ABSTRACT

The purpose of this article is to bring to light the depth of involvement of industrialists on re-thinking their business processes. In a research study within several UK and Brazilian companies, two themes have appeared consistently; namely (1) a basic awareness of the importance of understanding business process flow, and (2) no clear demonstration of how business processes have actually been re-designed, or in some cases of how they have been considered at all. Possible reasons are given why some of these companies seemed to lose a BPR focus in favour of more urgent restructuring matters. The authors conclude that companies often lack a basic awareness of the concept of business process, and that misconceptions about these issues can lead to unrealised expectations at various levels in the organisation. Furthermore, the need for professionals able to view their work holistically and the educational role of Universities in changing the success rate of BPR programmes is emphasised.

Área: Gerência da Produção
Business process, cross-functional structure, BPR

1- Introduction

This article reports on eight comparative case study investigations of large scale re-engineering projects in manufacturing companies; four in the UK and four in Brazil. In order to understand the companies’ respective approaches to Business Process Re-engineering (BPR) practice, 30 interviews among directors, BPR team leaders, administrative and operational personnel were carried out over a 16 month period. The interviews were conducted on an individual basis and recorded on audio cassette to maintain the integrity of the respondents’ words.

The recorded meetings revealed interesting insights into the reality of BPR projects. The main barriers to business process re-design were found to be: a lack of real knowledge by company leaders about BPR concepts, rigid organisational structures, and human obstructions caused by insecurity arising from things that were not made clear. And all this many years after the first BPR implementations!
It seems, according to the observations, that the majority of companies that declared their change programme to be a BPR programme did so in order to be seen as a modern company following in the footsteps of successful large and well-known organisations that have declared good results out of their changes.

The reasons why some of the organisations undertook a BPR programme are in fact contradictory to the typical reasons given in the literature. For example, the literature stresses that re-engineering is not about restructuring, downsizing or acquisition of new technology (Hammer and Champy, 1993), which rather constitute ground preparation techniques for re-engineering. However, some of the organisations still have their ‘mind’ focused on specific issues or problems, believing that eliminating costs, or modernising certain areas, or contracting new skills, or building teams for discussing certain matters, or restructuring the shop floor into cells are the answer. By contrast the fundamental business processes of the organisation are neglected.

The paper uses grounded data, highlighted with quotations from the research interviews, to demonstrate some of the actions undertaken within the BPR projects investigated.

2- On communicating change and new definitions

It has been alleged that business process re-engineering has transformed the way managers behave in organisations, and the way they do business (Fisher, 1996). These changes have required clear and direct top management communication to all employees to explain the ‘new’ organisation’s alignment to the business process concept. Change means the intrusion of the new, the unfamiliar or the unknown into the ordered working world; as such, it can produce symptoms of fear, anxiety or insecurity (Harrington, 1991). Business process re-engineering entails an entire rethink of the way business processes operate, the flow of information within them and the way human resources are organised, which brings with it apprehension among staff (Davenport and Short, 1990).

People in all areas of the organisation, as implied by the re-engineering leaders interviewed, need to understand their role in re-defining the processes, and understand that error-free performance can be accomplished only by focusing everyone’s efforts on process improvement. One of the best ways to accomplish this is to issue a BPR message, clearly stating management's commitment to the programme and outlining the role every employee has to play in this important undertaking (Harrington, 1991). The human resource manager of company F (Brazil) says that there is no ‘one’ most effective approach to communications; he emphasises that organisations should use a number of different approaches to make sure that everyone ‘gets the word’.

The issues discussed during the research interviews raise concerns, directly and indirectly, to communication factors. Early difficulties in planning and implementing a BPR programme result from misunderstandings and misinterpretations of the concept. Later, during the implementation process, evidence of a lack of shared values arises either because the information has reached different levels with different ‘nuances’ or because it did not reach certain levels at all. The traditional ways of communicating change have been ineffective (superficial) and not flexible enough to deal with fundamental issues such as lack of homogeneous involvement, lack of shared vision and common beliefs.

As the re-engineering concept evolves within an organisational environment, the current structure has to support fundamental aspects of the concept. To re-engineer a business process, flexibility is a default apparatus that has to be in place.
Overall, communication has been recognised from the eight organisations investigated as the single most important factor to drive businesses to effective and continuous growth.

