

BPR - Business Process Reengineering

Design

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BPR - Design

4. Map the ideal process

Map the ideal process

- To map your ideal process, you must:
 - Complete preliminary work
 - Set new goals and establish new measures
 - Create a new process flow chart

Complete preliminary work

- You've identified process performance gaps in the previous step
- Before you sit down to draw an actual map of the new process, you and your team must decide how you can close those gaps
- Maybe you've already decided upon a design that will achieve breakthrough opportunities
- More than likely, however, you still have to consider the following suggestions:

Suggestions

- Can we make the process simpler?
 - Is our language or are our explanations too complex?
 - Can we make them simpler?
 - How about paperwork?
 - Is there a way to simplify forms, reports, even memos?

Suggestions

- Are we asking for unneeded reports or data?
 - Are there any parts of the process that can be eliminated?

- Can technology help?
 - What tools or equipment can improve the process?
 - How they improve it?

Suggestions

- Is new computer hardware or software necessary for our reengineering effort?
 - Will we need to provide training for any new equipment?
 - Do we need training to use already existing equipment?
- Can we reduce time and/or cost?
 - Where are the delays in our current process?
 - Are steps designed in the correct order?
 - Where are we getting the least amount of return?

Process Design Alternatives Worksheet

- These considerations, although general, apply to most organizations looking to improve processes
- Don't attempt to reengineer a process unless you realize the existence of your current process's deficiencies
- You can use the following Process Design Alternatives
 Worksheet to help your team think through your process
- Also encourage your team members to share their ideas and conclusions with employees involved

Goals and measures

- Set goals and establish measures worthy of your reengineering effort but also be realistic
- Your best bet is to set goals and establish measures that at least meet customer requirements: from there try to meet what competitors provide

New process flow chart

- Reengineering involve more than pinning up your old flow chart and tearing off chunks of it
- Reengineering a process mean that you are doing something new, not just reducing the old
- The new process flow chart need also be checked by the experience of employees working directly with the process after you've finished flow charting it

Eliminate uncertainties

- Next three steps:
 - Solicit input
 - Design
 - Verify
- ...you will encompass more possibilities and eliminate more uncertainties in your new process flow chart
- Mapping the ideal process is the best approach, next you will work on redefining your process support requirements

Reengineering approach

- Old approach (too expensive in term of money and time):
 - 1. Deep analysis
 - 2. Faultless execution
- New approach (more effective and cheaper):
 - 1. Quick planning
 - 2. Experimentation and analysis
 - 3. Feedback to modify & re-design

To be creative

"BPR is a creative activity where analysis, innovation, experimentation and learning are following each other indissolubly"

Re-engineering pattern

- It's a no-structured activity where are important following milestones:
 - a. Removal of "no-value" operations
 - b. Information flow optimisation
 - c. Focus on parallel/overlapped activities
 - d. Differentiation of Standard vs. Complex activities
 - e. Differentiation of Core vs. Staff activity
 - f. Change controlling system
 - g. Advanced technology oriented approach

Re-engineering pattern

- h. Check information technology support system
- i. Create process units
- j. Focus on customer needs
- k. Introduce overall skills
- I. Define process owner/manager profiles
- m. Introduce proxy system
- n. Define dedicate and skilled staff
- o. Re-organize supply chain
- p. Define unit batch
- q. "Pull" planning systems
- r. Introduce evaluation and remuneration system
- s. Establish recruitment and career systems

a. "no-value" or "trash" operations removal

All no-value operations must be deleted

• Ex.:

- Useless report
- Duplicated authorization connected to hierarchical organization
- Downstream corrections of upstream mistakes

b. information flow optimisation

 Complex flows of documents or paper must be identified and deleted

• Ex.:

