

Reengineering: Necessary Aspect of Sustainability for Organizational Development

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Abstract: Most of the managers believe that they have had all the debates they need to have and that the industry will continue to exist as it has for many years. But the industry is continuously deregulated, and the business must be reconfigured in this deregulated environment? There is always a fear of unknown but organizations must evaluate their needs for changing fundamentals of the business. Companies, even those with cultures receptive to process innovation, should not expect to achieve major change without making major commitments. Successful reengineering process relies on a wide range of skills. To effect needed change, organizations must somehow mobilize sufficient technological, human and organizational, political, and process expertise with the requisite enablers. This necessarily involves assigning some of their best people, or, if the firm lacks the needed skills or methods internally, employing external consultants, to design and implement new processes. Business orientation that combines process improvement and process innovation efforts is unique and uniquely relevant to current business management. It is in keeping with cultural leanings toward innovation and incorporates the rigor and measurement orientation found in the quality approaches of many successful firms.

Keywords: reengineering, bosnia, process reengineering, revolution, innovation

Introduction

Many managers, especially those in relatively successful businesses, naturally tend to keep using the same old process and technology. They believe that they have had all the debates they need to have and that the industry will continue to exist as it has for many years. But what will they do, for instance, if they suddenly find out that their business is potentially unsustainable, and the business must be reconfigured to maintain the economic development? Perhaps these managers have been around the old industry simply too long to be able or willing to imagine that new configuration.

Sustainable development expect from business leaders to use resources with aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for future generations. United Nations' "Agenda 21" emphasizes the need to change from old sector-centered ways of doing business to new approaches that involve cross-sectoral co-ordination and the integration of environmental and social concerns into all development processes (Agenda 21, 1992).

This is where reengineering the business comes in, changing the fundamentals of the business. A truly reengineered business finds out how to do more with less. But there is a fear of the unknown and its potential threats, its inevitable risks. Some managers are prevented from seeing the future because they are blinded by the sun of their current success and they cannot see the wall that they are driving right into. Also, many people suffer from a kind of subliminal denial of the future because to face it would be too traumatic (Champy, 2006, pp. xi-xii). They are unable to implement personal responsibility and to develop mechanisms to protect the environment.

Companies, even those with cultures receptive to process innovation, should not expect to achieve major change without making major commitments. Successful reengineering process relies on a wide range of skills. To effect needed change, organizations must somehow mobilize sufficient technological, human and organizational, political, and process expertise with the requisite enablers. This necessarily involves assigning some of their best people, or, if the firm lacks the needed skills or methods internally, employing external

consultants, to design and implement new processes. Absence of skills is as much a reason for caution as an unreceptive culture.

Consequently, process innovation must itself be viewed as a process, not a project. If initial efforts are successful, companies will move on to redesign other processes, a prospect that stretches to decades. Absence of such long-term orientation is often decried in contemporary business; process innovation is one more reason it cannot continue (Davenport, 1993).

This work will comparatively explore these basic issues and approaches of most influential researchers in field of business process reengineering, with specific focus on controversial issues and failures in this process.

History

In 1990, Michael Hammer, a former professor of computer science at the Massachusetts Institute of Technology (MIT), published an article in the Harvard Business Review, in which he claimed that the major challenge for managers is to obliterate non-value adding work, rather than using technology for automating it (Hammer, 1990). This statement implicitly accused managers of using information technology for automating existing processes rather than using it as an enabler for making non-value adding work obsolete. A similar idea was advocated by Thomas H. Davenport and J. Short in 1990 (Davenport, 1990), the same year as Hammer published his paper.

This idea, to unbiased review a company's business processes, was rapidly adopted by a huge number of firms, which were striving for renewed competitiveness, which they had lost due to the market entrance of foreign competitors, their inability to satisfy customer needs, and their insufficient cost structure. Even well established management thinkers, such as Peter Drucker and Tom Peters, were accepting and advocating business process reengineering (BPR) as a new tool for re-achieving success in a dynamic world. During the following years, a fast growing number of publications, books as well as journal articles, was dedicated to BPR, and many consulting firms embarked on this trend and developed BPR methods.

