CHAPTER 2.0
BUSINESS PROCESS RE-ENGINEERING

2.1 BUSINESS PROCESS

A business process is a collection of activities that takes one or more kinds of inputs and creates an output that is of value to the customers. It is not products, but the processes that create the products that bring companies long-term success. Hallmark of a truly successful Company is a willingness to abandon what has long been successful.

Reengineering business processes is not a substitute for strategic direction. For example, reengineering will not help to perfect a flawed process. But when an organization has a clear strategic direction with a focus on core competencies, reengineering will help it better to achieve its goals by creatively strengthening and combining customer opportunities. An organization must have a built-in ability to make rapid changes in response to internal and external environments.

2.2 RE-ENGINEERING

Definition: Hammer & Champy (103) Reengineering is the fundamentals rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance such as cost quality, service and speed.

Today industries have functionally oriented departments’ e.g. Purchasing, production, marketing, finance, etc. whereas the processes taking place involves more than one department to produce the desired result to the customer. Successfully bringing together people from various departments (functions) who are responsible for the process of customer satisfaction is called reengineering. This brings back the spirit of ownership to employees and thereby makes them answerable to any process of satisfying customer’s demands.

The managers and engineers need to disregard all existing structures and procedures and invent completely new ways in completing the work. Reengineering is about business re-invention. Aim at quantum leaps and not go for incremental improvements. It is a logical organization of people, materials, energy, equipment and procedures into work activities designed to produce.
FUNDAMENTAL: Reengineering determines what a company must do than how to do it.

RADICAL: It means getting to the root of things and not making superficial changes. The end users have to disregard all existing structures and procedures and invent completely new ways in completing the work. Reengineering is about business re-invention.

DRAMATIC: Aim at quantum leaps and not go for incremental improvements.

PROCESS: It is a collection of activities that takes one or more kinds of inputs and creates an output that is of value to the customer. In other words, it is a logical organization of people, materials, energy, equipment and procedures into work activities designed to produce specified end result.

A set of processes forms a business system. Processes have customers who are the recipients of the outcome. Some examples of processes are new product development, creating a marketing plan, material acquisition, etc. Process may consist of one or more process teams. A team is a group of people from marketing, R&D, production, QA and other disciplines as relevant to the process. Having identified the team members, a responsible person is nominated as the process owner, who is answerable to the customer (both internal and external) at any stage.

2.3 NEED OF REENGINEERING

Need to reengineer for the following reasons:

a) To reduce cost of product / service.
b) To improve quality.
c) To ensure quicker results and speedy delivery.
d) To cater to the ever expanding customer's needs
e) To achieve dramatic output in performance, thus increasing profitability.
f) To remain a market leader for rapid growth besides becoming a global player.
g) To ensure optimal utilisation of information technology.

2.4 SITUATIONS TO RE-ENGINEER

There are three situations when companies undertake reengineer.
Situation 1 (Survival): Company is not faring well and is suffering losses that find themselves in deep trouble. They have several hurdles before them, which need to be overcome before they can stabilize their position for survival.

Situation 2 (Catching up): In this situation, there may be no hurdles before them but the management has the foresight to see trouble coming. The company may be doing reasonably well but there is enough scope to improve further and catch up with the market and become global players.

Situation 3 (Increasing the Lead): Third type of the company may be the market leader but there may be keen competitors trying to catch up or even overtake. Hence the management is ambitious and aggressive since there would be a need to further increase the gap between the company and the close competitors to maintain their position in the market.

In brief, companies in the first category are desperate and lie hurt, second are cruising at high speed but see hurdles before them and the third one are to stop and build a wall for others.

2.5 STAGES OF REENGINEERING

Phase 1 – Preparation.
1. Key members of senior management from the steering Committee.
2. Steering Committee evolves the business process map that defines the business of the company as a series of increasing Business processes rather than as departments, functions or an organization structure.
3. The key focus in the Business process map is the customer.
4. Steering Committee uses a series of techniques to shortlist the business process (es) which should be reengineered.
5. Redesign teams, which are cross-functional, are formed for each of the business processes to be reengineered.