- Documents or information outward-return
- Hierarchical controls paper

c. focus on parallel activities

- Cycle time reduction can be achieved starting downstream operation before ending upstream
- More sequence of operations, after analysis, could be developed in parallel
- Parallel execution (when possible) mean time (and cost) saving

c. focus on overlapped activities

- Overlapping it's more difficult than parallel approach
- It's necessary to analyse deeply any process aspect before to decide about possible overlapping
- Overlapping process mean information exchange between functions and activities
- Ex.
 - New product development process: it's necessary to define specific interfaces between products and process engineering functions

d. standard vs. complex activities differentiation

- Standard vs. complex activities differentiation mean:
 - HR costs saving
 - Wage differentiation (line employee-expert)
 - Skills and know-how better focused
 - High people motivation
 - Automate standard activities
 - Process time reduction (ex. credit allowance)
 - Possibility to work in parallel (ex. order data entry)

e. core vs. staff activities differentiation

- Core vs. staff activities differentiation mean:
 - Concentration of forces on core activities improvements (value operations)
 - Different evaluation for staff activities (no-value operations):
 - Outsourcing of no-value operations
 - Parallel carrying out (ex. Orders in charge to production planning - supplier/agreement portfolio in charge to purchasing dept.)
 - Possible synergies with other divisions (ex. accounting, HR, IT, ...)

f. control system change

- Managerial control must be erased when it expand standard lead time
- Whole organization must focus on value delivery
- It's better to concentrate efforts on punctual activities check and control
 - ex. Purchasing vs. Accounting invoices control activity

g. advanced technology oriented approach

- Use of specific know-how to carry out process
- Main issues:
 - Conflicting partnership between different functions
 - Language discrepancies
 - Lack of understanding
 - Managers interaction (defensive approach)
 - **.....**
- Ex.
 - QFD: Quality Function Deployment to integrate new product development process between different functions (R&D, Manufacturing, Marketing, Purchasing, Quality, ...)

h. IT support system

 IT systems are the preferential way to support BPR for more reasons, if fact they are:

- Process oriented by definition
- Promoters of new communication channels
- By-pass solutions for hierarchical obstacles
- Easy to use to develop automatic solutions
- Very flexible and change drivers

i. process unit creation

- Introduction of process units instead of functional organisation
- Specific process units can be organized in term of people, activities, skills, know-how, machinery,.....
- Each unit must be self governing to carry out the process autonomously

i. process unit creation

- Customer and process oriented people with different cultures
- Relationship inside the unit must be self-managed by members
- Unit manager will take a role of "coach" of 20-30 people per unit
- Ex.
 - Volvo: 740-760 mod. manufacturing zone

j. focus on customer needs

- The challenge is to avoid delay or misunderstanding in customer service
- Ideally everybody in the company should attend every customer
- Xerox introduced a specific program named ICS (Integrated Customer Service) system:
 - Information technology support
 - Training systems

h. overall skills

- Introduction of team members enable to carry on every activity in a process
- Case manager as a skilled team leader
- Many advantages:
 - Pack of activities
 - Flexibility
 - Sickness
 - **.....**

I. process owner & process manager

- The process owner has the following characteristics:
 - Process team co-ordination (coach)
 - Responsible for project effectiveness and efficiency (problem solver, trainer, ...)
 - No hierarchical authority on team members
 - He's appointed process manager only in case will be create a process units systems

I. process owner & process manager

- the "boss" profile is changing into a "leader" perspective:
 - from "order" ⇒ to "explain targets"
 - from "control peers" ⇒ to "control process"
 - from "judge the best" ⇒ to "discuss opportunities"
 - from "distribute benefits" ⇒ to "manage resources"
 - from "decide everything" ⇒ to "persuade about solutions"
 - from "defend unit from outside" ⇒ to "solve problems of interface with other company entities"

m. proxy system

- "delegate lower levels" mean "make easier and more flexible the whole process"
- Different assignments:
 - Targets, strategy ⇒ manager
 - Unit organization ⇒ operative level
- Operative performance index can be delegate directly to each unit (Build-in feedback), taking on management only global process performance indicators

n. skilled staff definition

- Process re-engineering normally re-design and reduce staff activities
- Line employees are charged of all operational activities
- Staff employees:
 - Support and update line
 - Take in charge complex cases
 - Develop strategic activities (ex. 3M case purchasing dept.)