Although some of the case studies revealed that the organisations have been actually looking at ways of doing their work differently, looking at simplifying and then improving processes, the examples and experiences described show that many of the companies have been trying to improve their business processes on top of the old organisational structures. There has not been much evidence of investments made in order to understand their actual processes. The data shows that, in reality, when most of the companies investigated say they were re-engineering their organisation, actually they were spending most of their time on restructuring the business. There is an accepted understanding by some BPR advocates that in order to re-engineer processes there is a need to re-structure an organisation’s business first - for example, as in the case of this study, by delaying, downsizing, relocating, re-designing manufacturing, or updating systems (Hammer and Chamy, 1993). However, it was evident in this research that some managers believe re-engineering is nothing more than restructuring.

Findings show that very few of the organisations studied mentioned changes relating to the structure of business processes. Rather, the study has shown that in the majority of the case studies, the action taken has more closely resembled the broader aspects of a macro organisational transformation involving: business structures, hierarchies, job redefinition, information technology matters, etc.

Interestingly, the optimisation of business processes has been the current concern of all the companies consulted, but fundamental issues such as: lack of understanding of the change project proposed (even among higher levels of management within the same company), lack of consistent information at several organisational levels, and a high degree of misinterpretation of business process concepts have been an inhibitor of fundamental implementation of changes.

3- What’s in a ‘business process’?

Several management theories had touched on the business process concept, but not done anything with it; rather, they have insisted on trying to improve the quality of products and management by simply implementing technology on top of obsolete structures and processes (Schmidt, 1994). However, according to the BPR advocates, the BPR fundamentally focus on the following two activities: first, defining how the organisation operates in terms of business processes, and second, analysing and reviewing each business process (mapping technique), which would include measuring and benchmarking process performance (Fisher, 1996). Such activities would certainly drive organisations to identify how processes cross beyond the boundaries of a single function.

The following statements help examine some of the practitioners’ definitions, as well as giving examples of business processes to demonstrate their understanding of this concept and subsequently comparing it with literature definitions.

Company B (UK):

The business quality manager defined a business process as:

“a series of interrelated work steps organised to meet a business objective. It will impact the people who operate the process, the way they work, the information and documents they need and the technology (telephones, PCs, ...) they use”.
Referring to the business processes being re-engineered the manager said:

“Company B is making considerable investment in ‘re-engineering’ its operations world wide. The company has some four years experience of business process re-engineering and our initial work focused on: (a) order management (b) field engineering - taking a customer call for a product installed but not functioning correctly and responding with a process that makes sure the customer is satisfied. However, over the last two years the business processes undergoing fundamental change include: (a) sales (b) market management (c) invoicing of collection (d) service management (e) product development and launch.”

Company G (UK):

The material flow manager defined a business process as:

“Any logical group of activities that have defined inputs and outputs and is replicated”.

The company’s first experience of re-engineering a business process started with the ‘supply-chain’. The manager stated:

“The company has decided to select a specific supply-chain for its characteristic of being a small and simple business process. Having learnt from this one, other complex business processes are the next objective”.

Company F (Brazil):

The definition of business process, as given by the industrial strategy manager, on the services site, is:

“All service processes and processes that support production processes. A business process consists of a group of logically related tasks that use the resources of the organisation to provide defined results in support of the organisation’s objectives”.

The manager stated that two business processes have been selected to be re-engineered:

“(a) integrated supply chain (b) product delivery process”.

Company H (Brazil):

The quality manager declared:

“business process represents all stages of the business, starting with the creation of a project, followed by the approval of the concept, prototype construction, validation, design, etc.”.

According to this manager, the company’s business processes being re-engineered are:

“(a) design process (b) product development (c) process development (d) quality system audit (e) material handling (f) production control and scheduling”.

The re-engineering concept, as implied by Talwar (1993), basically ignores traditional functional and organisational boundaries. According to Talwar, companies should place an emphasis on designing and implementing efficient cross-functional processes or so-called ‘business processes’. Other key authors in the BPR literature define business process as:

“a set of logically related tasks performed to achieve a defined business outcome” (Davenport & Short, 1990);

“a group of logically related tasks that use the resources of the organisation to provide defined results in support of the organisation’s objectives” (Harrington, 1991);

“a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer” (Hammer & Champy, 1993).

