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**INVESTIGATING REENGINEERING TEAMS IN THE CONTEXT OF BUSINESS  
PROCESS CHANGE**

**A THESIS SUBMITTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY**

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**ABSTRACT**

*This research is concerned with investigating reengineering teams in the context of business process change, or more widely known, business process reengineering (BPR). Business Process Change, on the one hand, is still considered as being an approach that is required in recent times. Reengineering teams (teams that are involved with the planning, analysis and design of the approach) on the other hand, have been viewed to be essential for the development and implementation of BPR. Bearing these points in mind, it was discovered that although the reengineering teams area warrants attention, there has been little attention paid to it.*

*In the reengineering area, specifically, this research aims to address two main issues: first, the role of reengineering teams in business process change and second, the human and organisational aspects that surround the teams. For this, the research applied several steps and they are described in the following paragraphs.*

*To discover the role of the reengineering teams in the context of business process change, it was initially assumed that the foundations of the BPR lie in organisational change. Using this assumption, it became simpler and clearer to determine the exact role of teams. With regards to the human and organisational aspects, a strategy unique to the topic was adopted. At the outset, some human and organisational aspects that are more commonly found in the organisational behaviour and psychology areas were revealed and research with regards to these particular aspects was described.*

*Whilst that was the theoretical side of the research, the research then had to determine whether the deductions formed from the theoretical side were evident in practice. For the empirical results, the research used a combination of approaches in order to obtain the desired results. A qualitative approach that has its foundations in Interpretivism was the methodology used in the research. The ontology assumed then that subjective meanings could be assumed to reconstruct reality. Evidence from practice was obtained using initially, two pilot studies.*

*Further, a multiple case study strategy and the research techniques of mainly, interviews and referring to archival documents were utilised.*

*Once the data was analysed, a theory that could be used for future research in the reengineering teams area was developed. This was arrived at using a combination of certain grounded theory techniques, particularly, the forming of categories and coding. The findings suggested that reengineering teams are imperative for BPR and that some of the selected human and organisational aspects are evident in the newly formed theory.*

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# 1 INTRODUCING BUSINESS PROCESS CHANGE AND REENGINEERING TEAMS



## 1.1. INTRODUCTION

In the present environment, change is an inevitable prospect that affects every organisation (Scott-Morton, 1991; Sadler, 1995; Hsiao and Ormerod, 1998). To obtain a smooth change is inherently viewed to be a difficult task (Hannan and Freeman, 1989). In view of such assumptions, change programs (Schaffer and Thomson, 1992), or “programmed” approaches (as they are also known) to organisational change (Sadler, 1995) such as Business Process Change, Process Innovation or more widely known as, Business Process Reengineering (BPR) are being employed.

Grover and Kettinger (1998) found that: “Business Process Reengineering (BPR), Process Improvement, Business Process Redesign, Process Innovation and Process Improvement” are terms used interchangeably to represent the phenomenon of “Business Process Change.” Based upon this observation, it can be noted that the research used the term BPR and Business Process Change interchangeably.

Business Process Reengineering is a management change approach that still holds the interest of both academics and practical researchers (Willcocks and Currie, 1996; ProSci, 1999, 1998). This can be confirmed by determining the number of articles still being published about the topic both within academic journals and projects on BPR being funded by various research bodies and reports.

Following similar trends as the previous change management approaches, BPR was also popular at the time of introduction, but as time progressed, high rates of failure emerged and research into the causes of these failure rates began (Hammer and Champy, 1993; Grey and Mitev, 1995; Business Intelligence, 1994). Hammer and Champy (1993) estimated that approximately 70 % of BPR projects failed. To the present day, this estimation is quoted, however the data to substantiate this claim has still not been presented. Instead, authors have found evidence that displays reengineering projects consistently falling short of the dramatic or expected benefits (Hall *et al*, 1993; Moad, 1993; Willcocks and Currie, 1996). For instance, 100 companies were surveyed to determine the success of their BPR projects and it was found that of the 100, only 18 companies reported completed projects that resulted in a 20 percent increase in profits and reduced the costs of doing business by over 10 percent.

To prevent the high rates of failure, researchers began to question the origins, nature, and applicability of BPR and attempted to provide suitable and appropriate answers (Earl, 1994; Grint and Willcocks, 1995; Currie and Willcocks, 1996; Willcocks and Currie, 1996; Aggarwal, 1997; Biazzo, 1998). Theorists have emphasised that an engineering perspective that has considered the influence of other factors such as the human ones may provide suitable solutions and prevent the failure rates (Scott-Morton, 1991; Davenport, 1993; Francis and Southern, 1995; Coombs and Hull, 1995; Wellins and Rick, 1995; Oram and Wellins, 1995; Avgerou *et al*, 1995; Corrigan, 1997). Indeed, results from literature findings also support the view that the human, political, and social aspects *need to be* considered and should *not* be forgotten (Moad, 1993; Belmonte & Murray, 1993; Mumford, 1999).

Teams have been considered an imperative factor for the successful implementation of BPR. However, theorists in the BPR area have not considered any factors that are affecting their performance or the development of the teams. Teams that are not well developed display signs that the team will not function and perform well as there are no arrangements that have been undertaken to understand their strengths and weaknesses and to prepare the teams for the road ahead. This is viewed to be a major factor leading to failure within teams (Robbins and Finley, 1997).

This research will attempt to investigate the human aspects identified from the extant literature that have an impact both upon the individuals working for the organisation and also upon the organisation. Once this is achieved, attempts will be made to determine using the proposed research methods whether the identified aspects are indeed relevant for the development of the reengineering teams. Reengineering teams are viewed to be different to other teams that are required for organisation wide continuous improvement on the basis that reengineering teams are required to be familiar with particular processes and with the enablers of change. Examples of enablers of change include technology and the information to be used to obtain the change (Davenport, 1993; Harrington, 1991).

