
Army Requires Business Process Reengineering

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Michael Hammer was one of the founders of Business Processing Reengineering (BPR). In his article titled “Reengineering Work: Don’t Automate, Obliterate”, published in the *Harvard Business Review* in 1990, Hammer stated that it was time to stop paving the cow paths. He recommended that instead of embedding outdated processes in silicon and software, business houses should obliterate old processes and start over. This article aroused considerable interest and debate, and eventually led Hammer, together with James Champy, to formulate the “BPR Manifesto” in their key work *Reengineering the Corporation*, which was the most widely read management book in the 1990s, with almost two million copies sold in 15 different languages. BPR primarily emphasises the need to “reengineer” businesses and proposes use of the power of information technology to radically redesign business processes in order to achieve dramatic improvements in performance. At almost the same time, Davenport and Short predicted that information technology and business process redesign are the two tools that will transform organisations to the degree that Taylorism did earlier. In a short time, BPR became the hot new managing tool of the 1990s. By 1993, reportedly, some 60 percent of Fortune 500 companies had

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initiated some form of BPR.¹ Despite the low success rate and negative critiques, organisations – both public and private— still find it very relevant.

India has had a fair share of BPR implementations in the public as well as private sector. Some of the oft quoted case studies of BPR in India include organisations like the State Bank of India, Mahindra and Mahindra, ONGC, etc.

However, the Indian Army has remained untouched by the phenomenon so far. The very idea of implementing business process reengineering in the Army raises many hackles, even without a complete understanding of the nuances involved in such a proposal. The popular view is that the Army is all about leadership and operations. What the Army really needs is hard-core leaders who have the ability to motivate and discipline soldiers to accomplish military missions. Management best practices are for the corporates who are wooing profits and the Army is no business house, is the typical opinion of those who matter. Change in any organisation meets resistance. Interestingly, while the corporates meet resistance during the implementation stage, the Army's bureaucracy, at most times, resists the very idea of change at the conceptual stage itself. Therefore, before going any further on the idea of business process reengineering in the Army, it is essential that basic observations with regard to the applicability of such techniques are addressed.

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The Leadership vs Management Debate

Gen Colin Powell in his book *My American Journey*, says, “We never lost sight of the reality that people, particularly gifted commanders, are what make units succeed. The way I like to put it, leadership is the art of accomplishing more than the science of management says is possible.” The

primacy of leadership is unquestionable given the way most Armies define leadership. An emerging reality is that the significance of management has increased manifold given the quantum and costs of resources available at the disposal of commanders in the field. The debate on the issue goes a long way back in the Indian Army as well. The changing perceptions in our Army can be sensed by the way the environment and the organisation distinguish between selection for the Defence Services Staff College and the Technical Staff Course or, for that matter, even between nomination for the Higher Command Course and the Higher Defence Management Course. If yearly vacancies allotted for the Higher Command Course and the Higher Defence Management Course are to be taken as representative of the staffing demands of the Army, then the force requires at least two managers for every leader it trains.

Is the Army a Business?

Lt Gen Thomas W Spoehr, who is the Director of the Office of Business Transformation in the US Department of Defence (DoD), while speaking on the subject. “Is the Army a Business?”, said, “I think after due consideration, in the end, the answer to that question must be no. The Army’s sacred role is to protect the nation’s interests. The unique nature of the profession of arms transcends what we would consider typical for business.” However, the General also qualified that while the Army is not a business, if it is to be successful, it must exhibit “world-class” business practices and “if we tolerate inefficient business practices, we risk sending America’s sons and daughters into combat ill-prepared, and that’s most unacceptable.”²

What Gen Spoehr has to say about the US military is equally valid for the Indian Army. A mere look at the magnitude of numbers associated with the country’s defence forces would tell anyone that they need to follow world class practices to ensure that the nation’s resources are made good use of. The defence forces every year account for 12-13 percent

of the annual government expenditure. They are among the biggest fuel consumers in India, with an expenditure of over Rs 7,000 crore on petroleum products in 2012-13. The total defence land holding in the country is 17.56 lakh acres, an area of land which would be four and half times the National Capital Region (NCR). The Services Married Accommodation Project, responsible for construction of 198,881 dwelling units, is one of the largest construction endeavours in the world. Moreover, the forces have a huge, complex and diverse upstream and downstream supply chain which feeds and equips more than 1.3 million active combatants. Managing such an enormous force with outdated business practices will have a telling effect not only on the defence preparedness but shall also lead to avoidable and wasteful expenditure.

