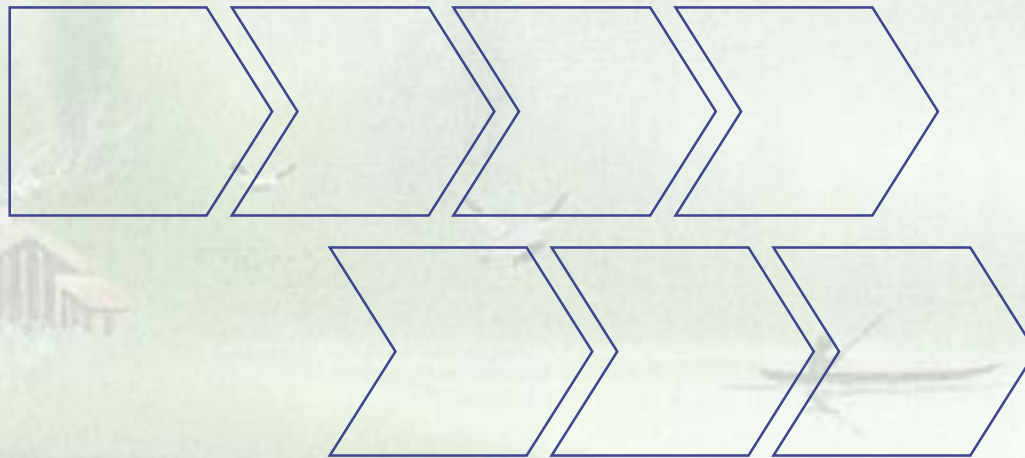
# Ford: Reengineered Procedure Enabled by IT



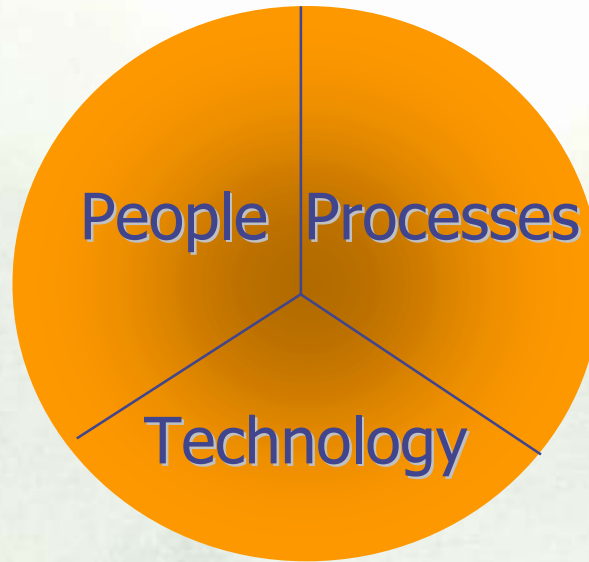
# Value Creation

**In the eyes of the Customer**

**Value Stream >> Customer**



# BPR Starts from Strategy, and then



**BPR** involves

rethinking and redesigning

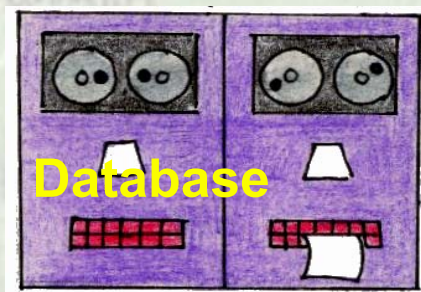
business processes to

create value to Customers.

# Ford: Reengineered Procedure Enabled by IT



Technology facilitates the processes  
People should drive the processes !



# BPR Projects fail

BPR projects fail not because the tasks are intellectually huge, but because they're engendered by an effort to **transform the company**. IT is used as the mechanism for that change and makes a convenient scapegoat if things turn ugly. When a BPR project fails, it may look like IT failed but it's almost always because **organizational change** failed.



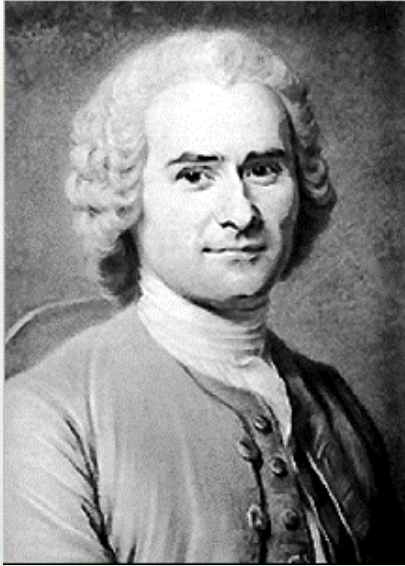
Tom DeMarco  
Author & consultancy

Source:  
<http://www.darwinmag.com/read/060101/dirty.html>



# BPR Characteristics

- ❑ Seeking of dramatic levels of improvements.
- ❑ Break-away from outdated rules and fundamental assumptions that underlie operations.
- ❑ Break-away from the constraints of organizational boundaries.
- ❑ Broad and cross-functional in scope.
- ❑ One-time change
- ❑ Information technology is the primary enabler
- ❑ BUT: Other enablers (structure, management style, facilities, measurement, compensation) need to be considered as well
- ❑ Focus is on internal and/or external customers.
- ❑ Risky