Teams are not only fundamental for the BPR area, they have been considered essential to obtain organisational change and for the management of a project. Within the organisational change area, theorists have been asking for an identification of the most important characteristics having an impact on performance to be identified (Porras and Robertson, 1992).

Thereafter, the dissertation will attempt to propose a suitable framework that will identify and provide an understanding to the reader the issues studied with regards to the teams undertaking BPR. Thus, in addition to the characteristics that surround such teams, an understanding of the human and organisational aspects within teams that are used in organisations undertaking Business Process Reengineering (BPR) will be provided.

The research objective is to develop academically researched cases that provide counterpoint to the many researched cases found in the literature. As such, the aim is not to

provide theory that describes how success or failure in BPR is achieved, or cases of successful or unsuccessful BPR. Instead the aim is to investigate in-depth the issues that emerged with regards to the reengineering teams.

The purpose of this chapter is to introduce both the topic of interest in the research and the contents and structure of the dissertation. First, the chapter will set the scene for the undertaken research. Then, a description and discussion of the objectives, the expected contribution of the research and the motivation for the research will be provided. Thereafter, an introduction to the research methodology pursued in the dissertation, followed by an overview of the chapter and the contents of the proceeding chapters are stated.

## 1.2 BACKGROUND TO THE RESEARCH PROBLEM

This section addresses issues relevant to BPR. Basic information about change management approaches is firstly provided. Business Process Reengineering is viewed to be an approach belonging to several areas, however, the area that it is mostly associated with, is change (Sarker, 1997). The research that has been done in this regard in the BPR area is reviewed. Thereafter, the section addresses issues such as the relationship between management change and BPR, the focus of BPR, the definitions of BPR and the relationship between BPR and teams.

### 1.2.1 MANAGEMENT CHANGE APPROACHES

Present trigger factors in the economic, technological, political and social environment have made it an inevitable prospect that an organisation will undergo change (Scott-Morton, 1991; Sadler, 1995; Hsiao and Ormerod, 1998). To deal with the change in an appropriate manner organisations conform themselves to the new conditions by reshaping the way that they operate (Rockart and Short, 1989). To achieve the desirable outcomes several alternative methods, tools and techniques have been developed and applied (Kettinger *et al*, 1998). The most prominent of these alternatives have been management change approaches. These are

theoretical or practical approaches that have been proposed to assist organisations to manage, plan and co-ordinate change management initiatives (Giaglis, 1999).

There have been a number of approaches that have emerged through time, ranging from Total Quality Management (Drury, 1992), Just-In-Time Manufacturing (Harrison *et al.*, 1995) and the more recent and presently popular, Business Process Change (Grover and Kettinger, 1998). The Just In Time Manufacturing method involves “*a continuous approach commitment to the pursuit of excellence in all phases of manufacturing systems design and operations*” (Drury, 1992). The aims of this approach are to produce required items at the required quality and in the required quantities, at the required time. Its main purpose is to improve delivery of products to customers and not inventory reduction.

Total Quality Management “concentrates on spreading quality consciousness throughout an organisation, characterised by attention to operational detail and discipline and by the encouragement of enthusiasm for quality improvements among the workforce” (Harrison *et al.*, 1995). TQM typically comprises stages of inspection, quality control, quality assurance and quality management. Table 1.1 developed by Peppard and Rowland (1995) summarises the differences between the three approaches.

**Table 1.1 Summarising the Differences between JIT, TQM and BPR**

Source: Peppard and Rowland (1995)

ELEMENT	TOTAL QUALITY MANAGEMENT	JUST-IN-TIME	BUSINESS PROCESS CHANGE/REENGINEERING
Focus	Quality Attitude to customers	Reduced inventory Raised throughput	Processes Minimise non-value added
Improvement Scale	Continuous Incremental	Continuous Incremental	Radical
Organisation	Common goals across functions	‘Cells’ and ‘team working’	Process based
Customer Focus	Internal and external Satisfaction	Initiator of action ‘pulls’ production	‘Outcomes’ driven
Techniques	Process maps Benchmarking Self-assessment SPC Diagrams	Visibility Kanban Small batches Quick set-up	Process maps Benchmarking Self-assessment IS/IT Creativity/out of box thinking
Process Focus	Simplify Improve Measure to Control	Workflow/ Throughput efficiency	‘Ideal’ or Streamlined

From Table 1.1 it can be seen that although the approaches are different in many aspects, a common element evident amongst them is that they express the view that the organisation has to undergo change in some form or another. What is also well known is that change is not always obtained successfully. Researchers have been examining the areas to determine how improvements can be made in order to achieve success. BPR is no exception and as aforementioned, failure rates with this approach are also high and therefore researchers have been examining the core of this recent approach.

### 1.2.2 INTRODUCING BUSINESS PROCESS REENGINEERING/CHANGE

Business Process Change is the most recent of the aforementioned approaches and is also known by other terms as the following citation demonstrates: “*Business Process Reengineering, Process Improvement, Business Transformation, Process Innovation, and Business Process Redesign are terms used interchangeably to represent the phenomenon of Business Process Change*” (Grover and Kettinger, 1998).

BPR has been applied for a number of reasons. These include the reasoning that previous management approaches focused on traditional ways of thinking about and managing organisations and they are becoming outdated in their ability to deal with a constantly changing environment (Peppard and Preece, 1995). In addition the view is held that “a major new management theory or philosophy appears on average every five to ten years” (Morgan, 1995). It is also believed that BPR has built on the body of existing knowledge from the other approaches and applies it with a new and particular focus (Peppard and Rowland, 1995).

Davenport and Short (1990), Hammer (1990) and Venkatraman (1991) were amongst the first to introduce Business Process Reengineering. In the introductory phase, the role of Information Technology (IT) in obtaining the desired change was emphasised. The issues surrounding the role of IT were considered by researchers, however, the approach itself was not made popular until 1993, when formal introductions by both Hammer and Champy (1993) and Davenport (1993) were made. At this time, BPR was defined “as the radical rethinking of



business processes to achieve dramatic improvements in critical contemporary measures of performance such as cost, quality and speed” (Hammer and Champy, 1993). A holistic view to the approach was provided and several aspects, including the role of IT and the human ones were stated. Some of the changes that occur as a result of BPR were summarised by Hammer and Champy (1993) and are presented in Table 1.2.

