

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

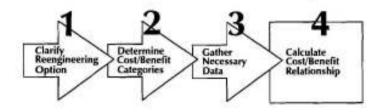
 Determine cost/benefit categories for your organization then gather the data for each (guesstimating when necessary) and calculate cost/benefit relationship

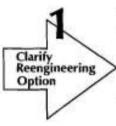
 If the benefits appropriately outweigh the cost, you have the green light to begin developing your change management plan

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	V	Probable	Worst	
All figures are	e: 🗹 Annual	C] Monthl	y	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: One-time: Total:	Totals Ongoing: One-time: Total:			

COST/BENEFIT CALCULATION WORKSHEET (continued)

Comparison Of Costs And Benefits	Year 1 (One-time + Ongoing)	Year 2+ (Ongoing)
Total Benefits=		
Total Costs =		
Difference (Benefits - Costs) =		
(If the difference is positive, the option being combe ex	sidered may be a viable one; however, th amined. See the section below.)	he magnitude of the difference should
Magnitude Of Difference		
ROI = Return On Investment		
ROI = return - investment X 100 =		By End Of Year 2
	X 100	X 100
ROI = return - investment × 100=	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
			_
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TASK/ RESPONSIBILITY MATRIX

	,			RESPONSIBILITY MATRIX RESPONSIBILITY						
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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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				-					
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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

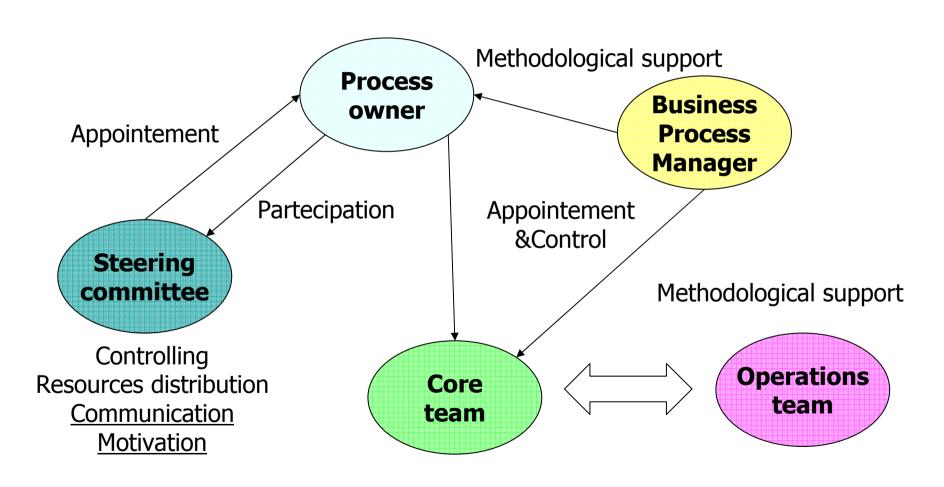
Re-engineering team

- 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