Phase II – Diagnosis.
6. Each redesign team uses some techniques to analyze the shortcomings of the present process.
7. These shortcomings would be formally recorded and would provide the insight for redesigning the current process.
Phase III – Process Redesign

8. The Redesign team would start from scratch and devise new, innovative ways to perform the processes to be redesigned.

9. While using some powerful redesign techniques, the team would also consider all aspects of information technology to execute the process.

10. After redesigning the process, the team would also evolve the new organization structure and the performance – based reward schemes for the new process members.

11. The Redesign team would also evolve measures of performance (MOP) to continuously measure the performance of the process.

Phase IV – Implementation

12. The new process is tested and proved in a “controlled laboratory”.

13. Information Technology elements for the new process are developed.

14. The process is deployed.

15. The entire efforts are repeated for the other business processes.

Table 2.1 Differences between traditional & re-engineered organisations

<table>
<thead>
<tr>
<th>TRADITIONAL</th>
<th>RE-ENGINEERED</th>
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<tbody>
<tr>
<td>Fragmented work</td>
<td>Whole job</td>
</tr>
<tr>
<td>Little customer contact</td>
<td>Extensive customer contact</td>
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<tr>
<td>Control is centralized</td>
<td>People are empowered and control is decentralized</td>
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<tr>
<td>Multi management layers with vertical structure.</td>
<td>Minimum supervision with flat horizontal structure</td>
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<tr>
<td>People organized in function based</td>
<td>People organized in process based</td>
</tr>
<tr>
<td>Organizational boundaries set. (e-g) Division / Department.</td>
<td>Boundaries are broken and set across functions.</td>
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<tr>
<td>Decision making from top of bottom</td>
<td>Fundamental decision making at lowest level, from bottom to top.</td>
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2.6 TEAM

Companies select and organize the people who actually do the reengineering is the key to the success of the endeavor. Insiders are those people who have been around long enough to know the ropes but no long as to think the old process make sense. The following roles emerge, either distinctly or in various combinations, during re-engineering process.

**LEADER** – a senior executive who authorizes and motivates the overall reengineering effort.

**PROCESS OWNER** – a manager with responsibility for a specific process and the reengineering effort focused on it.

**TEAM** – a group of individuals dedicated to the reengineering of a particular process, who diagnose the existing process and oversee its redesign and implementation.

**STEERING COMMITTEE** – a policy-making body of senior managers who develop the organization’s overall reengineering strategy and monitor its progress.

**CZAR** – an individual responsible for developing reengineering techniques and tools within the company and for achieving synergy across the company’s separate reengineering projects.

2.6.1 LEADER

He or she is a senior executive with enough clout to cause an organizational change and to persuade people to accept the radical disruptions that reengineering brings. An organization can even come up with new process design concepts; but without a leader, no reengineering will actually happen. It is the leader who appoints senior managers as processes owners and charges them with achieving breakthroughs in performance. The leader creates the *new vision* and sets the new standard and, through the owners, induces others to translate that vision into reality. Leaders must also create an environment conducive to reengineering. Urging people on isn’t enough. The leader must make clear to everyone that reengineering involves a serious effort that will be seen through to its end. From the leader’s convictions and enthusiasm, the organization derives the energy that it needs to embark on a voyage into the unknown.
2.6.2 PROCESS OWNER

The process owner, a senior level manager usually with line responsibility is responsible for reengineering a specific process. If the leader's job is to make reengineering happen in the large, then the process owner's job is to make it happen at the individual process level. After identifying the processes, the leader designates the owners who will guide those processes through reengineering. Process owners must be people who are comfortable with change, tolerant of ambiguity, and serene in adversity. The owner must assemble a reengineering team and do whatever is required to enable the team to do its job. He or she obtains the resources that the team required, runs interference with the bureaucracy, and works to gain the cooperation of other managers whose functional groups are involved in the process.