**Table 1.2 Changes occurring in an organisation as a result of BPR**

Source: Original data obtained from Hammer and Champy (1993). Reproduced from Currie and Wilcocks (1996).

Changes occurring in:	The Traditional Organisation	The Reengineered Organisation
a) Organisational Structure	• Hierarchical	• Flat/delayed
b) Work Units	• Functional departments	• Process Teams
c) Nature of Work	• Simple tasks	• Multi-Dimensional
d) Employee roles	• Controlled	• Empowered
e) Managerial roles	• Supervisors	• Coaches
f) Executive roles	• Scorekeepers	• Leaders
g) Value System	• Protective	• Productive
h) Job Preparation	• Training	• Education
i) Promotion Criteria	• Performance	• Ability
j) Performance Measurement and Compensation Systems	• Activity (Inputs)	• Results (Outputs)

### 1.2.3 BPR AND PROCESSES

BPR has been viewed to have a common element to some of the previously mentioned change management approaches, which is transforming the business in some way. However, a large difference is that BPR is renowned for its focus on ‘processes’ (Sadler, 1995). Processes have been an integral part of organisational design (Earl *et al*, 1996; Feeny *et al*, 1996) and have been used to describe characteristics of organisation structure, work role behaviour and resource interdependence (Mohr, 1982; van de Ven and Poole, 1990).

Processes are also viewed to be the manner by which work in an organisation gets done and therefore a distinguishing characteristic (Venkantraman, 1991) that leads to a competitive edge (Armistead and Rowland, 1996). Definitions of processes in the BPR area have looked at the structure and specific ordering of work and the focus of the processes crossing firm boundaries. These are ideas extracted from the Industrial Engineering and Systems Dynamics areas (Forrester, 1961). What emerges from the discussions is that a process is a change of the inputs and outputs of tasks within an organisation. Further, each of the researchers has defined it in these terms but in addition has included other aspects such as including the viewpoint of the customer (Hammer and Champy, 1993). For a detailed discussion about this concept, refer to Appendix A.

#### 1.2.4 DEFINING BPR

When examined closely it can be seen that the theory relating to BPR is ground in theories from other disciplines. This is a view shared by many theorists (Earl, 1994; Grint and Wilcocks, 1995; Francis and Southern, 1995). From the definitions provided below, it is evident that firstly, BPR is an IT-enabled change, a different and recent form of organisational change and evidence of the information systems area (Alter, 1990; Butler Cox Foundation, 1991; Schnitt, 1993; Hall, Rosenthal and Wade, 1993). Secondly, it has foundations in the organisational behaviour and analysis area (Tapscott and Caston, 1993; Poh and Chew, 1995; Smith and Willcocks, 1995 and Loh, 1997, 1995). Thirdly, evidence of theories regarding Project Management is also apparent (Poh and Chew, 1995; Earl *et al*, 1996). Fourthly, organisational change, which has been identified as rapid change, is also described in the definitions (Hammer and Champy, 1993; Teng *et al*, 1994; Alter, 1990).

The foundations of BPR are composed of theories from other disciplines is a well-known belief (Peppard and Preece, 1995). This belief will be demonstrated in the next chapter where the thoughts from the other disciplines will be explored and demonstrated. For the purposes of

this chapter as an introduction to this opinion, and to demonstrate the existence of this view, the following definitions are provided in Table 1.3.

**Table 1.3 The Diverse Definitions of Business Process Reengineering**

Author	Year	Definition of BPR
Tapscott and Caston	1993	"A fundamental reevaluation/redesign of a company's business processes and organisational structures in order to achieve dramatic improvements in its critical success factors-quality, productivity, customer satisfaction and time to market etc."
Hammer and Champy	1993	BPR is the " radical rethinking of business processes to achieve dramatic improvements in critical contemporary measures of performance such as cost, quality and speed"
Morris and Brandon	1993	"BPR is redesigning business processes and then implementing the new processes."
The AT&T Quality Steering Committee	1991	"Reengineering is the redesign and implementation of a process to meet new customer requirements or achieve significant improvements in process performance."
Hall, Rosenthal and Wade	1993	"Reengineering is the redesign and improvement of business processes both in depth (roles and responsibilities, measurements and incentives, organisational structure, information technology, shared values and skills) and breadth (activities to be included) which can lead to long term profits."
Teng <i>et al</i>	1994	"BPR is the critical analysis and radical redesign of existing business processes to achieve breakthrough improvements in performance measures."
Davenport and Short	1990	"Business Process Redesign is the analysis and design of workflows and processes within and between organisations."
Alter	1990	BPR is "a methodical process that uses Information technology to radically overhaul business process and thereby attain major business goals."
Butler Cox Foundation	1991	"...a way of transforming the business, which frees it from the restrictions of the traditional approach by cutting across functional divisions. Information systems...are the fundamental ingredient of redesigned business processes..."
Poh and Chew	1995	"Business Reengineering is a total replanning and redesign of manpower consisting of individuals, internal system, and structure, and processes in direct or indirect response to external forces, in order to achieve some objectives which are usually not easy to achieve given current conditions of an organisation."
Business Intelligence	1993	"The transformation of a company from one