Who has the Ownership of Best Practices Today?

Who is currently using the world-class business practices is also crucial to establishing the necessity of business process reengineering in the Indian Army. Let us examine the case of logistics, a science used by both the military and the civil, to identify where the ownership of best practices rests. A comparison of the logistic practices in the civil and the military, over a period of time, would undoubtedly bring out the fact that historically, the military side of logistics has enjoyed a head start. The term logistics was originally used in the context of the military only. Undoubtedly, the military has had a head start due to the earlier adoption of research and the practice of various processes, tools and technology. However, the truth, as revealed by contemporary research, is that the civilian logistics and supply chain management surpassed military logistics at some point after World War II.

The primary reason for this shift is that the private sector companies are responsible to their shareholders requiring financial returns. Competitive pressures in these companies have steered and accelerated the evolution of business processes used by these companies. In fact, it would not be

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wrong to say that in the last two decades, the private sector companies have faced many a business process revolution on account of competitive pressures, sometimes threatening their very survival. In contrast, the defence logistics have largely focussed on being responsive to the needs of the soldiers in the field.³ There has seldom been competitive pressure. Field force commanders demand an assured supply of stores and are seldom aware of the cost at which the supplies are being made available. The absence of competitive and financial pressures has

slowed down the pace of the evolution of our logistic practices. Though there can be no direct comparison between the military and civilian supply chains, the Army may find some inspiration from Flipkart. Not from the fact that Flipkart's annual sales have reached US\$ 1 billion in just about seven years, but from the fact that it has the capability to process 17 orders per minute and its delivery time capability has improved from an average of *3-5 business days* to *one day delivery* to *same day delivery* in the seven years of its existence. On the other hand, the Army's distribution lead times just over a few 100 km between static customers have remained unchanged in the last three decades. Flipkart is one among many such stories that the Army could learn from. Without going into other civilian successes, it would only be prudent to examine the management revolutions that have stormed the corporate world in the last few decades.

Management Revolutions in the Past Few Decades

In the last two decades, many new management tools have revolutionised the way private sector organisations are managed. The most important of

these tools are benchmarking, total quality management, reengineering, and the learning organisation. A brief discussion on these and their influence on the Army's functioning is appended below.

- Benchmarking as a management tool that can be defined as the systematic process of searching for best practices, innovative ideas and efficiencies that lead to continuous improvement.⁴ In layman's terms, benchmarking implies identifying organisations with similar processes and better yield in terms of cost, quality, or time and

finding out how they are able to do better. The results from Rigby's survey in 1999 revealed that benchmarking was amongst the five most popular tools usually used by managers. More than 70 percent of managers worldwide reported using this tool in their companies.⁵ However, in the last fourteen years, the Army has remained isolated and inward looking and has made little effort to benchmark its core managerial processes with those that are best in the class.

- The Total Quality Management (TQM) movement swept the world in the late Eighties and the Nineties and was primarily centred on the idea of consistently improving a firm's processes in order to deliver increasing value to customers. TQM essentially revolved around doing things better, cheaper and faster. TQM success stories included names like Xerox, Motorola, General Electric, Marriot, Harley-Davidson and Ford. Service delivering organisations of the Indian Army were also influenced by the movement. ISO 9000 series certifications were sought by Ordnance Depots, Supply Depots, Repair Workshops and even a few Category A establishments. However, attention to the

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process has dwindled after the initial euphoria.

- Business process engineering was the hottest trend in management in the mid-1990s and was based on the idea of designing the business process afresh. It asks, “If this was an entirely new firm, how would you organise it?”

or “If you were to start all over again, how would you do it?”⁶

- Learning organisations comprise the hottest new trend of the last decade. As organisations grow, they lose their capacity to learn, but learning organisations are the ones which grow while retaining their capacity to learn. According to Peter Senge, who coined the concept, a learning organisation is based on five basic ingredients: systems thinking, personal mastery, mental models, a shared vision, and team learning. The Services organisations are yet to experiment with the concept.