Process owners also motivate, inspire, and advise their teams. They act as the team's critic, spokesperson, monitor, and liaison. When reengineering team members start to produce ideas that make coworkers in the organization unhappy, process owners shield them from the criticism.

2.6.3 CORE MEMBERS - INNER RING

The actual work of reengineering - is the job of the reengineering team members. These are the people who must produce the ideas and plans and who are often then asked to turn them into realities. These are the people who actually reinvent the business. No team can reengineer more than one process at a time, which means that a company reengineering more than one process will have more than one reengineering teams at work. Reengineering involves invention and discovery, creativity and synthesis. A reengineering team must feel comfortable with ambiguity. Team members must expect to make mistake and to learn from them. People not capable of working this way do not belong to the team.

2.6.3.1 INSIDERS

Insiders are those people who have been around long enough to know the ropes but not so long as to think the old process make sense. In general, the insiders assigned to a reengineering team should be the best and the brightest, the company's rising stars.
Insiders by themselves, however, are incapable of reengineering a process. Next to their knowledge, the most important asset that insiders bring to their reengineering work is their credibility with coworkers. When they say that a new process will work, the people in the organizations from which they’ve come will believe them.

2.6.3.2 OUTSIDERS

Outsiders are outside the process, and often, especially in companies that have not reengineered at least once before, they may be from outside the company. Outsiders need to be good listeners and good communicators. They must be big-picture thinkers and quick studies, since they will have to learn a lot in a hurry about each process on which they will work. They need to be imaginative thinkers, capable of envisioning a concept and making it happen.

2.6.4 CORE MEMBERS – OUTER RING

So far we have discussed what we call the core reengineering team, the group with direct responsibility for the reengineering effort. This core is usually supplemented with an outer ring of part-time and occasional contributors, who make more narrow and specialized contributions to the effort. Process customers and suppliers are often represented on the outer core to make sure that their perspectives and concerns are heard in a direct, unfiltered way. Specialists with expertise in particular disciplines – such as information technology, human resources or public relations – are often also included in the outer core.

2.6.5 STEERING COMMITTEE

The reengineering steering committee is an optional aspect of the reengineering governance structure. Some companies swear by it, and others live without it. The steering committee is a collection of senior managers, usually including but not limited to the process owners, who plan the organization’s overall reengineering strategy. The leader should chair this group.

Overarching issues that transcend the scope of individual processes and projects get aired in the steering committee. This group decides, for example, the order of priority among all the competing reengineering projects and how resources should be allocated.
Process owners and their teams come to the steering committee for help when they run into problems that they can't resolve on their own. Committee members hear and resolve conflicts among process owners. The steering committee can do much to help an extensive reengineering program to succeed.

2.6.6 CZAR

The reengineering czar serves as the leader's chief of staff for reengineering and will report directly to the leader. The czar has two main functions. One, enabling and supporting each individual process owner and reengineering team and two, coordinating all ongoing reengineering activities. The czar can also help to select insiders for the team and can identify—or even provide-appropriate outsiders. The reengineering czar is also concerned with developing the infrastructure for reengineering so that not every reengineering project seems like the first one the company has ever done. When the owners need to coordinate their efforts, the czar should make sure that they do. The czar will also advise owners on the issues and problems they are likely to encounter. The czar also keeps a watchful eye on process owners to keep them on track as they proceed through reengineering. The czar may convene and moderate some discussions among the process owners.

There are instances where the czar becomes a problem by becoming too controlling and forgetting that the leader and the process owner are in charge. Organizations must guard against this possibility and always remember that the work of reengineering has to be the line manager's job.

