

Project Reports: Industry and Services

APO Symposium on Re-engineering for Higher Productivity

21-24 August 2001, Taipei, Republic of China

BACKGROUND

Improving business processes is paramount for businesses today to stay competitive. Established as a means for rapid change and dramatic improvement, business process reengineering (BPR) has been around for quite sometime. Many papers and workshops have been written and organized around the world. Today, it is acknowledged that BPR can assist businesses in identifying potential targets for improvement. It is the initial step a firm must undertake before planning and implementing innovation methods to achieve higher productivity. Many issues have been identified as being critical to BPR motivation. These issues generally pertain to change, people, technology and strategy.

Take the case of IT. Today, as business imperatives change and new high-capability information technologies (IT) appear, organizations recognize the need to remain at the forefront of change by reengineering their business processes and implementing enabling responsive IT infrastructures. However, experience in this context indicates a lack of comprehension of essential elements and their mutual relationships that can contribute to the success of business-process change-implementation efforts. There is a need for managing IT for effective business-process redesign (BPR) implementation. A good IT infrastructure that covers issues of BPR strategy development, IT strategic alignment, IT infrastructure development, IT sourcing, legacy systems reengineering, IS integration, and IS function competence is essential and critical for effective implementation. Although several BPR methods have been proposed in the literature, research in this area lacks rigorous analytical tools for effective BPR. A BPR method must simultaneously analyze and integrate several key performance measures of business processes in identifying best practices. This is easier said than done because it is by no means a trivial task to blend multidimensional information in a useful and effective manner.

Organizational change has also been a key component in enhancing post BPR performance and organizational design. Previous process-oriented organizational change methods, however, focused on simplifying process flow without examining how it affects other organizational elements. Since an organization consists of several interdependent elements, a change within an organization can affect the other dependent organizational elements. Lack of coordination within an organization can result in unexpected poor performance and high coordination cost. In this regard, human issues, among others, have been identified as a critical factor to deal with if successful BPR is to be achieved. In fact, one of the most often-cited reasons why many reengineering projects do not accomplish the level of success the organizations expect is the issue relating to organizational culture. Indeed, managing the resistance to change in an organization appears to be the hardest part of a reengineering exercise. In short, it has been asserted that as far as holistic and fundamental change is concerned, application of new tools and technology including IT would not be sufficient to ensure the success of a BPR project. What really increase the chances of success is implementing effectively the principles of change management with commitment from top management and adequate employee empowerment. Against this background, this project has been proposed to look closely into the success factors of reengineering, with particular attention to the technology, human, business strategy, process flows and their interactions.

Against this background, this program was implemented for the benefits of organizations in the AF

member countries, with a view to helping them significantly improve their productivity and competitive performance in the emerging millennium through the effect application of BPR principles and practices. In particular, the program provided a platform for the participating member countries to understand the difficulties of developing some BPR understanding in APO member countries, and to discuss the possible alternatives for meeting these difficulties and challenges, and to share their experiences on the practical applications of BPR that have contributed to increasing customer satisfaction, productivity, and competitiveness. The scope of the discussion covered, inter alia, conceptual and theoretical issues related to BPR and productivity, critical elements of world-class organizations, facilitating work flow process improvement through internet infrastructure, and technology for the organization of the future, building customer focused enterprises, organizational issues in implementation, and recent advances in BPR. In short, this symposium purports to review the recent developments in BPR techniques and practices, particularly human and organizational aspects, and to formulate successful reengineering strategies for higher productivity.

The methodology used is drawn primarily from:

1. case studies presented by resource persons from Taiwan (e.g. DigiMusic, Acer, China Petroleum),
2. country case papers presented by various APO participants (e.g. Philippines' Keppel, Thailand's Thai Farmers' Bank, Fiji's Courts, Sri Lanka's Ansell Glove Company).
3. lectures from resource persons related to BPR planning and process analysis, BPR technology, BPR trends and development, and new paradigms in higher productivity strategies.
4. experiential learning through panel, syndicate and informal discussions.

Twenty-one (21) participants from eleven (11) member countries contributed to the deliberations. Resource inputs were provided by Dr. Shigenobu Ohara, Professor, Chiba Institute of Technology, Japan; Dr. Mark Goh, Associate Professor, The NUS Business School, National University of Singapore; Mr. Fred Huang, CEO, Sophir International Co. Ltd. Dr. George Huang, Acer, and Dr. Maw-Wen Lin, Chinese Petroleum Corp. In all, there was fruitful deliberation on 19 diverse presentations from the APO participants and resource persons. The program, and the list of participants and resource persons are attached as Annexes A and B respectively.