		based on functions such as accounting, marketing and manufacturing to one based on processes such as order processing and fulfilling customer expectations.”
Schnitt	1993	“BPR is redesigning work to take advantage of the demographic and technological changes that have emerged since the advent of Scientific Management.”
Dixon <i>et al</i>	1994	“Reengineering is the radical or breakthrough change in business process. Reengineering process designs seek dramatic orders of magnitude, as distinguished from incremental improvements in business value.”
Keen and Cummins	1994	“BPR is the redesign of functions and activities to improve efficiency and quality of products and services. The base of reengineering is to take a fresh look at work processes and remove as many documents, people, administrative procedures and delays as possible. The redesigned processes usually rely heavily on telecommunications and information systems to achieve the productivity and efficiency gains.”
Lowenthal	1994	BPR is “the fundamental rethinking and redesign of operating processes and organisational structure, focused on the organisation's core competencies, to achieve dramatic improvements in organisational performance.”
Smith and Willcocks	1995	BPR is a “means of facilitating significant, even fundamental change in the way the organisation operates.”
Kettinger <i>et al</i>	1998	“BPR is an organisational initiative to accomplish strategy driven (re)design of business processes to achieve competitive breakthroughs in quality, responsiveness, cost, flexibility and satisfaction. These initiatives may differ in scope from process improvement to radical new process design.”
Peppard and Rowland	1995	BPR is an “an improvement philosophy. It aims to achieve step improvements in performance by redesigning the processes through which an organisation operates, maximising their value added content and minimising everything else. This approach can be applied at an individual process level or to the whole organisation.”
Earl <i>et al</i>	1996	“Business Process Reengineering in its current usage is referred to as approaches for initiating and managing ‘radical’ changes in existing processes.”
Loh	1997	BPR is “a multidisciplinary approach to implementing fundamental change in the way work is performed across the organisation with the goal of dramatically improving performance and stakeholder value.”

Apart from proving that different disciplines underpin BPR (of which, a certain amount of discussion has been provided earlier, the definitions also display the various descriptions that have been provided through the times.

### 1.2.5 BPR AND ORGANISATIONAL CHANGE

An important focus area of BPR has been determining the type of organisational change that it obtains. From the time that BPR was introduced to both the practising and academic worlds, researchers have been attempting to determine the type of change that BPR entails. That is, to determine whether BPR is indeed a radical change in processes as emphasised in the formal introductions (Hammer and Champy, 1993; Davenport, 1993) or is it some sort of an incremental change (Harrington, 1991; Geisler, 1996). A radical approach involves risky departures from existing procedures and practices (Duchesneau *et al*, 1979; Ettl *et al*, 1984), whilst an incremental one represents minor or simple adjustments in current practice (Munson and Pelz, 1979).

Davenport (1993) investigated the type of change that BPR is in terms of the time span, the type of change and other aspects, such as the type of support required from within the organisation to obtain BPR and the results are displayed in Table 1.4.

Following such distinctions, research results indicate that some organisations have been using BPR in an incremental manner and in such cases, organisations could be utilising a piecemeal approach (Talwar, 1996). This is a direct contradiction to the view held by some of the other researchers (Hammer and Champy, 1993) or to the results demonstrated above. The contradiction of views was also evident within the processes being reengineered. The processes being reengineered seemed existing ones rather than new ones being identified and obtained. In the instance of existing processes, an improvement, rather than a radical change was being sought (Willcocks and Currie, 1996). However, some researchers have pointed out that the incremental improvements undertaken over a number of years could achieve the same results as radical reengineering (Craig and Yetton, 1994).

Table 1.4 Differences between a Process Improvement and Innovation

Source: Davenport (1993)

	IMPROVEMENT	INNOVATION
Level of Change	Incremental	Radical
Starting Point	Existing processes	Clean slate
Frequency of Change	One time, continuous	One time
Time required	Short	Long
Participation	Bottom-up	Top-down
Typical scope	Narrow, functional	Cross-functional
Risk	Moderate	High
Primary enabler	Statistical Control	IT
Type of change	Cultural	Cultural, Structural

An indicator that a radical change was not being obtained was also evident from the budgetary spend that an organisation made. An example of the spending that medium and large organisations incur was employed and it was found that: There was a low size of spend as only 43% of medium and large organisations incurred BPR related expenditures of less than £1 million (Grints and Willcocks, 1995). As a result of radical BPR, large jobs losses occur and it was found that staff redundancies averaged less than 5% of the total BPR costs (Currie and Willcocks, 1996).

Researchers have found several ways to determine whether a radical as opposed to an incremental approach is being applied within an organisation (as discussed above). This distinction does help when distinguishing between the types of change being pursued. However, the problem lies in that when stating the answers to these questions, some organisations are not always clear about the type of change. For instance, although BPR is viewed to be a means of changing processes and consequently, the jobs that people perform, there was little evidence to support that theory. Instead, the findings indicated that work processes were just being automated and speeded up (Harrington *et al*, 1998).

Keen (1995) adopted a different style to the established research in the BPR area by attempting to understand organisational change within BPR by considering a human aspect rather than a time element. By utilising Boddy and Buchanan's (1992) framework, that encompasses issues such as *Project Management*, *Participative management* and a *Political perspective*, the emphasis of organisational change was shifted from a time analytical role to one that encompassed people related issues. Therefore, issues related to the management and planning of the individuals undertaking BPR were explored rather than concentrating upon the type of change (radical or incremental) and time of change. This was also discussed earlier and illustrated in Table 1.3 in the definitions provided by Poh and Chew (1995) and Keen and Cummins (1994).

Peppard and Preece (1995) attempted to understand the foundations of BPR utilising Pettigrew and Whipp's (1992) model. By doing so, an alternative and established model of the organisational change area was applied in the BPR area and supported the view that BPR has its foundations in the organisational change area.

Galliers (1998, 1995) adopted a completely different view to the previous researchers and applied a very theoretical view to research. Galliers (1998, 1995) believed that in order to demonstrate the impact of change that BPR obtains a combination of the dominant change models is required and by doing so, the results become clearer. He attempted to apply Leavitt and Whistler's (1958) model (content aspect), Lewin's (1947) model (process view) and Checkland's (1981) soft system methodology.