2.7 OVERCOMING RESISTANCE

People naturally resist change. They have a need for stability, and change can cause anxiety and uncertainty, and reduces the sense of self-control. Change not only upsets formal structures, but also informal structures. There are two broad reactions to change, especially to the type of radical change a Business Re-engineering programs heralds. The two types can be classified as the "negative curve" and the "positive curve.” Reactions give rise to resistance, both are natural, and both need to be managed in an active way.
The negative curve (Fig:2-1) is normally the reaction of those who are targeted for the change. After shock, the first reaction is to deny the change. When realization sets in anger follows. Then a stage of negotiation begins with depression following. Acceptance follows only after rationalization. This curve will occur more than not. For some it will be very fast, while others may remain angry and resistant or depressed. The secret is to recognize the various stages in people and help them get through the curve as fast as possible. It is often assumed that those who are involved in designing and planning the changes do not go through such a reaction, and it is broadly correct. However, these teams and even the top managers that originally instigate the changes can go through the positive curve (Fig:2-2), which has its own dangers.

Once the initial optimism occurs, and the details of what is involved dawn, change teams can quickly move to the stage of “informed pessimism”. The resistance of others not involved can reinforce this pessimism but aware of the re-engineering program. This resistance can even manifest itself by open threats to the change team members. What can happen is that the members “cop out,” either publicly (by distancing themselves from the program), or privately (by staying on the program, but not enthusiastically so). Those who pull the re-engineering teams together need to be aware of this dynamic and continue to inspire, motivate, and support the members of the teams doing the work.
So resistance is a natural occurrence. To overcome it, one must motivate change in people’s behavior. There are several techniques that can be used to do this.

❖ Bring and resistance to the surface and continually gauge readiness for change.
❖ Create and maintain dissatisfaction of the status quo.
❖ Generate new training for new skills.
❖ Allow participation in planning and implementing change.
❖ Reward needed behavior and results in the transition and future states.
❖ Provide time for people to disengage from the current state.
❖ Use pilots and reposition the remainder.
❖ Burn bridges and build ambassadors.
❖ Actively manage in/outplacement in a firm, clear, and sympathetic way.

2.8 TRAINING

A prior training about BPR concepts should be given to the leaders of the core team. Training to the employees should be given to make them know the advantages of BPR and what is expected from them to reap the performance improvement. The critical importance of leadership lies in the fundamental reason of being misunderstanding of the concept itself and applying it inappropriately. Training the employees is appropriate
since they will require new skills in the wake of BPR. Ideas too can be captured from within the employees. It is found in most of the cases the failure occur in the BPR approaches due to the lack of commitment, inadequate training and poorly designed business processes. In most cases BPR forgets people which reduce morale leading to the high rate of failure of BPR.

Steps in Training

- Conduct orientation program to know what is mission
- Explain methods and procedures to leader
- Explain methods and procedures pertinent to technical phases of production operation to employees
- Explain the market requirement
- Establishing time standards
- Explain the broader the range of significant benefit the more likely the action will result

2.9 BUSINESS PROCESS MAPPING

Business process map illustrates how companies identify their business processes. It suggests techniques for selecting the processes that should be re-engineered and the order of their re-engineering. Stresses the importance of understanding specific processes before attempting to redesign them.

Processes, not organizations, are the objects of reengineering. The confusion between organizational units and processes as objects of reengineer arises because departments, divisions and groups are familiar to people in business, while processes are not. Organizational lines are visible, plainly drawn on organization charts and processes are not. Organizational units have names and processes most often do not. Every company on earth consists of processes. Processes are what companies do. Processes in a company correspond to natural business activities, but they are often fragmented and obscured by the organizational structures. Processes are invisible and unnamed because people think about the individual departments, not about the process with which all of them are involved. Processes also tend to be work units, but no one is given the responsibility for getting the whole job – the process – done.
One way to better handle on the processes that make up a business is to give them names that express their beginning and end states. Their names should imply all the work that gets done between the start and finish. Just as companies have organizational charts, they can have process maps that give a picture how work flows through the company. A process map also creates a vocabulary to help people discuss reengineering. Given in Fig 2.3 is a sample process map of a XYZ company.