Despite critiques, reengineering was adopted at an accelerating pace and by 1993, as many as 65% of the Fortune 500 companies claimed to either have initiated reengineering efforts, or to have plans to do so. This trend was fueled by the fast adoption of BPR by the consulting industry, but also by the study Made in America, conducted by MIT, that showed how companies in many US industries had lagged behind their foreign counterparts in terms of competitiveness, time-to-market and productivity (Industry Week, 1994).

Definitions

Different definitions of business process reengineering can be found. We will focus here on most influential ones. "... The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance, such as cost, quality, service, and speed." (Hammer M. a., 1993)

Reengineering "encompasses the envisioning of new work strategies, the actual process design activity, and the implementation of the change in all its complex technological, human, and organizational dimensions." (Davenport, 1990).

Additionally, Davenport points out the major difference between BPR and other approaches to organization development (OD), especially the continuous improvement or TQM movement, when he states: "Today firms must seek not fractional, but multiplicative levels of improvement – 10x rather than 10%." Finally, Johansson provide a description of BPR relative to other process-oriented views, such as Total Quality Management (TQM) and Just-in-time (JIT), and state: "Business Process Reengineering, although a close relative, seeks radical rather than merely continuous improvement. It escalates the efforts of JIT and TQM to make process orientation a strategic tool and a core competence of the organization. BPR concentrates on core business processes, and uses the specific techniques within the JIT and TQM "toolboxes" as enablers, while broadening the process vision." (Johansson, 1993).

In order to achieve the major improvements BPR is seeking for, the change of structural organizational variables, and other ways of managing and performing work is often considered as being insufficient. For being able to reap the achievable benefits fully, the use of information technology (IT) is conceived as a major contributing factor. While IT traditionally has been used for supporting the existing business functions, it now plays a role as enabler of new organizational forms, and patterns of collaboration within and between organizations.

Business strategy is the primary driver of BPR initiatives and the other dimensions are governed by strategy's encompassing role. The organization dimension reflects the structural elements of the company, such as hierarchical levels, the composition of organizational units, and the distribution of work between them. Technology is concerned with the use of computer systems and other forms of communication technology in the business. In BPR, information technology is generally considered as playing a role as enabler of new forms of

organizing and collaborating, rather than supporting existing business functions. The people / human resources dimension deals with aspects such as education, training, motivation and reward systems. The concept of business processes - interrelated activities aiming at creating a value added output to a customer - is the basic underlying idea of BPR. These processes are characterized by a number of attributes: Process ownership, customer focus, value adding, and cross-functionality. (Business process reengineering, 2000).

Methodology

Although the labels and steps differ slightly, the early methodologies that were rooted in IT-centric BPR solutions share many of the same basic principles and elements. The following outline is one such model, based on the Process Reengineering Life Cycle (Guha, 1993).

1. Envision new processes
 1. Secure management support
 2. Identify reengineering opportunities
 3. Identify enabling technologies
 4. Align with corporate strategy
2. Initiating change
 1. Set up reengineering team
 2. Outline performance goals
3. Process diagnosis
 1. Describe existing processes
 2. Uncover pathologies in existing processes
4. Process redesign
 1. Develop alternative process scenarios
 2. Develop new process design
 3. Design HR architecture
 4. Select IT platform
 5. Develop overall blueprint and gather feedback
5. Reconstruction
 1. Develop/install IT solution
 2. Establish process changes
6. Process monitoring
 1. Performance measurement, including time, quality, cost, IT performance
 2. Link to continuous improvement

-> Loop-back to diagnosis

One critical issue is: Who will lead the reengineering process? Experience shows that most professionals and managers are not completely qualified to lead and implement revolutionary process redesign. The MIS professional typically has too little training in process design and analysis and is likely to see things from the perspective of technology, not of added value to the customer. Senior executive leadership and guidance are essential to reengineering efforts, but who will actually devise and implement revolutionary process designs? Most companies have little or no experience envisioning and putting into practice radical changes in how they work. Operating managers, for example, know how to execute and control existing processes, not explode them. Most have never been encouraged to "think out of the box." Manufacturing and process engineers are trained to improve processes, not to abandon them and start over. Everyone involved will require extensive training and development. Some prediction for the distant future is that CIO will stand for Chief Innovation Officer, the catalyst of reengineering. (Miller, 1991)

The Role of Information Technology

Information technology (IT) was in the past an essential part of the reengineering concept. It is considered by some as a foremost enabler for new forms of functioning and collaborating within an organization and across organizational borders.