The first major observation made was, not to forget Leavitt and Whistler's (1958) model and for this reason, BPR cannot be only a technological or process change, rather all the components and their relationships have to be examined and from there accurate conclusions can be made. Applying Lewin's model, Galliers (1998) emphasised studying the unfreezing and freezing phases of the model than anything else and endeavoured to understand the relationships between the phases utilising Checkland's approach. An assumption made when conducting the

analysis is that IT is not held central to the argument and that change will necessarily be radical or processual.

Galpin (1996) also attempted to describe the changes obtained by a business process change in the form of a process change that extended the original Lewin (1947) model. This resulted in a nine-wedge wheel and a description of the human side of change being provided. Further discussions about the wheel are provided in the next chapter.

Willcocks (1995) developed a framework that describes the organisational change in terms of five phases. This framework provided an understanding of some of the impacts of BPR upon an organisation; however, it lacked a theoretical outlook to the research since it contained very little theoretical underpinnings from earlier organisational change research.

While an introductory analysis of the way that established organisational change models have been examined and utilised in the BPR area, the theoretical underpinnings of organisational change have not been provided and the information regarding this can be obtained from the next chapter. An analysis of the organisational change models that have been developed in the area and the ones that are applicable to this research will also be explained and discussed. However, for an introduction and brief description regarding organisational change reference can be made to Appendix B where some descriptions have been provided.

### 1.2.6 BPR AND PROJECT MANAGEMENT

BPR has also been viewed to be an approach that encompasses some issues of the Project Management area. Poh and Chew's (1995) definition above also explicitly points to the fact that when BPR occurs, there is total replanning that takes place. The action of planning is part of the area of Project Management. "The real battle of reengineering is to learn how to translate the best of intentions into the best of plans and ultimately, into the best of products, processes and systems" (Moad, 1994). This was also a view expressed by many organisations surveyed by ProSci (1999) "...when asked about the most important reengineering step overall, participants cited project planning." Hall *et al* (1993) viewed the fact that the lack of a strong leadership



could lead to failure in a reengineering project. Davenport (1993) also briefly considered an element of this area-formulating the vision. The vision is also viewed to be an essential component of process innovation. A process vision that consists of specific, measurable objectives and attributes of the future process state is viewed to be a vital link between strategy and action.

A vision is described as “a great perception of future developments” (Collins Paperback English Dictionary, 1999). Lewis (1997) defined a vision as “a statement that captures an ideal, unique, and attractive image of an organisation's future when challenged to answer the question “What do we want to create?” Vision is the ability to see what is potential and what is necessary when confronted by opportunity. It clearly identifies where everyone agrees the organisation is going and the major activities that will get it there.”

To obtain a transformation in the processes of an organisation, Davenport (1993) stated that the context of the processes must be clarified through a set of visions. The vision must be realistic and must be shared. By fulfilling these conditions, a wider range of participants is involved in the task and process innovation, instead of an improvement in the process will occur. Thus Davenport (1990) asserts that a vision is imperative for BPR.

Another way that project management impacts any form of organisational change is by concentrating upon teambuilding skills and communication (Boddy and Buchanan, 1992). When investigating the topics of project management that have been worrying researchers undertaking organisational change, more emphasis was stressed upon understanding the impact of the planning and control aspect and consequently, the aforementioned characteristics were virtually left untouched with problems occurring later on (Boddy and Buchanan, 1992).

The theory from the Project Management area underpinning BPR and recent research undertaken in the area will be discussed in more detail in chapter 2. This section was meant to illustrate the use of some of the issues regarding Project Management that are evident and discussed in the BPR area.

### 1.2.7 BPR AND THE HUMAN ASPECTS

It has been suggested in the theory supporting management change approaches that BPR cannot be implemented in isolation (Hammer and Champy, 1993; Davenport, 1993). To be successful, it must be integrated in a way such that its impact throughout the firm must be addressed. This means it cannot deliver the expected performance improvements unless the required changes are acknowledged and addressed.

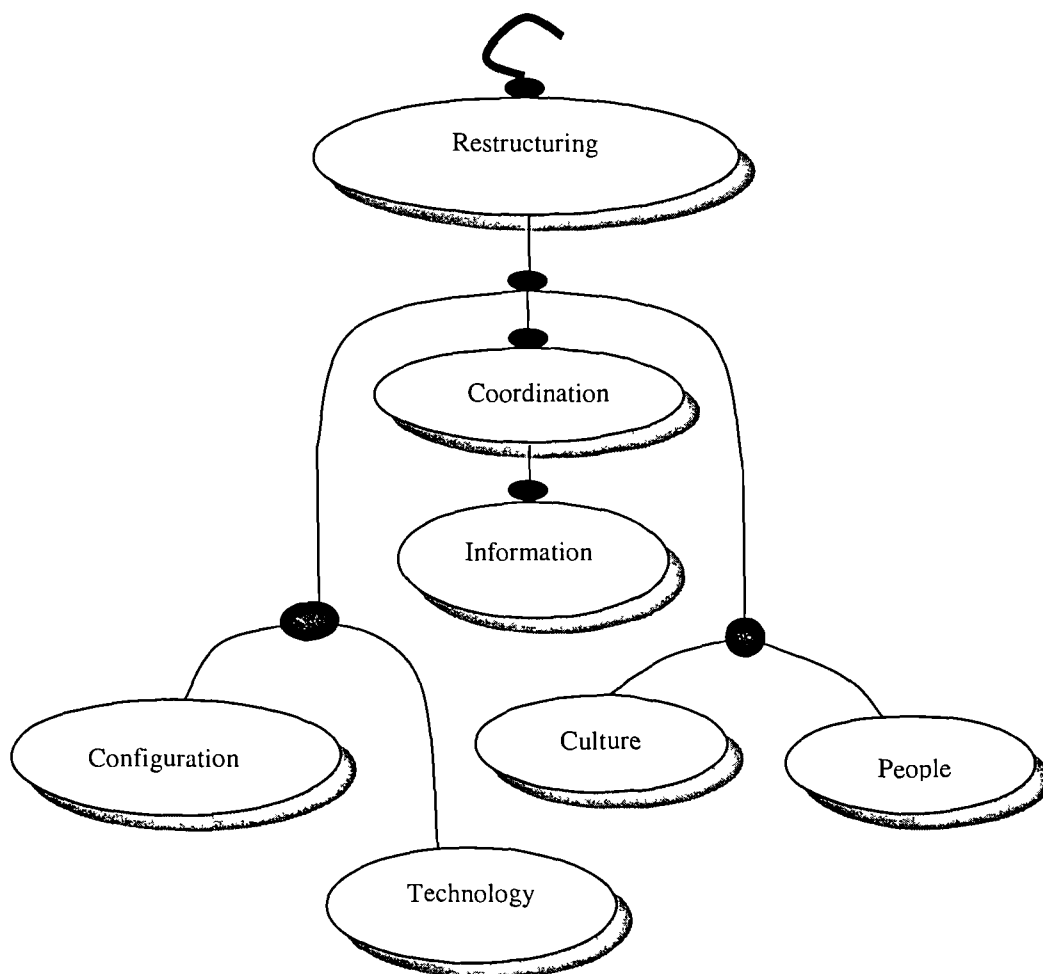
Markus and Robey (1988) were the first to emphasise this point when they drew attention to the fact that change could occur in a variety of forms including, organisational, technological and emergent. However, this belief has been adapted and reconfigured in a way that is more appropriate for BPR.