Also, to facilitate the focus of discussion, the country papers were categorized under three broad sectors of government (public sector), manufacturing/ industrial, and services to represent the broad classification of country papers offered for presentation and discussion. Using this classification, there were six (6) papers on public sector reengineering, seven (7) on manufacturing and six (6) on services. Some guidelines for the syndicate discussions were also established:

1. Arrive at a common interpretation of BPR
2. Identify some triggers and drivers for BPR exercises within the enterprise, industry, etc.
3. Identify three to four key success factors, constraints or barriers to BPR implementation
4. Identify unique features for implementing BPR for higher productivity for the cluster (public sector, manufacturing or service) and the industries represented in the cluster e.g. some culture specific issues for BPR implementation.
5. List some (at least four) recommendations for government, industry level, enterprise level, and the APO on BPR motivation and implementation
6. Highlight 3 to 4 key issues arising from the APO and local resource persons' presentations

and country paper presentations.

SUMMARY OF ISSUES

Based on the syndicate discussions and resource persons' presentations, the symposium arrived at several key conclusions. The details of the findings are tabulated in Annex C.

1. **Common interpretation of re-engineering is needed.** Among the three sectors of government, manufacturing and services, initially, there is no one collected viewpoint of BPR and for that matter re-engineering. However, participants accept and realise that re-engineering should bring about a dramatic change in the work or business process with positive results in efficiency, cost reduction, and better quality services. In short, BPR is a concept or a mechanism to improve the total productivity of an enterprise by redesigning the business processes within the organization. This concept is especially useful in an industry where (1) competitive advantage is needed, and (2) people are constantly required to provide for customer delight. Hence, the participants agreed that re-engineering could be commonly interpreted as being tantamount to undertaking a dramatic business process change for the customer.
2. **Common triggers and drivers of BPR are universal.** Participants recognise that in today's climate of the one marketplace, intense competition, dynamic business environment, proliferation of innovation and new disruptive technologies, organizations require re-engineering of their work processes even more. Indeed, the triggers and drivers identified by the participants, globalization and competition, will continue to haunt organizations and business systems nationally and regionally for the APO member countries. The need to do so can be attributed to reduced government funding for the state owned enterprises, rapid changes in information technology development which affect particularly the manufacturing industries, maintaining of profitability and response to crisis or change demanded by the customer.
3. **Top management commitment and sponsorship is critical to the success of re-engineering.** While participants agree that commitment and co-operation from all stakeholders, availability of domain expertise in re-engineering and productivity improvement, clear goals, visions and strategies, and a suitable climate or environment are important to ensure the success of any re-engineering effort, all participants affirm that top management must champion the re-engineering drive for greater productivity. Indeed, top management must be seen to visibly support, sponsor and provide leadership to the BPR change in the organization in order to ensure the success rate of re-engineering. This is consistent with Michael Hammer's thesis that any change process requires top management commitment and not just lip service. Even some of the country paper presentations alluded to this. Therefore, to deny BPR failure, key support from the right decision makers will send the right signals downstream.
4. **Organizational culture is perceived as the greatest hindrance to re-engineering.** In trying to establish relevant constraints and barriers to productive BPR implementation, organizational culture is reckoned to be the most important and pertinent barrier. For the government sector, participants felt that the culture and policies of this sector of the economy might not lend itself to be amenable to easy adoption and deployment of BPR as the public sector agencies are not as profit nor competitor conscious as the private sector. In some APO member countries, the laws and regulations have moulded the enterprise or an industry so much so that the mindset, attitude and values of the employees make it difficult for BPR to be enforced as an effective change program. BPR has been predominantly enterprise-focused on interdependent sets of activities. As such, for some

industries, particularly services, the misalignment of corporate goals and culture can hinder the smooth progress of any BPR program.

5. **A unique feature for implementing BPR for higher productivity is the total integration of the functional activities of the firm.** Rightly so, different industry clusters would have different set or sets of features unique to BPR implementation. For instance, in the manufacturing cluster, standardization of quality is seen as a must for driving productivity standards. On the other hand, in the public sector, participants view the need to provide public enterprises with greater autonomy to undertake re-engineering efforts. Despite the variations across the sectors, a common thread identified as a unique feature for implementing BPR appears to be the need to totally integrate all functional activities of the enterprise. This is not surprising as the integration of organizational networks or processes can help to accelerate the process of re-engineering itself. Of course, other issues like the inherent desire of employees to improve their processes, empowerment of staff to re-engineer sub-processes, the use of technology to help automate workflows are also valid features albeit unique to the particular cluster or sector.
6. **Technology is only an enabler in BPR.** The resource persons' presentations all alluded to the use of technology to help drive BPR for higher productivity. However, it is recognised in the symposium that technology without appropriate empowerment of the human effort and correct communication of the BPR vision statement to all cannot bring about the necessary change desired. Indeed, the human aspect of BPR cannot be overlooked, as after all, creative people are still required to enforce change.