It is apparent that the private sector has more motivation to evolve and has, hence, experimented very rigorously with newer management tools. On the other hand, the Army has remained rather untouched by the new age management tools that have impacted corporate business processes and enhanced their outputs rather dramatically. Therefore, a case exists to examine these tools and establish their applicability to the Indian Army. Having established the applicability, this paper attempts to analyse the necessity and methodology of utilisation of BPR by the Indian Army.

Business Processing Reengineering

The concept of BPR has been widely regarded as having been introduced as a perceived solution to the economic crisis and the recession of the late 1980s and early 1990s by many researchers. The 1980s were a time for financial reengineering and the 1990s for technological reengineering.

Hammer and Champy, in 1993, proposed that “BPR can help organisations out of crisis situations by becoming leaner, better able to adapt to market conditions, innovative, efficient customer focused and profitable in a crisis situation”. Business systems, especially in large companies, organically evolved into functional structures with individual fiefdoms such as marketing, personnel, manufacturing,

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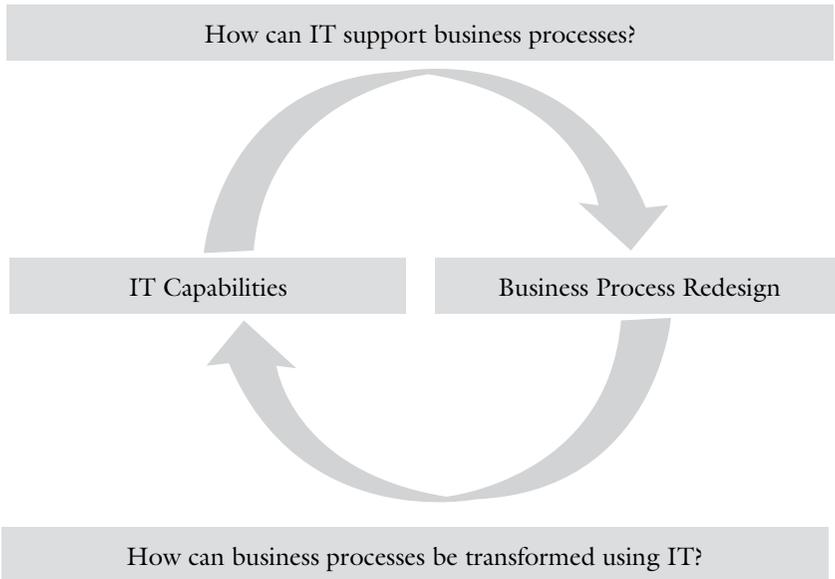
etc. These structures not only made business inefficient in terms of cost, ineffectual for rapid decision-making, inflexible to change and unresponsive to changing market conditions, the inherent nature of the structure encouraged the growth of the “functional silo” mentality and, consequently, the business systems tended to lose focus on the customers’ needs. BPR addressed such issues in a big manner and brought out the importance and centrality of processes. It encouraged radical realignment of workflows and processes to achieve unprecedented and dramatic improvements.

BPR has brought in a shift of emphasis from structures and functions to processes and at this point, it is essential that some of the accepted definitions of BPR and business processes are understood. Hammer and Champy in their book *Reengineering the Corporation: A Manifesto for Business Revolution* define BPR as 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. At the heart of business reengineering lies the notion of discontinuous thinking – identifying and abandoning the outdated rules and fundamental assumptions that underlie the current business operations.⁷ The idea is to *start with a clean sheet of paper* and to rebuild the business based on processes that are fast, flexible and have the capability to

deliver quality outputs consistently. The focus is on ‘fundamental rethinking’ by questioning the very assumptions underlying the present processes. The requirement is to reinvent business by leveraging the latest technology and consequentially achieving quantum leaps in performance.

Davenport, who is also considered a founder of the concept, defined business process redesign as the analysis and design of workflows and processes within and between organisations. Business processes were defined as a set of logically-related tasks performed to achieve a defined business outcome. Davenport and Short, in their paper on *The New Industrial Engineering: Information Technology and Business Process Redesign* suggest that Information Technology (IT) will have a strong role in business process redesign and go on to present the recursive relationship between IT and BPR. Importantly, BPR requires using IT as a leverage to fundamentally reshape the way business is done.