Marchand and Stanford (1995) describe the changes required in the organisation as those of corporate culture, configuration, and co-ordination, and in the way the organisation deploys its human, technological and information resources. These issues have been described as shown in Figure 1.1. Marchand and Stanford (1995) have described culture as consisting of the shared values and beliefs that underlie and define corporate behaviours and objectives. Configuration refers to the physical and organisational structures that exist internally and externally to the firm. Co-ordination includes the fundamental activities undertaken within the organisation. These activities include process management and the flows of materials and information throughout the firm. It is also emphasised that if an organisation wishes to achieve the desired transformation, then change in one dimension must be balanced with another (Collins *et al*, 1991).

Based upon such views, theorists have conducted extensive studies to acknowledge and address the cultural, and people issues (Mumford, 1995; Oram and Wellins, 1995; Marchand and Stanford, 1995). Willcocks and Mason (1987) commented, "The human and organisational, including political and cultural issues in change are frequently underplayed, even neglected in practice. ... All too often budgetary and time constraints, together with a concern for technical

issues lead to a focus away from the softer, behavioural factors that are in fact strong determinants of long term success or failure.”

The changing attitudes in the BPR area towards the human aspects than the technical ones were also found in practice. In 1993 at a Business Intelligence conference the focus was almost exclusively upon the linear change methodologies and IT enabled change. By 1996 at a conference organised once again by the Business Intelligence Unit, the emphasis had shifted to examining issues such as ‘change management’ and ‘continuous improvement’.



**Figure 1.1 The Restructuring Framework**

**Source: Adapted from Marchand and Stanford (1995)**

However, despite the investigations into the human aspects in the BPR area (Corrigan, 1996; Carr and Johansson, 1995; Oram and Wellins, 1995; Aghassi, 1996), there has been

minimal research conducted into the human and organisational aspects area of the reengineering teams.

Tinaikar *et al* (1995) found that 95.9% of all the articles referring to BPR focused upon the technical issues. They also stated the position that the human aspects have in the BPR area: “While most of BPR thinking seems to focus on the technical core of the process, they ignore that the process lies in a certain social context which varies across and within organisations. The humans interacting with the process make sense of it on the basis of this context and construct - so to speak - an outer shell of meanings round the inner technical core of the process” (Tinaikar *et al*, 1995).

Supporters of the view that the human and organisational aspects must be investigated argue that a more balanced approach to BPR must be taken and the social and political perspectives must be taken in account. Such an approach must be applied in order to “gain the commitment of key people” (Smith and Willcocks, 1995).

### 1.2.8 BPR AND TEAMS

Teams have been considered an important element for the development and implementation of BPR (Hammer and Champy, 1993; Davenport, 1993). Previous research (Davenport, 1993; Hammer and Champy, 1993; Hammer and Stanton, 1995) has been very general. Generic and minimal benefits, characteristics of team members, types of teams and criteria to determine the success of the team undertaking BPR without providing any understanding behind any of the observations or context specific models or frameworks have been provided. Although some of the main issues surrounding the reengineering teams may have been indicated, the views have been expressed without any supporting theory. For instance, theory may provide an answer for the reasons that a certain size is appropriate for the team. Other issues in terms of organisational change such as the processes involved in forming and adopting the reengineering teams, or the content can be determined. General issues such as the criterion used for selecting the teams, the environment that they work in, or what is required

within the teams in order for them to perform to their utmost could also be explored and explained.

Teams are also viewed to be important agents for obtaining change (Porras and Robertson, 1992; Ottoway, 1983) and an important factor for managing change in the Project Management area (Yeates and Cadle, 1996), therefore more importance should be given to the topic of teams. Teams are viewed to overcome and supplement individual skill weaknesses (Applebaum *et al*, 1999). Teams are usually synonymously associated with groups, however, before proceeding further, a distinction between the two terms is provided. A team is usually defined to be two or more people with different tasks who work together adaptively to achieve specified and shared goals and usually have a history and future (Brannick *et al*, 1997). Reengineering teams on the other hand, have been described as consisting of between five to ten people (Hammer and Champy, 1993). Groups on the other hand, often have members whose functions are interchangeable, and are usually brought together for a specific purpose and disbanded when the task is achieved (Brannick *et al*, 1997). Table 1.5 summarises some of the differences that researchers have found between the two categories.

