The Role of IT in Business Process Reengineering

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Abstract: Many organizations in the world are going for Business Process Reengineering (BPR) to improve profits, to reduce costs, to improve turn around times, to improve quality or to provide better service to the customer, etc. This article discusses business process, business process reengineering, top management's role, reengineering team, process redesign, external consultant, skills required for a reengineer, communicating in the team, role of IT in business process implementation and advantages of the combination of IT and BPR in detail.

Keywords: customer; Business Process Reengineering; implementation

JEL Classification: M21; M21

1. Introduction

Business Process Reengineering (BPR) has been used widely in the industry since 1990s. Many corporations became successful in reengineering their business processes. It is mainly in the USA, the business process reengineering movement started and spread to Europe, Asia and the rest of the world. What is business process? What is business process reengineering? What are the factors, which effect business process reengineering? What is process redesign? What is the role of IT during process implementation? This article tries to answer these questions.

2. Business Process Reengineering

A business process is an activity or collection of activities, which has an effect on the customer directly or indirectly. Every organization has many processes built in their systems. Manufacturing, order processing, invoice generation, bill payment and customer service are some of the business processes of current day organizations. These processes can be reengineered.

Hammer, M. and Stanton, S.A. defined reengineering as follows in their book *The Reengineering Revolution* (1995).

"The fundamental rethinking and radical redesign of business processes to bring about dramatic improvements in performance."

According to this definition, we can expect the *dramatic* improvements as a result of our reengineering process in the business. Also the definition talks about the radical redesign of the existing business processes in the organization.

There are many steps involved in business process reengineering effort. Those steps are given in the following figure.
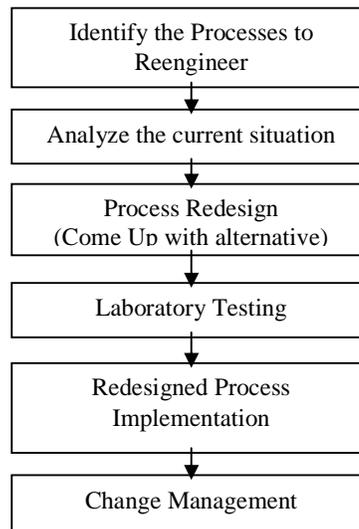

Figura 1. Steps in Business Process Reengineering

Figure 1 explains the steps involved in business process reengineering. For Business Process Reengineering, one should identify the processes in the organization to be reengineered. The outcomes expected from business process reengineering can be increase in profits, reduction in costs, improvement in quality, service or increment in turn around time, etc. There should be reengineering team assigned for this business process reengineering assignment purposes. Definitely there should be commitment from the top management such as CEO and COO for this business process reengineering purpose.

Reengineering efforts are to be supported by the senior management in the organization. The process owner and reengineering team work on reengineering of each identified processes of the organization.

During this reengineering time, the top management should be committed to the BPR efforts in the organization. Top management commitment is explained in the next paragraph.

3. Top Management Commitment

Definitely top management like CEO, COO should have commitment over these reengineering efforts. They should dedicate resources and time for reengineering efforts. First of all, top management should assess their situation and the organization's situation, and they should come up with whether they are ready for reengineering or not at this point in time. Once they are ready, the top management should identify the reengineering team. The reengineering team after situational appraisal comes up with to be reengineered processes in the organization. Identification of processes is the important step in a business process reengineering assignment.

The role of top management in reengineering efforts of the organization is very much significant and has got lot of importance. The reengineering team efforts and their role are explained in the next paragraph.

4. Reengineering Team

The top management has to identify the reengineering team. In some of the organizations, a member of senior management may head the reengineering team. The reengineering experts report to this senior management member. In some of the organizations, reengineering teams form as committees and directly report to the CEO or head of process reengineering. In some of the organizations, reengineering team consists of only external BPR consultants. Some of the organizations have VP and Director level positions for business process reengineering experts.

Reengineering team is responsible for identification of processes and redesign of the processes. The employees of the organization must be part of the process implementation stage. Next, we will see the skills required for the business process reengineer.

Skills Required for Reengineer

According to the Hammer, M. and Stanton, S.A. (1995), the business process reengineer should have the following profile.

- Process–orientation;
- Holistic Perspective;
- Creativity;
- Restlessness;
- Enthusiasm;
- Optimism;
- Persistence;
- Tact;
- Team Player;
- Communication Skills.

These skills of reengineer leads to the successful execution of business process reengineering assignments. In the next section, we will see how the BPR team communicates with the stakeholders.

5. Communicating to the Team

The Reengineer in the reengineering team should have good communication skills because he has to sell his ideas and the processes he redesigned to the outer world. That is the reengineer should communicate his work and redesigned processes to the employees of the organization for implementation purposes. This requires strong communication skills from the reengineer side. Because while communicating the designed processes to the other employees of the organization, it may face resistance to change the employees, because of various reasons. Hence the reengineer has to deal with these issues with care and diligence.