Fig 1



Further, BPR is distinctly different from process improvement achieved as a consequence of the adoption of the practices of Total Quality Management (TQM). The process improvement is achieved through incremental changes in existing processes through bottom-up participation, over a period of time, with statistical control as the primary enabler. The risk involved is moderate since the change is merely incremental and its execution time is small. In contrast, BPR is top-down radical change, with information technology as the primary enabler. Its execution takes considerable time and the associated risk is high.

In the context of the Services, particularly the Army, change has been largely through continuous incremental improvement. Changes to our core business processes are invariably pushed bottom up, small in scope, rarely inter-organisational, and even more rarely, radical. Avoidance of risk is another consideration which weighs heavy on the minds of decision-makers and this aspect again favours adoption of continuous improvement methods. Functional silos, departmental boundaries and differences amongst cadres also add up resistance to radical change. In such a constrained environment, IT has mostly been used to merely automate business processes as they have existed. A peep into the practices used by the Army to manage its finances, human resources or weapons, equipment and stores would tell anyone that the leveraging of technology for radical changes has been missing in almost all cases. The manner in which we make transactions involving information, stores or funds has not changed at all despite automation. It is time we leverage technology to design processes that forecast our stores requirements accurately, handle budget and funds more transparently and flexibly, and can yield force readiness status, which is updated real time.

BPR and Enterprise Resource Planning

The Enterprise Resource Planning (ERP) system is a business management system that comprises integrated sets of comprehensive, commercial off

the shelf software, which is used to manage and integrate all the business functions within an organisation. These sets usually include a set of mature business applications and tools for financial and cost accounting, sales and distribution, materials management, human resource, production planning and computer integrated manufacturing, supply chain, and customer information.⁸ The Army is at the threshold, or has been at it for a considerable time now, of absorbing a series of ERP implementations in its Service elements. The Service elements of the Army have projects in place to see through these implementations which would all be in the logistics domain.

There is strong connect between BPR and ERP implementation and, therefore, an understanding of their relationship is important. Firstly and foremost, implementing either of the two can be a very long and painful experience for any organisation and, therefore, needs to be done based on a very sound business case, with total commitment and support of the top level management. Secondly, executing and implementing, both are costly in terms of time as well as resources. Thirdly, the chance of achieving the desired objectives in both cases is not very high, given the historic success rates of BPR and ERP implementations. However, what is most pertinent is that BPR and ERP implementations are not substitutes, but complement each other. Ideally, a BPR implementation should precede the ERP implementation to derive maximum benefits. However, this may not be easy, as both are effort intensive, and demand two separate and distinct phases of organisational change. Alternatively, the BPR effort can be built into the ERP implementation itself. ERP packages offer many best business practices that might be worth including as a part of BPR and after the ERP implementation, one could get into continuous process reengineering.⁹ Instances of BPR post ERP implementation also exist.

Given that the Army has in place projects for ERP implementation and no institutional mechanism exists for executing BPR, it is a foregone conclusion that BPR would be included as a part and parcel of the ERP

implementation. This shall not only enlarge the scope, cost and time required for ERP projects but shall also increase the degree of difficulty of executing these implementations. Moreover, the advantages accrued from such implementations will be far less than those which would have yielded with BPR, followed by ERP implementation. Lastly, but not the least, coupling the two together increases the

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risk associated with such implementation, given the prevalent degree of resistance to change. The Army, therefore, needs to examine this aspect and explore the feasibility of phasing BPR prior to ERP implementation. The processing time of ERP projects has spanned over many years and in some case, even decades. While it is possible to implement BPR prior to ERP implementation, organisational will and resource allocation remain primary constraints.

BPR in the Pentagon

The US DoD has evolved the *Army Business Management Strategy* which aims to achieve cost-informed enterprise governance, improve the effectiveness and efficiency of business operations and achieve better alignment between business operations and operational forces. Further, the effectiveness and efficiency of business operations is under intense Congressional oversight and there is a series of statutory interventions which shape the endeavours with regard to business process transformation and the process of BPR.