Early BPR literature identified several so called *disruptive technologies* that were supposed to challenge traditional wisdom about how work should be performed. (Hammer M. a., 1993)

- Shared databases, making information available at many places
- Expert systems, allowing generalists to perform specialist tasks
- Telecommunication networks, allowing organizations to be centralized and decentralized at the same time
- Decision-support tools, allowing decision-making to be a part of everybody's job

- Wireless data communication and portable computers, allowing field personnel to work office independent
- Interactive videodisk, to get in immediate contact with potential buyers
- Automatic identification and tracking, allowing things to tell where they are, instead of requiring to be found
- High performance computing, allowing on-the-fly planning and revisioning

In the mid 1990s, especially workflow management systems were considered as a significant contributor to improved process efficiency. Also ERP (Enterprise Resource Planning) vendors, such as SAP, JD Edwards, Oracle, PeopleSoft, positioned their solutions as vehicles for business process redesign and improvement. (Business process reengineering, 2000)

High-Tech Forces of Reengineering

Regarding high-tech forces used in change process, the most interesting view of what is likely to be part of our lives as we make our individual and corporate ways through the twenty-first century. Most researchers agree on one overall key point that has been at times somewhat controversial, that is, that science and technology will continue to have enormous impacts on all of us and these impacts, in the main, are almost always positive. To the extent that there are negative consequences, we tend to recognize that, and wish to mitigate such consequences.

However, it is also clear that we are determined to try to minimize these potential negatives through systematic programs and year-by-year expenditures of money. What we are not prepared to do is to give up the benefits of the technological advances. It is fair to assume that this attitude will prevail in the twenty-first century as well. There are five high-tech forces that make reengineering necessary and applicable today (Eisner, 2000, pp. 43-48):

1. The information age. It is a fact that the twenty-first century will represent the complete blossoming of the information age. Those with the right information, and the ability to do something constructive with it, will handle the power and increase the wealth. Information will allow enterprises to do what they do even better, and also to create completely new enterprises, in terms of both products and services. Increased bandwidth and reduced cost characterize the information age, and even information have a hierarchical structure as knowledge engineering and management threaten to become a form of just plain information.
2. Speed and responsiveness. This is in a very real sense a necessary companion to the information age. As we build the infrastructure and capabilities that will be part of the information age, increased bandwidth will allow increased speed. The demand for this speed will follow on the heels of the technology push, meaning that people and businesses will wish to pay real money for the speed and responsiveness that such a capability is able to provide. As information finds its way to the right people more quickly, there will be pressure for the executives in business to speed up their operations in order to provide what their customers want in a more responsive manner, and make their decisions more quickly, which will be supported by having the right information available at the right time.
3. Competition. The fact that people and companies will have and utilize the capability to move with increasing speed in the marketplace leads to extremely strong competition. If every business, in effect, sees more powerful competition coming globally, out of necessity this will have a most profound effect on the business itself. All companies that rely on information must be working as hard as they know how to make sure they remain at the leading edge. All these new enterprises, in the aggregate, pose a threat to the established companies in that a new very soon replaces the old one in a world in which market share can be reversed in very short periods of time. And these new companies heat up the competitive environment so that nothing is safe or sacred.
4. New work patterns and environments. We are interested in new work patterns and environments, within individual's migration path of the business enterprise of the twenty-first century. What type of work pattern and environment are we likely to find as we move into that future world and work our way through it? We can see at least three new work patterns emerging: Working highly irregular hours, often at home or at remote locations; working with new application that will bring fame and fortune; A confusion of plenty, that gives new ways of developing software as well as new ways to fail to integrate them.
5. Loyalties and leverage. The world is changing and double-sided loyalties were shattered. Top management, not in the habit of firing themselves, looked around for ways to cut costs as profits were eroding or negative. The answer became a national pastime in which the euphemism was "right-sizing". After all, the layoffs proved how responsible and effective the executives were. Loyalties were seriously

eroding. Trust was dissipating and disappearing. If the workers were ultimately only pawns in the game, then constant movement for the best deal was to be a kind of response.