![Process Map](image)

Fig 2.3 A sample process map

The process map shows only six processes for this company. The process map displayed is a clear and comprehensive picture of the work in the company. Strategy development creates a strategy, product development generates an overall product design, customer design and support produces a custom design, manufacturing capability produces a plant, customer communications answers customer questions and inquiries and order fulfillment delivers what the customer wants.

A few processes one might expect to find is not on the map. Manufacturing, for instance. The process portrait does not depict manufacturing as one of its main processes. Instead, manufacturing is a sub process of order fulfillment – just one of the sub processes that must get done to deliver a product to the customer. Sales don’t show up in the picture either. A sale is not a process, but a department, a collection of people. Salespeople, however, are involved in many of the processes. They’re involved in order fulfillment because another sub process of order fulfillment is order acquisition, which is
primarily performed by salespeople. Salespeople will also be involved in the customer communication and in product development processes.

Clearly, then, this map does not represent everything that happens. It shows only the high level processes. But each of these can explode into various sub processes usually numbering no more than half a dozen or so-on separate sub process maps. Together, the process and sub process maps give a simple but effective picture of what any company does.

Process maps require people to think across the organizational grain to construct. It's not a picture of the organization, which is what people are used to seeing and drawing, but a depiction of the work that is being done. When it's finished, the process map should not surprise anyone. In fact, people may wonder why drawing it took as long as it did, since the finished map will be so easy to understand, even obvious.

2.10 PROCESS DIAGNOSIS

No company can re-engineer all its high level processes simultaneously. The process which is most fundamental, important, feasible and in deepest trouble to be selected. It is based on the vital few processes that will have the greatest leverage on those company goals. A separate re-engineering team should be constituted to perform individual process diagnosis and redesign. Studies should also be conducted in various departments to find their capabilities.

Redesign team uses certain techniques to analyse the shortcomings of the present process. One such effective tool is benchmarking using Information Technology. The shortcomings could be formally analysed and would provide the insight for redesigning the current process.

2.11 BENCHMARKING

**Dictionary Definition:** A standard against which something can be measured. A survey mark of previously determined position used as a reference point.

**Generic Definition:** A basis of establishing rational performance goals through the search for industry best practices that will lead to superior performance.
This is an effective tool to find out the process in the organization having largest opportunity to improve performance. It can identify best practices that produced the results observed during the study and finally the study can set performance goals for the process and identify areas where the sponsoring organization can improve performance. Benchmarking firms must assess the strengths and weaknesses of their current work processes, analyze critical cost components, consider customer complaints, spot areas for improvements and cycle reduction and find ways to reduce errors and defects or to increase asset turns.

2.11.1 GAP ANALYSIS

Benchmarking study is a four-step process namely planning, collection of data, analyzing the data for performance gaps and improving the process. It compares the performance of the benchmarked process among the target organizations. It describes an organization's gap in performances compared to those identified performance levels. Determining the superior work practices and documenting them could decide how much is better these work practices over the current practice. The performance gap reveals what is to be improved.

Continuing this benchmarking and updating work practices, the industry will stay best with the ongoing industry changes. Conducting of a benchmarking project prior to committing organizational resources should improve the success rate of re-engineering by filtering out false alarms, taking away the theoretical aura of benchmarking and helping to ensure top executive interest.
2.11.2 DOCUMENTATION OF THE BENCHMARKING PROCESS

This is the development of strategies and plans for the management of business processes and organizations, and the management of these processes through the daily execution of business operations. Integral to the management process is the coordination and integration of plans and activities, inspection of performance and continuous process improvements.

This is set of repeatable activities (outside of human resource management) required to effectively operate and manage all other business activities.