o. supply chain re-design

- During process re-design the choice "Make or buy" is one of most critical decision
- 3 evaluation criteria
 - 1. Skills: who is making best this activity today?
 - 2. Best cost/price: who could make this activity more efficiently than us?
 - 3. Strategic context:
 - 1. Which would be the consequences of this choice for my core business?
 - 2. Which new extra-value for our customers after this supply chain re-design? (Wal Mart P&G case)

p. unit batch

- This approach suggest to proceed with a new step if at least 1 unit of the "output" is completed
- This change can reduce lead time

q. pull planning systems

- To improve planning efficiency could be introduced a pull system (ex. Kanban) in place of traditional push system (ex. MRP)
 - Kanban model use identification cards from empty containers to full up them again
 - Last step "pull" previous steps reducing stocks of WIP

r. evaluation systems

- Middle management is normally adverse to BPR solution because of de-bureaucratization approach
- It's necessary to change evaluation and remuneration system that must be:
 - 1. Process (not individual) performances oriented
 - 2. Focused on shared (not individual) responsibilities
 - 3. End-of-process (not step by step) performances considering

s. recruitment and career systems

- New recruitment approach: must be selected people that:
 - Accept responsibilities in changeable environment
 - Think about overall process perspective
 - Take in charge decisions and risks
 - Are outputs and targets oriented
 - Work for customers and outputs, not for their boss
 - Share success and benefits with the rest of their team
- To have a successful career mean to increase skills and experiences in horizontal context

Re-engineering environment

- Comfortable meeting room to hang all documents needed on the walls
- Clear and huge process flow-chart always consultable
- Clear and huge new process flow-chart proposal where would be possible easily add suggestions, changes, comments, ideas,

Capital investments request

- It's necessary to evaluate as soon as possible an investments evaluation:
 - People training
 - New IT support systems
 - New technologies, devices,...
- It's a difficult undertaking to evaluate true benefits but it's possible to assess them approximately and to compare to real investments

The simplicity way

- The challenge: improving coordination inside company organization
- Two philosophy:
 - Classical: co-ordination instruments improvement (Matrix organization, staff activity,)
 - New: process organization simplifying

Organization re-design

- From "pyramidal-functional" model to "horizontalfederal" model where:
 - Each unit (max 4-5 corresponding to critical processes)
 is independent and making final output
 - Middle management will disappear
 - A general manager will coordinate structure with small staff
 - Information and communication systems are lean and horizontal

Design

5. Redefine process support requirements

Questions

- You have mapped your new process by creating a flow chart that identifies the steps in your process
- Now you have to decide what your new process require to support it
 - Will you need to redesign jobs?
 - Do you need new computer system?
 - What will it take for your reengineered process to operate as designed?

Areas

- You'll be looking at three different areas of support when you redesign a process:
 - People
 - Technology, support tools
 - Finance

People

- Process reengineering includes a human element. If your process is completed by people, they will be impacted by the reengineering
- Part of designing a reengineered process involves discovering how it changes the work people do
- You might want to fill out a Role Transition Worksheet for each position that will change when your reengineered process takes effect
- You'll list the present and future job responsibilities. That will give you a handle on new job requirements

ROLE-TRANSITION WORKSHEET

ROLE-TRANSITION WORKSHEET				
Position Title:		FUTURE TITLE:		
Present Responsibilities		FUTURE RESPONSIBILITIES		
Key Functions	Key Responsibilities	Additions (*) Deletions (-)	Targeted Results	

Technology

- The potential of today's technologies for controlling work, communicating and accessing information by employees, customers and suppliers is very high
- If you have identified a technological tool that will support your process, implement it into your design
- Benchmarking can be especially helpful here checking which technology is used by the competitors

Other supports

- Technology is often an essential ingredient of process reengineering but it takes more support to create a recipe for success
- Other categories of support tools such as office furniture, new forms, additional telephones, electric panels, signs, etc.., may not appear essential but in reality are definitively necessary
- Look at the flow chart of the new process and list what is necessary to implement: if you need more people you need office space too
- Talk to the employees who will be affected by the reengineered process: if they realize that you are open to their concerns and opinions, your implementation will go much smoother

Finance

- Wouldn't it be great if you could go ahead with your reengineering plan without having consider its cost?
- You want your reengineering effort to have a positive impact on your organization
- You don't want to achieve market improvement if it will ruin your organization financially
- You will have to conduct a cost/benefit analysis of your reengineering project to determine whether it's advisable to move forward

Cost/Benefit analysis

- Can be described as a complete, realistic comparison of costs and resulting benefits associated with implementing a decision
- If you're contemplating whether to recommend continuing with the reengineering effort, you're probably weighing a number of cost/benefit considerations:

Considerations

- What are the current and desired states and their corresponding measures?
- What are the realistic costs related to reengineering?
- What tangible and intangible benefits will result from the reengineering effort, both long and short term?
- Which benefits are most important to customers?
- How will we ultimately balance the cost and benefit factors to make a decision?