Mandates or edicts issued by upper management that predetermine the technical approach or schedule, cost, and performance considerations without sufficient project team input or concurrence are frequently seen to cause reengineering failure. More often project schedules, costs, and deliverables are dictated by top management decisions. Software is a difficult business, and especially where one is dealing with legacy systems that may have poorly developed components and poor documentation. While top management does need to make decisions on the allocation of scarce resources, it is tempting for them to also determine specific deliverables and timetables. However, detailed planning of schedules and milestones can only be accurately determined through careful study of the technical parameters of a system, based on an understanding of the system, historical data, and knowledge of the specific skills of the staff. When top management prescribes these details with little data, the results are usually disastrous. (Bergey, 1999, p. 24)

Why Reengineering Fails

Inspired with contemporary management trends, many companies tried to make themselves a significantly better competitor. All of them tried to make a fundamental change in how their business is conducted, and many of them tried to apply reengineering, so they can cope with more challenging market surroundings. However, many of them either failed, either have been in between, or in most cases obvious lack of success were distressing.

The media usually point out the high rate of failure to three factors: the resistance of employees to change, inadequate leadership by senior management, and unrealistic expectations about reengineering results. (Kiely, 1995)

Many lessons have been learned through analysis of these failures. Some very general reasons could be drawn, and one is disrespect of process phases. Process phases are usually involving a considerable length of time, and skipping some phases makes only illusion of speed and never produces rewarding result. Following are some specific reasons why reengineering fails (Kotter, 1995):

- 1) Not Establishing a Great Enough Sense of Urgency. The first step in reacting to revenue drop or declining trends in company is very important, because its success directly depends on motivation of individuals or groups who are crucial wheels of change. Although it sounds easy comparing with further steps in process, most companies fail in this phase. Sometimes executives underestimate how hard it can be to drive people out of their comfort zone, or they lack patience, or they worry that employees will be defensive, or that morale will drop, or they fear to be blamed for creating a crisis. To be successful in this phase, urgency rate must be very high, and it must be established in most of company's management. Some executives created a crisis, by making large accounting loss or going public with terrible results, so the sense of urgency becomes higher. However, although sometimes crisis atmosphere promotes reengineering success, experts believe that crisis create fear and panic which drives out optimism. (Kiely, 1995, p. 15)
- 2) Not Creating a Powerful Enough Guiding Coalition. Major renewal programs often start with just one or two people. In cases of successful transformation efforts, the leadership coalition grows and grows over time. Major change is impossible unless the head of the organization is an active supporter. In the most successful cases, the coalition is always pretty powerful- in terms of titles, information and expertise, reputations and relationships. Sometimes they expect the team to be led by a staff executive from human resources, quality, or strategic planning instead of a key line manager. No matter how capable or dedicated the staff head, groups without strong line leadership never achieve the power that is required. One deep research of 30 companies reengineering process show that first precondition for failure was allowing wrong manager to sponsor the project. (Kiely, 1995, p. 15) But whenever some minimum mass is not achieved early in the effort, nothing much worthwhile happens. Companies that fail in phase two usually underestimate the difficulties of producing change and thus the importance of a powerful guiding coalition. Sooner or later, the opposition gathers itself together and stops the change.
- 3) Lacking a Vision. In successful transformation effort, the guiding coalition must develop a picture of the future that is relatively easy to communicate and appeals to customers, stockholders, and employees. A vision always goes beyond the numbers that are typically found in five-year plans. A vision says something that helps clarify the direction in which an organization needs to move. Without a sensible vision, a transformation effort can easily dissolve into a list of confusing and incompatible projects that can take the organization in the wrong direction or nowhere at all. In failed transformations, you often find plenty of plans and directives and programs, but no vision. Not surprisingly, the employees in such cases are confused or alienated. A rule for sharing a vision: if you

can't communicate the vision to someone in five minutes or less, and get a reaction that signifies both understanding and interest, you are not yet done with this phase of the transformation process.