**Table 1.5 Differences between Teams and Groups**

**Source: Adapted from Cleland (1996)**

<b>Teams</b>	<b>Groups</b>
Shared authority and responsibility	Limited sharing of authority and responsibility
All members share leadership	Leadership rests with one or few individuals
Individual and team accountability	Individual accountability
Shared results and rewards	Modest sharing of results and rewards
High degree of self direction	Limited self-direction
Members work together to produce results	Results are produced by individual effort

Teams on their own are increasingly being employed by organisations operating in the present environment. *The Wall Street Journal* (1995) reported that two thirds of organisations

are making use of teams (Lipnack and Stamps, 1997). Robbins and Finley (1997) found that there are very many advantages of a team that have not been emphasised before. Some of them include, increased productivity, improved communication, and work that groups otherwise cannot do. This was particularly evident when a multi-functional task was to be undertaken. Other benefits covered were that teams make better use of resources, and are more creative and efficient at solving problems. Teams also imply higher quality decisions, since teams are composed of carefully selected individuals to form the team. However, Robbins and Finley (1997) also found that organisations employing teams did not necessarily have successful teams and found several reasons for failure, as shown in Table 1.6. When organisations were questioned about what areas would they be requiring assistance with, team development appeared to be one of the most important areas requiring attention (Robbins and Finley, 1997).

Hammer discussed BPR and beyond (1996), and noted that the idea of teams was not new and in fact fashioned much of the thinking and practice of the quality and customer service initiatives of the 1980s. Despite the large classifications of teams in existence, there is very little in the management literature or within the BPR area about issues that can be attributed to reengineering teams. These include the reasons for the teams being employed, what are the behavioural aspects (human) and changes that occur within the organisation (organisational) as a consequence of teams, how have they been formed and the impact of some of these issues on the basic team development model. Ultimately, what is missing from the BPR area is a careful understanding of appropriate properties, behaviours and processes that could eventually lead to a reengineering team.

Table 1.6 Some of the problems that teams face

Source: Robbins and Finley (1997)

PROBLEM	SYMPTOM	SOLUTION
Confused goals, cluttered objectives	People don't know what they are supposed to do, or it makes no sense	Clarify the reason the team exists; define its purpose and expected outcomes
Unresolved roles	Team members are uncertain what their job is	Inform team members what is expected of them
Bad decision making	Teams may be making the right decisions, but the wrong way	Choose a decision making approach appropriate to each decision
Personality conflicts	Team members do not get along	Learn what team members expect and want from one another, what they prefer, how they differ, start valuing and using differences
Bad Leadership	Leadership is tentative, inconsistent or stupid	The leader must learn to serve the team and keep its vision alive or leave leadership to someone else
Bleary vision	Leadership has imposed a bill of goods on the team	Get a better vision or go away
Anti team culture	The organisation is not really committed to the idea of teams	Team for the right reasons or don't team at all; never force people onto a team
Insufficient feedback and information	Performance is not being measured; team members are searching blindly in the dark	Create system of free flow of useful information to and from all team members
Ill conceived reward systems	People are being rewarded for the wrong things	Design rewards that make teams feel safe doing their job; reward teaming as well as individual behaviours
Lack of team trust	The team is not a team because members are unable to commit to it	Stop being untrustworthy, or disband or reform the team
Unwillingness to change	The team knows what to do, but will not do it	Find out what the blockage is; use dynamite or Vaseline to clear it

When teams are formed, members from various departments across the organisation are amalgamated. In some instances, some members are provided with more power or rewarded in such a manner that 'motivation' amongst the team members is promoted. Additionally, the increase in decision-making achieves 'empowerment' amongst the team. While the team is forming, conflicts could also be on the increase and this could be detrimental both for team development and ultimately, performance. Due to empowerment, some team members may feel that their power is withdrawn and for this reason 'motivation' is reduced. It is the purpose of

this thesis to examine the impact of these behavioural aspects (in the form of constructs) upon the development of the reengineering teams. Constructs were selected in order to help shape the initial design of theory building research as suggested by Eisenhardt (1989). However, a consideration when deciding about the number of constructs to be formed was that not many should be employed. This was a point that Dyer *et al* (1991) stressed upon. By having too many constructs, the deeper understanding of the research would have been lost. The authors clearly draw attention to the fact that the aim of research is to form a deeper understanding and not just to gain 'surface' information.

An important issue at the point of investigating the constructs (behavioural aspects) was to determine what particular ones should be included or removed from research. When research into the reengineering teams began, it became clearer that in order to fully understand the teams, certain constructs needed to be investigated as well. Initially, a process of surveying the literature in the BPR, organisational behaviour and work psychology was undertaken.

Research in the work psychology, management and organisational behaviour areas (areas where research into teams has taken place are discussed in chapter 2) indicated that the concepts of empowerment, trust, motivation, and conflict were still under consideration, therefore, indicating to an extent that the constructs selected were not inappropriate choices. Thereafter, discussions with researchers in the department, supervisors of the researcher and the organisations selected for the case study process, indicated that the constructs (behaviours) of empowerment, trust, motivation, and conflict should be investigated. However, not only the presence of the human aspects should be indicated, but how are they introduced, if they are, and managed thereafter.

To further validate whether these are appropriate areas to study, talks were also held with researchers from the psychology department at Brunel University. It was discovered that the content and nature of the particular identified areas had been researched into exhaustively, however, their application in different contexts was still an ongoing process. Utilising this information, it was then decided to investigate their impact upon team development.



While that was one issue that could lead towards an understanding, it was also decided during the earlier stages that an investigation of the processes that an organisation that has undertaken BPR has to employ in order to develop and implement the team could also be of importance. Other issues such as where do the team members come from, the gender and assistance of external personnel could then be identified. Eventually the objective of this research is to develop a theoretical contribution containing some model or framework that demonstrates an understanding of reengineering teams in the context of BPR. By doing so, organisations that are still about to undertake BPR could obtain a picture of some sort of a “best practice” view from the previous experiences of organisations that have undertaken BPR.