Therefore, it can be summarised that different industry clusters will approach re-engineering differently due to their perception and prior experience of BPR. However, one commonality is that BPR is dramatic unlike the incremental approach of the traditional quality improvement processes. As the rate of globalization and intense competition increases, so too will the need to re-engineer work processes to better meet the changing requirements of the external environment. Like all improvement processes and initiatives, top management commitment and leadership are paramount for the continued well-being of the re-engineering effort. Organizational culture must also either change or be made more amenable for the BPR effort to take place. It is here too that the top decision makers must be proactively seen as the drivers of effecting this change. Lastly, BPR is about using people and technology to revamp the totality of activities and not just a subset of the activities. As such, corporate goals must be congruent with BPR goals and vice versa.

RECOMMENDATIONS

There are many ways in which governments of APO member countries, industries and clusters in member countries, and the APO can assist to expedite the adoption of BPR for enterprises that wish to realize higher productivity. Some key recommendations are listed below:

Recommendations to the Public Sector

1. The basis of global competition has changed. No longer are companies competing in isolated pockets or in localized markets but the arena for competition has enlarged. As such, the relevant public agencies must formulate appropriate policies to encourage productivity improvement through process re-engineering in their respective economies, especially for the state owned enterprises.
2. The governments of the APO member countries should consider privatizing the public sector enterprises on a graduated scale. This is to encourage the management of the public enterprises just like the private sector. This will allow for more accountability and transparency to the relevant stakeholders and better monitoring of process improvement

efforts. Further, the organizational culture can then be more amenable to BPR and competition awareness.

3. The governments of the APO member countries should actively promote the awareness of BPR as a tool for sustaining economic growth. This can be effected through sponsoring appropriate training schemes at the national or federal levels. Only then can the right set of people and skill set be established to provide a pool of technical expertise necessary to conduct BPR and productivity related activities.
4. National level resource centers, if not already done so, should be established immediately to serve as points of dissemination of BPR best practices, facilitate expert advisory services, repositories of publication and related case studies of successful BPR implementation. Another role of the resource center is to serve as a benchmarking clearinghouse for domestic industries with other related industries elsewhere.
5. Governments in developing countries must participate in those global organizations that are providing good BPR services and setting the technology standards of the future. By doing so, developing countries can use this knowledge to create better BPR understanding.

Recommendations to the Private Sector

1. Companies in developing countries must constantly re-evaluate their business and work processes to align more with today's marketplace and stamp out unnecessary inefficiencies or redundant traditional work cultures. Industries and enterprises must realize the need to radically change processes to realize greater productivity strides.
2. Internally, enterprises must prepare employees to accept change brought about through BPR and assure these employees that such changes are essential for the organization and will benefit the employees ultimately as they will now be working more productively. Also, enterprises must make their CEOs accept the mantle of carrying the BPR torch.
3. If the private sector recognizes the value of BPR as a tool for survival and a roadmap for growth in a competitive marketplace, industry and enterprises must be prepared to seek external advice and help from the domain experts. To do so, industries must learn to leverage on the prevailing networks of industries around the industrialized world and draw upon their expertise and experience.
4. An association (formal or informal) for collaboration on re-engineering practices, innovation drives and benchmarking of performance management could be instituted at either the national or regional levels among the various chambers of commerce or industry associations. This can help to provide the necessary bridges of knowledge on BPR, information sharing about current cost reduction best practices, good process redesign tools and techniques, and so on.
5. Finally, companies need to work with their respective governments to support the adoption of appropriate information and telecommunications technology in their organizations and industries, and to support government-sponsored training programs.

Recommendations to the APO

1. Organize a follow-up workshop/symposium on re-engineering to build on the momentum created at this meeting. The focus of this intended deliberation would be on presenting relevant and in-depth statistical (as in objectively quantifiable) Asian case studies of enterprises or industries that have demonstrated measurable success in their BPR implementation over a reasonable period of time. Through the deliberation of such best practices, other member countries and their enterprises can benefit.