- 4) Undercommunicating the Vision by a Factor of Ten. Having used about .0001% of the yearly intracompany communication, the group is startled that few people seem to understand the new approach. Transformation is impossible unless vast majority of people are willing to help, often to the point of making short-term sacrifices. Employees will not make sacrifices unless they believe that useful change is possible. Without credible communication, and a lot of it, the hearts and minds of the troops are never captured. Executives who communicate well incorporate messages into their hour-by-hour activities. They take ritualistic and tedious quarterly management meetings and turn them into exciting discussions of the transformation.
- 5) Not Removing Obstacles to the New Vision. Too often, an employee understands the new vision and wants to help make it happen. But an elephant appears to be blocking the path. In some cases, the elephant is in the person's head, and the challenge is to convince the individual that no external obstacle exists. But in most cases, the blockers are very real. The change effort ground to a halt because the officer in charge of the company's largest division was allowed to undermine most of the new initiatives. Perhaps worst of all are bosses who refuse to change and who make demands that are inconsistent with the overall effort. The other officers did virtually nothing to stop the one blocker. If the blocker is a person, it is important that he or she be treated fairly and in a way that is consistent with the new vision.
- 6) Not Systematically Planning For and Creating Short-Term Wins. Real transformation takes time, and a renewal effort risks losing momentum if there are no short-term goals to meet and celebrate. Without short-term wins, too many people give up or actively join the ranks of those people who have been resisting change. In a successful transformation, managers actively look for ways to obtain clear performance improvements, establish goals in the yearly planning system, achieve the objectives, and reward the people involved with recognition, promotions, and even money.
- 7) Declaring Victory Too Soon. After a few years of hard work, managers may be tempted to declare victory with the first clear performance improvement. While celebrating a win is fine, declaring the war won can be catastrophic. Instead of declaring victory, leaders of successful efforts use the credibility afforded by short-term wins to tackle even bigger problems. They pay great attention to who is promoted, who is hired, and how people are developed. They include new reengineering projects that are even bigger in scope than the initial ones. They understand that renewal efforts take not months but years.
- 8) Not Anchoring Changes in the Corporation's Culture. Finally, change sticks when it becomes "the way we do things around here," when it seeps into the bloodstream of the corporate body. Two factors are particularly important in institutionalizing change in corporate culture. The first is a conscious attempt to show people how the new approaches, behaviors, and attitudes have helped improve performance. Helping people see the right connections requires communication. Time was spent at every major management meeting to discuss why performance was increasing. The second factor is taking sufficient time to make sure that the next generation of top management really does personify the new approach. One bad succession decision at the top of an organization can undermine a decade of hard work. The champion for change was the retiring executive, and although his successor was not a resistor, he was not a change champion.

There are still more mistakes that people make, but these eight are the big ones. In reality, even successful change efforts are messy and full of surprises. But just as a relatively simple vision is needed to guide people through a major change, so a vision of the change process can reduce the error rate. And fewer errors can spell the difference between success and failure. (Kotter, 1995)

Conclusion

Reengineering is a new and desirable approach to transforming organizations and improving sustainable economic development requirements. The radical improvement of business process performance through the use of innovative tools and work designs has roots in the quality movement and other approaches to operational betterment of business activities. Although the quality movement has developed the notion of processes and process improvement to a high degree, its orientation is to incremental rather than radical change, and it does not address enablers of change.

Business orientation that combines process improvement and process innovation efforts is unique and uniquely relevant to sustainable development. It is in keeping with cultural leanings toward innovation and incorporates the rigor and measurement orientation found in the quality approaches of many successful firms. But because improvement and innovation are quite different, it is important to know which is pursued in a particular instance.

Reengineering, although difficult to achieve because of the radical nature of the organizational change involved, is a highly tempting approach to business transformation. It can be undertaken at relatively low cost, and the design, if not the implementation, of new processes can be completed in a matter of months. For these reasons, many firms in the developed countries in all industries, are embarking upon major process innovation initiatives.

Reengineering is particularly challenging if the short-term sacrifices include job losses. Such consequences are sometimes not seen as proper way for achieving economic sustainability. Gaining understanding and support is tough when downsizing is a part of the vision. For this reason, successful visions usually include new growth possibilities and the commitment to treat fairly anyone who is laid off. The only constraint is that the actions fit within the broad parameters of the overall vision. The more people involved, the better the outcome.

Reengineering is a particular way of using our minds, a way of radical experimentalism, of invention and reinvention, constantly checked by the realities of the bottom line.

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