**Jean-Jacques  
Rousseau**

□ “There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success than to take the lead in the introduction of a new order of things.”

# Management: the first thing which needs Re-engineering

- i Managers are most difficult to change
- i Managers are causes of most BPR failures
- i Middle managers add little Value after BPR



**Managers as Leaders/Role Models  
Vs. Management by Walking Around**

# BPR Case Study#2

## □ Mutual Benefit Life: Processing Life Insurance Applications

### Results of BPR effort

- ✓ Reduction of time flow  
("average 4 hours in compare to 5 to 25 days")
- ✓ Customer satisfaction
- ✓ Personnel reduction by 50%
- ✓ IT based expert system

# Mutual Benefit Life: Processing Life Insurance Applications

## Function-based approach:

- Long, sequential process involving credit checking, quoting, rating, underwriting, Ö
- Work spanned 5 departments
- Involved 19 people
- Turnaround time: ranged from 5 to 25 days.

# Mutual Benefit Life: Processing Life Insurance Applications

## Process-based approach:

- Creation of 'Case Managers': Total responsibility for an application, from receipt to policy issuing
- Use of expert systems as a support technology
- When needed, assistance from a senior underwriter or physician
- Turnaround time: average 2 to 5 days (for some cases: < 4 hours)
- More enriching jobs, increased productivity and better customer service.

# What BPR Is Not

- ï **BPR** is not automation as is
- ï **BPR** is not managing complexity but reducing it
- ï **BPR** is not down-sizing; it is doing more with less means, effort and people (right-sizing?)
- ï **BPR** is not TQM (the former seeks change of the process, while the latter seeks incremental improvement using existing processes).

# Process Redesign /Total Quality Mgmt

	<u>T.Q.M.</u>	<u>B.P.R.</u>
Magnitude	Incremental	Radical
Improvement sought	30% - 50%	10X - 100X
Starting base	Existing process	Blank sheet <sup>a</sup>
Top management commitment	Relatively low	High
Role of Technology	Low	High
Risk	Low	High



# BPR new job titles

- *Manufacturing* as the procurement-to-shipment process
- *Product development* as the concept-to-prototype process
- *Sales* as the prospect-to-order process
- *Order fulfilment* as the order-to-payment process
- *Service* as the inquiry-to-resolution process