In response to the National Defence Authorisation Act of 2005, the DoD established the Business Transformation Agency (BTA), tasked with modernising processes, systems and information flows to deliver 21st century enterprise level capabilities required to support national security requirements. The BTA continued with this task till 2011. Presently, the

Office of Business Transformation (OBT) assists the Army in transforming its business operations across the Army enterprise to more effectively and efficiently use national resources. The OBT achieves its mission by improving the effectiveness and efficiency of Army business processes, transforming business systems information technology management, promoting resource-informed decision-making and achieving an integrated management system.¹⁰

The DoD annually releases the Business Enterprise Architecture (BEA) to help defence business system owners and programme managers make informed decisions in support of the department. The BEA defines the DoD's Core Business Missions as an area of responsibility with functions and processes that provide end-to-end support to the war-fighter and also articulate the business transformation requirements. The five Core Business Missions are: Financial Management, Human Resources Management, Material Supply and Service Management, Real Property and Installations Life-cycle Management, and Weapon System Life-cycle Management. End-To-End (E2E) Business Flows are business processes that span Core Business Missions. These are 15 in number and include Budget-to-Report, Hire-to-Retire, Procure-to-Pay, Acquire-to-Retire, Concept-to-Product, Deployment-to-Redeployment/Retrograde etc. Leveraged from commercial/industry standards, each E2E business process represents a set of integrated business functions that fulfill a need identified by the DoD and are expected to evolve as DoD's business environment changes. The E2E framework provides the DoD with a guidepost, or management structure, to identify opportunities for streamlining business processes by examining their inter-related operational activities and by identifying gaps or redundancies.¹¹

Further, in big budget ERP implementations, BPR has to precede ERP implementation. Section 1072 of the National Defence Authorisation Act for Fiscal Year 2010 stipulates that defence funds for business system

modernisations may not be sanctioned in excess of \$1 million without completion of BPR. The Office of the Deputy Chief Management Officer in the US DoD has a holistic approach to BPR which includes a portfolio and End-to-End (E2E) perspective. The department defines BPR as a *“logical methodology for assessing process weaknesses, identifying gaps, and implementing opportunities to streamline and improve the processes to create a solid foundation for success in changes to the full spectrum of operations.”* This definition covers various perspectives of BPR and aligns with the principles of Doctrine, Organisation, Training, Material, Leadership and Education, Personnel, Facilities, and Policy (DOTMLPF-P) analysis.¹²

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Recommendations for the Indian Army

The Indian Army’s business process orientation is no different from the corporates who took to BPR. Antiquated and inflexible business processes with sub-optimal yields coupled with the “functional silo” mentality impair our business processes as well. The review of business processes has been mostly incremental and the scope limited to functional heads within the Army. There is an agency which can holistically review business process end-to-end, as they span well beyond the boundaries of the Army into other organisations, including, and under, the Ministry of Defence (MoD).

The Indian Army cannot avoid reviewing its business processes any longer given that in the coming years, numerous high investment ERP implementations shall occur. These implementations will thrust upon the Army the requirement of reengineering its antiquated procedures. Combining BPR with ERP implementations has its inherent risks.

If these implementations are to succeed, it is imperative that they are preceded by BPR. Therefore, the Army urgently requires creation of an institutionalised mechanism to address the following:

- Define core business missions required to support our operations.
- Define end-to-end business processes that span these core business missions.
- Steer BPR of the end-to-end processes with a view to achieve effectiveness and efficiency.
- Drive towards resource and cost informed decision making.
- Identify the requirements of business systems which can support the end-to-end processes.

Seventy percent of BPR cases fail. The top three reasons assigned to the failure are the absence of top management support, unrealistic scope and expectations, and resistance to change. Therefore, it is imperative that the said institutionalised mechanism is created as a standing establishment and not a collegiate body of representatives, by an order of the highest authority in the country, an Act of Parliament. It has to be empowered to recommend and implement changes across organisations and departments, besides the Army, to include the likes of the Controller General of Defence Accounts, Director General of Quality Assurance, Defence General of Defence Estates, Ministry of Defence and Ministry of Defence (Finance). Needless to say that to perform its assigned role, it should have a suitable composition, to include a variety of domain experts. The progress made by this agency should be monitored at least at the level of the Parliamentary Standing Committee on Defence (SCOD), in view of its importance and the fact that its scope is spread across various components of the MoD and the Army. Reviews by the SCOD can, and will, be the only motivation for an endeavour of such nature to succeed.

BPR is an inescapable requirement for the Army. The earlier we realise this fact, the better equipped and prepared the Army will be to support

the Army's operations. BPR implementation shall also ensure that the Army derives maximum value from the nation's resources that are placed at its disposal.

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