This is the comparison of actual performance with that of the internal/external process that is identified as an industry best to identify significant differences in process practices. Results are used to continuously improve the process, outputs, inputs, results and so on as appropriate.

Management to ensure that effective benchmarking investigations are conducted and results are implemented follows the process.

Conduct periodic assessments of benchmarking progress, maintain key, summary benchmark performance measurements, and establish objectives to close the benchmark gap and prioritize future benchmarking investigations.

Institutionalize benchmarking by increasingly having those responsible for implementations conduct their own benchmarking. Support operational management with centers of competency, networking, training and benchmarking guides.

Embed the requirement for benchmarking in operational reviews, annual plans and qualities tools and require benchmarking for all major decisions. The benchmarking question is: How do you know?

(Continued)
Key managers articulate benchmarking and a need to constantly focus on the external environment and continuously encourage pursuit of best practices to satisfy the customers.

Increase the awareness of the specific contribution of best practices to improving work processes and achieving unit goals and business results in communication sessions and success stories.

Where appropriate, recognize excellence in benchmarking that exemplifies use of the process.

Find and implement best practices in all major work processes to ensure continuous improvement.

Identify the area of greatest opportunity for performance improvement for the unit. Select the priority output for benchmarking and flowchart the supporting work process.

Determine those companies, both competitive and functional, that employ best practices that can be emulated.

Plan what data and information are needed and how to conduct the benchmarking study. Conduct the investigation, observe the best practices firsthand, and document the findings.

After completing the investigations and observations, decide how much better the best practices are that the current work methods.

Decide how much the performance gap will narrow or widen in the years ahead and what repercussions this will have for the unit. (Continued)
Communicate findings to all appropriate organizational levels that have a need to know to gain support and commitment.

Convert findings into operational statements that describe what is being committed to be improved.

Create specific implementation steps, measurements, assignments, and timetables for incorporation of the findings into the work processes.

Implement the plan and report progress to the key affected individuals in the unit.

Continue benchmarking activities and update key processes as required to keep current with external industry changes.
2.12 PROCESS REDESIGN

DEFINITION: "The analysis and design of workflows and processes within and between organizations" recognizing that business processes have internal or external customers and cross-organizational boundaries.

Points to the danger of the lack of cross-functional processes, monitoring and management which can result in departmental performance optimization at the expense of other departments' needs: to correct this, current processes need to be mapped to identify short trails, duplication and incorrect routing, then remapped to produce the best way to deliver products and services.

In redesigning five major steps are involved: developing the business vision and process objectives, identifying the processes to be redesigned, understanding and measuring the existing process, identifying Information Technology levers, and designing and building a prototype of the new process. The redesign team would also evolve measures of performance of the process. Information Technology (IT) can make it possible for employees scattered around the world to work as a team. As an example, Ford now creates new car designs using teams that have members in Europe, Central America, and the United States. Because Ford has standardized computer-aided design process, engineers can share complex three-dimensional design across the Atlantic. Perhaps the greatest difficulty in IT driven redesign is getting and keeping management commitment, because processes cut across various parts of the organization.

2.13 INFORMATION TECHNOLOGY

The information technology capabilities offered by computers: are software applications, business process redesign, the analysis and design of workflow and processes within and between organizations. Working together, these tools have potential to create a new type of industrial engineering. Well-known uses of it in manufacturing indulge in process modeling, production scheduling and control, materials management information’s systems and logistics. In more cases where IT has been used to redesign work, the redesign has most likely been in the manufacturing function and industrial engineers are most likely individuals to have carried it out.
Information technology should be viewed as more than an automating or mechanizing forces; it can fundamentally reshape the way business is done. Business activities should be viewed as more than a collection of individual or even functional tasks; they should be broken down into processes that can be designed for maximum effectiveness, in both manufacturing and service environments, IT can be more than a useful tool in business process redesign. In leading edge practice, information technology and BPR have a recursive relationship.