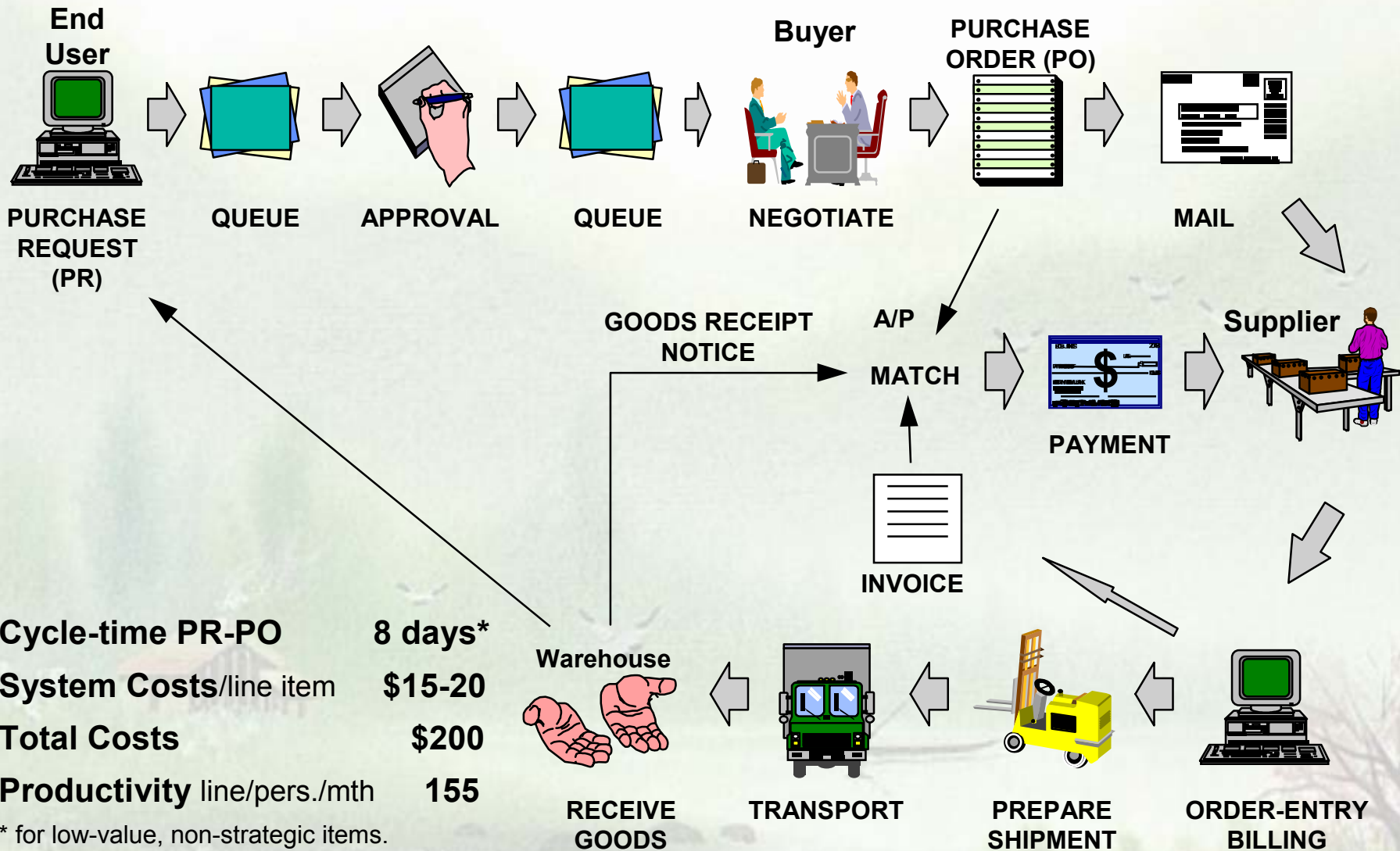
# BPR Case Study#3

## □ Texas Instruments (France): Procurement Process

### Results of BPR effort

- ✓ Cost reduction 40 times
- ✓ Productivity more than 5 times
  - ✓ Zero stock
- ✓ IT based distributed system
  - ✓ External goal !

# Traditional Procurement Process



<b>Cycle-time PR-PO</b>	<b>8 days*</b>
<b>System Costs/line item</b>	<b>\$15-20</b>
<b>Total Costs</b>	<b>\$200</b>
<b>Productivity line/pers./mth</b>	<b>155</b>

\* for low-value, non-strategic items.

Source: Adapted from Texas Instruments (France) internal documents. January, 1996.

# B-2-B: Electronic Procurement Process



**End User**  
PURCHASE ORDER (PO)



GOODS RECEIPT NOTICE

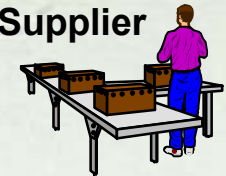
A/P

MATCH



PAYMENT

Supplier

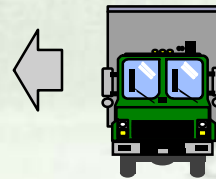


INVOICE



Warehouse

RECEIVE GOODS



TRANSPORT



PREPARE SHIPMENT



ORDER-ENTRY BILLING

<b>Cycle-time PR-PO</b>	<b>0*</b>
<b>System Costs /line item</b>	<b>\$1-2</b>
<b>Total Costs</b>	<b>\$5</b>
<b>Productivity line/pers./mth</b>	<b>800</b>

\* for low-value, non-strategic items.

# Strategic Gains

- Improve efficiency (internal goal)
- Enhance effectiveness (internal goal)
- Gain/sustain competitive advantage (external goal).

# Primary Concepts in BPR

- Think out of the box, innovate the new processes enabled by IT
- Starting point for organizational design and change: Clean sheet of paper
- An orientation to broad, cross-functional business processes, or how work is done
- Radical change in process performance,
- I.T. as an enabler for change in how work is done,
- Changes in organizational and human arrangements that accompany change in technology,
- Change activation program is the key to success

# Another BPR Examples

## ❑ Wal-Mart Case (Continuous supply)

### ❑ Results of BPR:

- ❑ Merchandise always in stock
- ❑ Suppliers are responsible for the management of their own displays
- ❑ Elimination of distribution intermediate
- ❑ Costs reduction
- ❑ Better customer service