2. Create a link or network in the current APO web site to disseminate updated BPR information, practices, adoption rates and related resources. For instance, various useful information such as symposium papers and related BPR, best practices web sites can be included in such a link.
3. Arrange for a study mission of BPR in developed APO countries to showcase to other member countries how the respective organizations have physically and practically implemented BPR. The visual sharing insight and interaction can serve to enlighten participants more on the practical realities and fruits of BPR, and initiate networking possibilities among such organizations.
4. Initiate more enterprise level training and exchange programs on BPR understanding and awareness between APO member countries. APO, through the various NPOs, may think about facilitating short courses about BPR software or tools specially targeting the specific industry clusters.

ANNEX

PROGRAM SCHEDULE				
APO Symposium on Re-engineering for Higher Productivity 21-24 August 2001, Taipei, Republic of China				
Time	21 August (Tuesday)	22 August (Wednesday)	23 August (Thursday)	24 August (Friday)
09:00 - 10:20	(09:50-10:20) Opening Ceremony	APO Expert (2) "BPR-The Japanese Experience" by <i>Prof. Shigenobu Ohara, Chiba Institute of Technology, Japan</i>	ROC Resource (3) "BPR and ERP in Chinese Petroleum Corp." by <i>Dr Maw-Wen Lin, CPC</i>	(09:00-11:30) <ul style="list-style-type: none"> Syndicate Discussion Outcome Presentation by Group Closing
10:20 - 10:40	Coffee Break			
10:40 - 12:00	APO Expert (1) "Overview, Emerging Trends and Critical Issues on BPR for Higher Productivity" by <i>Prof. Mark Goh, National University of Singapore</i>	ROC Resource (2) "Productivity Improvement for Manufacturing in the K-Economy" by <i>Dr. George Huang, Acer Digital Services Corp.</i>	Country Paper Presentation (II)	
12:00 - 13:00	Lunch Break			

13:00 - 14:20	ROC Resource (1) The Way from "Brick-and-Mortar" to "Click-and-Mortar" by <i>Mr. Fred Huang, Taiwan Soft/Digimusic Co. Ltd, General Manager</i>	Field visit (AOPEN, Inc.)	Country Paper Presentation (III)	Open (An optional visit to Chinese Handicraft Mart)
14:20 - 14:40	Coffee Break		Coffee Break	
14:40 - 17:00	Country Paper Presentation (I)		Syndicate Discussion	
18:00 - 19:30			APO Farewell Dinner Ambassador Hotel	

FINDINGS OF SYMPOSIUM				
	Government	Manufacturing	Services	Common Threads
Common interpretation	<ul style="list-style-type: none"> change in working process impact of changing process should: <ul style="list-style-type: none"> – enhance efficiency – reduce cost – increase quality, services , profit 	Rethinking and redesign business process to create competitive advantage through cost reduction, quality improvement, reduce cycle time, increase in efficiency and breakthrough innovation.	Tool where a dramatic improvement in business processes are achieved through people using it as an enabler for customer delight	Dramatic business process change for the customer
Common triggers and drivers	<ul style="list-style-type: none"> Globalization decline in ROI lack of government funding 	<ul style="list-style-type: none"> change/crisis competitiveness vision leadership technology 	<ul style="list-style-type: none"> Changing business environment e.g. green production, environmental issues 	<ul style="list-style-type: none"> Globalization Competitiveness

<p>Success factors for BPR</p>	<ul style="list-style-type: none"> • pressure from donor agency • Rapid changes in IT • Commitment from all • Cooperation from stakeholders • Availability of skilled manpower at higher level • Availability of funds from relevant agencies • Political commitment • Sustained support from political parties and governments • Strong support for BPR 	<ul style="list-style-type: none"> • customer satisfaction • liberization of trade • globalization • Top management commitment • leadership • empowerment of all management levels • employee participation • clear goals & vision and strategies • environment / organization climate • communication 	<ul style="list-style-type: none"> • Competition e.g. mergers and acquisitions, globalization • Crisis driven e.g. industrial disputes, political unrest • Top management commitment • Expert and resourceful personnel • Appropriate technology • Right tools at the right time 	<p>Top management commitment</p>
<p>Constraints and barriers</p>	<ul style="list-style-type: none"> • Employees fail to cooperate after implementation due to unacceptable compensation and other policies of organization • Fail to identify competitors' strategy • Delay in 	<ul style="list-style-type: none"> • Existing labor management conflict • Culture, people mindset, attitude and character • Laws& regulations (Sri Lanka) • Lack of competition (monopoly) 	<ul style="list-style-type: none"> • Conventionalism e.g. traditions, culture, ethics, thinking • Composition of team members with different aspirations • Misalignment of corporate goals with BPR goals 	<p>Organizational culture</p>

	<ul style="list-style-type: none">• Improvement is highly sustainable• standardization of quality is a must• environment for change• delegation of power/empowerment		
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