Cost/Benefit worksheet

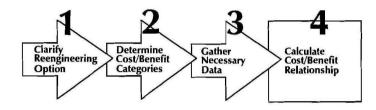
 Determine cost/benefit categories for your organization then gather the data for each (guesstimating when necessary) and calculate cost/benefit relationship

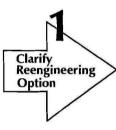
 If the benefits appropriately outweigh the cost, you have the green light to begin developing your change management plan

COST/BENEFIT MODEL

The Cost/Benefit Model consists of the following four steps:

- 1. Clarify Reengineering Option
- 2. Determine Cost/Benefit Categories
- Gather Necessary Data
- 4. Calculate Cost/Benefit Relationship





- Describe the proposed option
- Verify the option's link to specific organization-wide goals/Key Result Areas
- Summarize predicted/expected process performance gains
- Determine whether cost/benefit analysis is really worth doing (Is an option already a given?, Is it too expensive to do cost/benefit analysis for this option?, Is it a politically influenced situation, for which cost/benefit analysis is just an exercise?, etc.)
- Build (and get sign-off if necessary) a cost/benefit analysis project plan (objectives, roles, deliverables, dates, etc.)



- Locate similar, valid efforts to identify categories and line items; can lean on company archives, finance people, professional associations, other companies, resources such as libraries and on-line services
- Partner with knowledgeable people (finance, subjectmatter experts, workers close to the option, customers) to brainstorm cost/benefit categories and line items; make it a team effort to ensure creative and comprehensive brainstorming and refining
- Refine categories and line items to final list; input on "Cost/Benefit Calculation Worksheet"

COST/BENEFIT MODEL

(continued)



- Use appropriate data gathering methods
- Document assumptions completely and accurately
- "Guesstimate" when necessary
- Project results as realistically as possible
- Calculate relational benefits where appropriate

Calculate Cost/Benefit Relationship

- Project cost/benefit over appropriate time periods (1 year, 2 years, etc.)
- Consider contingencies
- When possible, develop three possible scenarios of cost/benefit analysis: Best, Probable, Worst
- Make sure as many possible "what if's" are considered and accounted for during analysis
- Avoid slanting, hiding, or inappropriately overemphasizing data
- List appropriate conclusion(s)/recommendation(s)

COST/BENEFIT CALCULATION WORKSHEET

Scenario: [□ Best ☑	Probable	□ Worst	
All figures are: Annual	☐ Monthly	□ Other		

Costs	BENEFITS	
Category/ Process Factor Amount Total	Category/ Process Factor Amount Total	
Labor Category	Labor Category	
Equipment/Materials Category	Equipment/Materials Category	
Other Categories	Other Categories	
Totals Ongoing:	Totals Ongoing:	
One-time: Total:	One-time: Total:	

COST/BENEFIT CALCULATION WORKSHEET (continued)

Year 1 Year 2+ **Comparison Of Costs And** (One-time + **Benefits** Ongoing) (Ongoing) Total Benefits= Total Costs = Difference (Benefits - Costs) = (If the difference is positive, the option being considered may be a viable one; however, the magnitude of the difference should be examined. See the section below.) Magnitude Of Difference ROI = Return On Investment $ROI = \frac{return - investment}{100} \times 100 =$ Where: return=benefits - ongoing costs investment=one-time costs By End Of Year 1 By End Of Year 2 X 100 X 100 ROI = return - investment X 100= _X 100 Conclusion(s)/Recommendation(s)

Design

6. Develop change management plan

Consider organizational impact

- You need to analyze the impact of your reengineered process
- Too many companies neglect this important step because they feel analysis is a waste of time but in fact isn't
- Analyzing the impact is critical if you desire your new process to radically change the way your organization operates

Considerations

- Who and what will be impacted, and how?
- What emotional factors need to be incorporated into the change management plan?
- How will the plan be monitored?
- Have all those who will be affected by the reengineered process been consulted about potential impact?
- Will the plan be designed to foster involvement and commitment to the recommended changes?