It can be seen that the companies investigated give definitions of business process with a slightly, but significantly, different emphasis compared with those given in the literature. By its very nature, business process is about cross-functional teams, where elements of different
areas are brought together during a re-engineering project, moving the company closer to its fundamental objective, to remain in business.

Perhaps even more alarming is a lack of congruence between the definitions provided above and the practices observed within these four companies. The research observations suggest that although the concept and vision exist, the practices in place are not so well aligned to them. The remaining four companies have not, for different reasons, participated in this specific survey. However, evidence of business process investigations was presented by company A (UK) in the preliminary interviews. At corporation level, directors at company A had decided to contract, at initial stages of their BPR programme, a consultancy to assist them in breaking down and analysing their processes. A technique called ‘Brown Papering’ was applied, consisting of a complex flow chart where boxes were represented by ‘Post-it’ notes describing individual activities of the process under analysis on a wall of brown paper.

4- Migrating from a functional to a cross-functional structure

In a functional organisation, departments are focused on meeting their own goals. In other words, departments do not own all of a process, they simply perform an activity and then pass the result on to another department (Turner, 1994). Evidence in the case study has shown that the majority of wasteful activities occur at the boundaries of traditional departments. This is aptly revealed by the statement of a machinist on the shop floor at company A (UK):

“It might be better if while the design team are studying what they intend to design, they come down to ask us if that idea would work. Instead of which they just go ahead and produce a drawing that won’t work here, either because our machines are not capable to do that or because we cannot understand what they mean by their drawing”.

This is only one example of a communication problem between two groups, the designers and the doers, where, as an analysis of the process goes deeper, bureaucracy and obstructions appear to get in the way of cross-departmental interactions.

As the core of a BPR effort is on analysing business processes and the term business process implies a horizontal flow of work or activities (Harrington, 1990) it may be expected that great emphasis will be placed on transforming a vertical (functional) structure to a horizontal one (cross-functional). This is confirmed in the data collected here.

It is expected, when operating a business cross-functionally, that re-work and bureaucracy, and therefore, time and budget overruns would be eliminated. Turner (1994) declares that:

“In a reversal of Adam Smith’s skill specialisation principles, the re-engineering approach was built around business processes with teams of people performing cross-functionally an entire process”.

Because many business processes cross functional boundaries, often companies have been restructuring their organisation’s hierarchy by flattening it in order to facilitate the horizontal flow of activities as stated by the production manager from company E (Brazil):

“...with many people driving a process it’s impossible to avoid conflicts; that’s why we’ve reduced our hierarchy. We realised we don’t need too many bosses. If you have a person with authority to cross functions as well as people from other functions working as a team you can have a more effective process, and consequently be more productive”.

Evidence from the eight case studies investigated shows that without exception all companies have been through a kind of restructuring, essentially by layering their
structures, and a certain degree of migration towards a cross-functional organisation has always been present.

In the later stages of the research, Figure 1 was presented to the team leaders to verify whether they could identify their company in one of the situations [1] or [2]. Most of them stated they were migrating towards [2]. However, ‘human barriers’, were cited as preventing the organisation from moving to structures which more closely resembled the flexibility implied by the re-engineering concepts represented by structure [2]. According to the team leaders, a strong cultural transformation had to happen first. A few others, like the manager of employee development from company C, stated that the reason why they have been delayering and replacing some of their people was because their traditional attitude of working, fuelled by operating under a type [1] structure, has been blocking changes.

Figure 1: Traditional versus re-engineered organisational structure

Key

F1... FN = Function 1 ... Function N; where F1 could be purchasing and FN distribution.

Business Process 1 could be, for example, a product development and introduction which could include product design → testing → configuration → manufacturing → documentation.

Business Process N could be administrative support.

Re-engineering requires a fresh look at the fundamental processes of business from a cross-functional perspective, according to Harrington (1991), where the traditional (functional) structure gives way to a cross-functional one.