While communicating with the employees of the organization, the reengineering team should keep in mind that the communication should be clear and unambiguous. They should make their point clear to the process implementation team. Here they should take into consideration of human factors and soft issues while dealing with people. They should make it clear that the BPR is not about downsizing and layoffs or reducing head count. It is about process improvement and reducing cycle time, reducing turn around time and improving profits. This should be communicated to the employees of the organization while BPR

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assignment is going on. Otherwise the BPR team will face resistance from the employees.

The reengineering team should be able to respond to the employees' queries and should able to do proper transition once process reengineering is over. In the next section, we will see how to hire an external consultant for BPR assignments.

5.1. Hiring a Consultant

Usually to have a macro view of the business operations, organizations hire external management consultants for business process reengineering assignments. There are many factors, which needs to be taken care while hiring an external consultant for BPR assignments. The experience level of the consultant, domain expertise, knowledge and awareness of BPR of the consultant play vital role in selecting the consultant for BPR assignments.

Small firms may go for independent individual BPR consultants and the big firms may hire big consulting companies for business process reengineering assignments. There are examples of AT & T, American Express, Texas Instruments, and EDS, which have successfully implemented business process reengineering in their organizations. Process redesign is explained in the next section.

5.2. Process Redesign

Usually, once the reengineer studies the current processes in the organization, he comes up with the alternative ways of doing things, which result into profitability, or cost reduction, or improved quality or improved services. These new processes or redesigned process needs to be tested in the laboratory before making them public. That is the new processes needs to be tested in a simulated environment before they are implemented in the actual business situation.

There are a few companies, which failed at business process reengineering. However these companies are very less in percentage. There can be many reasons for the failure of BPR in the organizations. Many be they have not identified the processes correctly to reengineer. Or they spent most of the time on planning rather than executing. Lack of commitment from top management can be another reason for the failure of business process reengineering in the organization. Or they did not have experienced BPR consultant. Or they did not choose the right consultant. These are some of the reasons for the failure of business process reengineering in organizations.

Hence, one should study the current processes in place in the organization before going for redesigning the processes. They should identify right processes to reengineer. And then go ahead with reengineering. Then communicate the results to the employees for implementation purposes. In the next section, we will see the role of IT in business process implementation.

6. The Role of IT in Business Process Implementation

Now the IT comes into picture in the process implementation stage. For example, in case of automobile manufactures, they used to have design centres in one location and manufacturing centres in another location and marketing offices in another location. In this scenario, once the marketing executive takes the requirements from the customer, he has to send them by surface mail to the design centre. The design centre drafts are sent through surface mail to the manufacturing plant. This used to take several weeks, before the product comes out of the plant. With the advent of IT and communications technology, this is possible to roll out the product in days time in current days. The marketing executive gathers the requirements and sends them to the design centre through Internet. Then the design centre sends the designs through Internet or email to the manufacturing plant. Some of the companies even went ahead and developed distributed systems and databases using data and voice communication systems. Like this the turn around time can be reduced using information technology.

The output of process reengineering assignment becomes input to the IT implementation team. It is better to have IT experts in process implementation stage in BPR assignments. As explained in the above example, the IT is reducing the cycle time in attending to the customer requests.

Following are the advantages we get if we use IT in combination with BPR.

- Information Technology can be used to reduce the turn around time, which was taking long time using manual approaches
- Less chance for fraud
- Less chance for corruption
- More accuracy and precision assured, if the IT systems are implemented properly
- More quantity of work (reports) in less time
- Good quality of work results, services or products
- Quick communication in the team
- Faster communication with customer and other stakeholders
- Efficient progress tracking with IT tools

To get all these benefits out of IT and BPR combination, the team and employees of the organization are properly trained in IT applications and related technologies.

Once business process reengineering is over in the organization, the redesigned processes of the organization are to be implemented in the systems. There are two ways to implement them. That is either manual or automation. It is better to

automate if the work is complex and needs accuracy. Payroll maintenance in organizations is an example of automation activities.

Once processes are identified to automate, the Information Technologies such as hardware, software and tools can be used in implementing the activities of processes. This part of IT implementation will be taken care by the IT project managers and project leaders. Programmers, database experts, application specialists, test engineers and quality experts are part of the information technology systems implementation. Once these IT systems are ready they will be given to the actual users and the employees of the organization. The team, which implemented the IT systems, should provide the necessary training to the users and the employees of the organization. Project management tools, database technologies, and data and voice communication technologies, networking technologies, e-commerce and web technologies can be used in implementing IT systems.

7. Conclusion

It is evident that the combination of IT and BPR results into reliable systems in the organizations. We have discussed the business process, business process reengineering, role of top management, the role of process reengineering team, and skills required for process reengineer. The factors we need to take into consideration while taking a process-reengineering consultant are also discussed. We have also discussed the advantages of the combination of IT and business process reengineering in modern day organizations. This combination is good for the benefit of customer, organization, employees and the stakeholders.

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