Who and what will be impacted, and how?

- Your team has already identified the tasks and organizational factors that will be affected by your reengineered process
- You have already soliciting information from your employees
- Now you need to take a closer look at the specific impact

Who and what will be impacted, and how?

- Write new job descriptions for those whose job will change
- Draw out the new organizational structure and write a new mission statement or list your organization's new values
- List all employees whose work processes, work style, attitudes will have to change
- Decide how the employees will be impacted by the changes

What emotional factors need to be incorporated into the plan?

 Emotions will run high when a change is in progress and may become uncontrollable

 The team will have to incorporate into the plan some way to manage emotions

• Consider ways to manage resistance, anger, anxiety, enthusiasm, excitement

How will the plan be monitored?

- For your reengineering effort to reach its goal of unprecedented improvement you will have to monitor it effectively
- Considerations include:
 - Who will direct your change management plan?
 - Who should be involved in identifying and resolving key issues?
 - What kind of tracking system will you use
 - What methods will you use to incorporate additional points into your plan?

Who affected by the process has been consulted about impact?

- This issue needs to be dealt with continually
- At every step in each phase you need to consult those who will be impacted by the reengineered process
- Even after the changes are implemented, this issue will still be important
- You may discovered that the effort will affect many more employees than you originally thought: get them involved in the effort, ask for their input and see to it that you use it to your advantage

Will the change management plan foster involvement?

- If your organization's employees are committed to the reengineering effort, your ability to make a radical change is enhanced
- Help all those affected by the change to keep the greater goal foremost in their minds
- You should have already been communicating your intent and in particular:

Why the process being reengineered?

- Let them know the driving force behind your effort: customer needs, competitive advantage, etc...
- If your organization would fold without this last-ditch attempt, say so
- Knowing their jobs would be in jeopardy without this move can be a great incentive to support it

What are the benefits?

- Will customers flock to your organization?
- Maybe they will be given more decision-making opportunities, as the layers of the organization are stripped away
- They may learn new skills, which will increase their opportunities
- It could even be that the whole atmosphere or environment will be more conductive to their input

Are there any employees that need to be addressed

- Think about what fears they may harbour
- Do they feel they will have to work much harder?
- Are they afraid they will lose their jobs?
- Maybe they are afraid some of their power will be taken away
- Answer each concern as honestly as possible
- Don't minimize risks but do focus on the benefits

Design your change management plan

- Do so by:
 - Identifying change management plan requirements
 - Choosing a planning process and format
 - Deciding how to move the Action Plan forward

Identifying change management plan requirements

- You need to decide what you will need to get you from the old process to the new one
- What will it take?
 - Time hiring temporaries?
 - Money?
 - Acting managers or consultants?
 - New roles?

Choosing a planning process and format

- Listing the requirements is not enough
- Your team will need to devise an Action Plan that is both detailed and specific
- Make sure it includes all major activities and then details specific responsibilities and timetables
- To best ensure a flawless execution you should consider also:
 - Communication systems
 - Feedback
 - Contingency plans

Deciding how to move the Action Plan forward

- If you have planned sufficiently your people are aware of the effort and are willing participants
- Decide how you'll kick-off the effort
- Keep employees excited about the changes
- Make sure that:
 - Proper attention is given to roles, responsibilities, structures and resources
 - Change effort is made a top priority
 - Needed resource people are freed up from their normal responsibilities
 - Implementation timetable is realistic

Suggestions

- List all people and areas that will be impacted by your process reengineering effort and explain how
- Check the emotions you expect from employees during implementation of the new process (excitement, enthusiasm, disbelief, anger, resistance, anxiety, other.....)
- Describe how you will monitor your change management plans

Suggestions

- How will you gain involvement and commitment to your reengineered process?
- Complete a detailed action plan for at least one change in your process reengineering effort. Be sure to include tasks, persons, responsibilities, timetables, estimated hours, estimated costs
- Use specific forms to develop your project

PROCESS TASKS WORKSHEET

TASK #	MAJOR PROCESS TASKS	SUBTASKS/DECISIONS	SYMBOL
		·	
1			
	<u>- </u>		

TASK/ RESPONSIBILITY MATRIX

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ACTION PLAN

ACTION PLAN								
ACTION STEP/ TASK	RESPONSIBLE PERSON/TEAM	BEGIN DATE	END DATE	Est. Hours	Est. Cost			
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			1					