According to some practitioners the benefits of working cross-functionally are many. The process line manager at company G (UK) states:

“I’ve certainly seen a difference. We have improved the communication significantly between each of the functions to get a much better understanding of the issues through the information flow, from suppliers right to the end-customers. So, I think we are much more like [2]. We’ve definitely moved from [1]”.
Another benefit when moving to a cross-functional structure is reported by a business quality manager at company B (UK), on the manufacturing site. By using one example he explains:

“...we at company B instigated a project where we would put together the sales people, delivery people, and production people, creating a trans-functional team to look at the total market, the total supply-chain. That project resulted in quite a few changes in the way we work. When we go for a session we start saying: ‘this is where we are and this is the flow process’. Then, we go through brainstorming sessions with all the people. We’ve got different levels of people within a cross-functional interchange. Usually we come up with a very good set of ideas. Then, we actually go in and do them”.

The advantages of moving to a cross-functional structure, as reported, are many. However, the disadvantages can be catastrophic if the company misinterprets the cross-functional concept. Consider company B (UK), on the services site, where one person, in this case a team leader engineer, was by himself responsible for many distinct functions at the same time. In this case, the cross-functional concept was attributed to only one person’s responsibility rather than to a team. The researchers believe here that the multi-skilling concept went too far. This is reflected by the engineer of that company:

“I don’t believe I’m capable of doing somebody else’s job, in the same way he is not capable of doing mine. For example, consider the service force, which is comprised of people that are educated to be engineers. We chose to be engineers at school. We weren’t educated to be marketers, administrators, or human resources people as [our managers] are imposing on us through this self management work group concept that has been implemented into services. We could collaborate a bit in other areas, but not compulsory collaboration. They want us to be able to run company B, but we can’t”.

5- Conclusion

Although business processes have received greater attention in the companies since re-engineering appeared, few of the staff interviewed could define a business process and/or give examples of how they were re-designing them. Rather they would talk about their conceptual vision of what they needed, or about visible and large transformations on the hierarchy, physical relocations, and an extensive network/computing infrastructure they were implementing which would, according to them, enable inter-disciplinary work.

The business process changes verified were not supported by process mapping tools, but rather by a more intuitive and superficial analysis of immediate needs of a macro process, except as shown by the implementations of by companies B and F, and at the initial stages of company A. From the analysis, most of the companies studied began by eliminating what the managers considered non-valued added activity, which drove them to dismiss many people while overloading others without appropriate skills to assume instantly those responsibilities.

Throughout this study two themes have appeared consistently within the companies investigated; namely (1) a basic awareness of the importance of understanding business process flow, and (2) no clear demonstration of how business processes have actually been re-designed, or in some cases of how they have been considered at all. In the majority of the companies investigated a deeper consideration of business process aspects were hindered by the situations described below:

- other emergent needs to do with flattening the organisation’s structure;
- unskilled people who were not trained/educated in re-engineering concepts;
• cultural aspects blocking key structural changes such as cross-functional and networking systems, as well as blocking attitude and behaviour changes such as empowerment, team working, partnership, etc.;

• general divergence and misunderstanding concerning the business process re-engineering concept, leading to dissatisfaction and discreditation of the re-engineering concept by practitioners.

This article aimed to demonstrate some of the facts and reality of what has actually been happening within the re-engineering period. The findings suggest the importance of giving greater attention to the task of educating simultaneously top and middle management by upgrading their skills towards an interdisciplinary involvement. This activity undoubtedly represents the foundation of a business process re-engineering project. Letting top and middle managers understand why and where the barriers occur in the first place, what business processes are and how they individually contribute or affect other business processes. There is a need to stimulate lower levels of the business chain to get into this business transformation, a transformation that focuses on how the work can be done more efficiently.

Another suggestion touches on the vital role of the Universities to educate professionals to fulfil the actual needs of the market. Externally, globalisation, and internally, cross-functional and team concepts, have been driving employers to search for specialists with broad holistic job domains. In order to move from the Taylorism era (specialists) to the re-engineering era (specialists + generalists) it is vital to build in the contribution from the academics to form (educate) a *flexibly minded professional* with an interest and disposition to question and interact with other disciplines.

**References:**