Actors

- Steering committee
- Process owner
- Business process manager
- Re-engineering team (core team)
- Outsiders

Steering committee

Top management + process owner

Tasks:

- Responsible for project co-ordination
- Critical process definition
- Process mapping evaluation
- Targets identification
- Process owner appointment
- Resources allocation

Steering committee

Other Tasks:

- New process approval
- Controversy settlement
- Project support
- Cross-functional communication

Process owner

- Reengineering team co-ordinator
- Project leader
- Profile:
 - Functional manager involved in BPR
 - Skilled on company activities
 - High motivated on project results
 - Flexible and performed "Coach"

Business process manager

- External consultant
- Skilled on methodological aspects
- Responsible for:
 - Steps definition
 - Process mapping method
 - Team constitution
 - Implementation monitoring

Re-engineering (core) team

- Managers representatives from company functions involved in the project + HR manager + IT manager + other partners representatives
- Tot. max 4-5 elements to keep efficiency and effectiveness
- Possible "flexible" solutions to evaluate

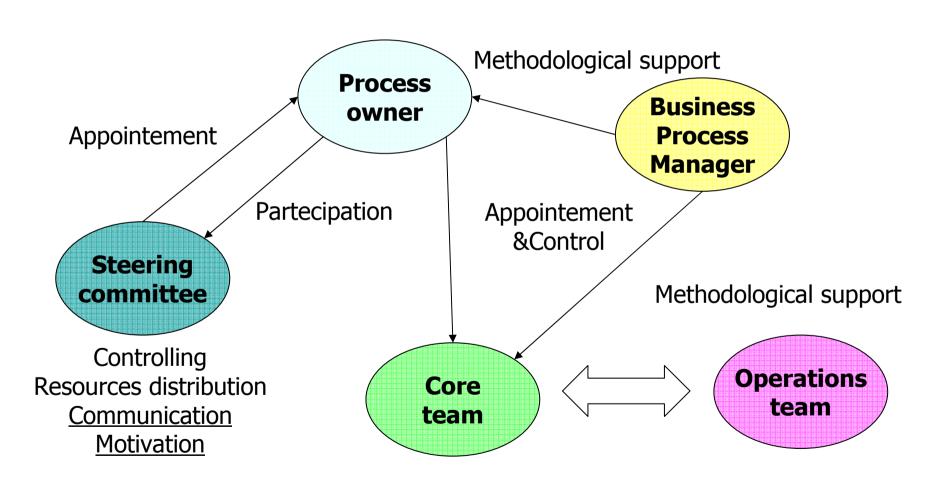
Re-engineering team

- Team members characteristics:
 - Helicopter view
 - Operational skills
 - Authority
 - Creativity
 - Flexibility
 - High motivation
 - Full time involvement

Re-engineering team

- Clear targets and responsibility circle must be declared
- Customer oriented mindset
- Recurring meeting between re-engineering team and steering team to decide investments and modify strategy

Organization model



Outsiders

- Skilled people could "block" the re-engineering process
- "Outsiders" are necessary to introduce new concepts
- External consultants could help the process
- Right solution doesn't exist; functional solution must be shared

Communication

- Transparent communication inside organization is a key success factor on BPR project
- Many communication channels:
 - CEO individual letter or e-mail
 - Meeting to update about process
 - Billboard communications
 -**.**

Training program

- Re-engineering team:
 - Modelling instruments
 - Simulation software
 - Experimentation technique
 - Performance monitoring know how
- Process owner:
 - Coaching skills

Training program

- Business process manager:
 - BPR management
 - Core process definition techniques
 - Process mapping systems
- Training "on the job" and when "it's necessary"

Mindset changes

- Why "change is necessary?"
- Change can be made only if people understand "why"
- Often this mean to give up privilege or power
- Slogan:

"You don't say to people it's necessary to change; you must change before"

Top management training

- Top management must trained about BPR milestones.
- Different workshops:
 - BPR: strength/weakness
 - Top management involvement
 - Effective strategy for:
 - Change opposition
 - Commitment showing