### **1.2.9 BPR AND THE ORGANISATIONAL ASPECTS**

The aforementioned discussion has focused upon the human aspects. That is, consideration is paid to the way people act and react in their environment. To obtain these aspects, organisations have to undertake some changes and these are regarded as the organisational aspects. With respect to the organisational aspects of an organisation, the organisational structure, the working practices and the ‘culture’ of the organisation need to be understood (Preece, 1994). For instance, when the teams are formed, communication programmes are established, training and education is provided, or reward schemes are established. These in turn have an impact by changing the tasks, roles and responsibilities that the individuals both within the team and having direct or indirect contact with the team members. The change in roles and responsibilities has an impact upon the organisational structure of the organisation since individuals undertake different roles and responsibilities. The organisational structures in existence in theory will be discussed in the next chapter and the empirical evidence discussed and described in the subsequent chapters.

While considering the previously mentioned aspects, another important issue that the thesis intends to address is to determine some framework that is context specific (in this instance applicable to organisations undertaking BPR) and can describe the development issues

of the teams undertaking BPR. For instance, team development models have been formerly created by Tuckman (1965) and recently by Stewart (1997) and it is the intention of this research to establish something similar, but in the context of BPR. For instance, the Self-Managed Work teams area (Yeatts and Hyten, 1998) has provided a framework based on previous theories utilised in the general area of teams. It is the intention of the research to follow a similar path and ultimately it is hoped that the gap that has been created will be reduced somewhat.

### **1.3 MOTIVATION FOR RESEARCH**

Despite claims that “BPR is a fad that is best forgotten” (Davenport, 1995) and critics emphasising that “BPR should, in a sense be forgotten” (Biazzo, 1998), BPR is still an approach that holds the interest of many academics and practitioners alike. While undertaking the research, newsgroups, researchers, practitioners, and research funding bodies were consulted and it was found that BPR is still an area of much interest and was being considered by many organisations planning to introduce change. In addition it became clearer that change approaches are always going to be utilised in some manner or the other and thus the more understanding that is obtained the better it is in the long run. This is because change is a concept that is synonymous with daily life, and therefore, the more knowledge that is obtained about it, the better the future is. This provided the largest incentive for pursuing this research topic.

When deciding upon the area that should be pursued for the research, careful consideration had to be given to how much research has been done into the subject, the timeliness, and research resources. It was found that the research area was divided into two areas, the “hard” and “soft” areas. The “hard” one involved more of a technical nature, while the “soft” one focussed on the behavioural aspects - both of the organisation and the people within the organisation. The soft area seemed to be the better alternative to consider of the two aforementioned areas, as research in this area was more prominent and on going.

The soft area consisted of topics such as the management of BPR projects with an emphasis on the human and organisational aspects. Within the human and organisational aspects area it was felt that very little research into the teams undertaking BPR had been undertaken and yet research (ProSci, 1999, 1997) emphasised this was an important element to consider. After reviewing the extant literature it was found that the development and implementation of teams undertaking BPR was an area that also lacked extensive research and that was how the motivation for the research emerged.

#### 1.4 RESEARCH METHODOLOGY

BPR is considered to be a topic belonging to the IS area, amongst other several disciplines. The Information Systems (IS) area is still a new area of study with its dimensions not always clear. To clearly explain this statement, the following definitions are provided. Avgerou and Cornford (1993b) define IS as: *"...we can start by using the term to refer to information and data handling activities in human organisations. Information handling in this sense is a purposeful activity sustained over time, and includes the activities of collecting information, storing it, directing it to appropriate places and utilising it in various tasks within the organisation."*

Angell and Smithson (1991) earlier defined it as *"Information Systems are social systems whose behaviour is heavily influenced by the goals, values and beliefs of individuals and groups, as well as the performance of the technology. As such, the behaviour of information systems is not deterministic and does not fit into any formal algorithmic representation."*

From the aforementioned definitions, it can be seen that the IS area is viewed to draw upon the research from other disciplines such as Computer Science, Software Engineering and Business Management. As a result, conflicting traditions from various disciplines have emerged. For this reason, academics in the Information Systems research methods area, have been expressing concern that dissertations in the IS area need to be clear and explicit about the research methods being employed. "In examining PhD Dissertations in a number of countries

throughout the world, I have found that there is seldom any evidence of consideration of alternative research methods; indeed the philosophy underpinning the method is rarely questioned" (Galliers, 1995). Smith (1990) was more direct and stated that "... meaningful research *demands* a sound epistemological base to the research methods."

The aim of this thesis is to identify theory related to the reengineering teams in the context of business process change. While determining this critical question, there will be other issues such as the human and organisational aspects within reengineering teams, an area that has been virtually ignored that will be addressed. Thus this research is going to obtain knowledge about areas such as teams, human and organisational aspects, the development and implementation of teams and business process reengineering and ultimately, provide a theory that shows the role of the reengineering teams.

How the knowledge will be obtained is an *epistemological* issue and chapter 3 will be serving that purpose. Qualitative research is used to obtain the required information. This research method is composed of various philosophies, but they are amended according to the perspective adopted by the research. In this case, the research has its foundations in Interpretivism. The reasoning behind this approach is that it interprets events from the subject's point of view. The philosophy of the Interpretivist approach will be further defined and explained in chapter 3, but for now the reader is provided with an introduction to the research approach being used in the thesis and the reasons for exploring this particular issue. The process that a qualitative research approach generally employs is shown in Figure 1.2.

The research strategy to be employed for this research is that of case studies. The data collection techniques used for the research are open-ended interviews, telephone interviews, referring to archival documents and utilisation of the Internet. Open-ended interviews were chosen as "an investigator can ask respondents questions and the respondents' opinions about events"(Yin, 1984). Interviews were chosen as they allow researchers to interact with members of the organisation, and indirectly, depending upon the location of the interview, to observe situations.

Case studies can involve single or multiple cases (Yin, 1993; Eisenhardt, 1989). In this dissertation, a multiple case studies strategy with five case studies—two pilots and three cases—is being followed. Initially, it was decided that a single case study would be undertaken. However, as the issues became clearer, it became evident that having more cases would assist in verifying and adding support to the findings, as a replication of results can occur. Yin (1993) found that the more replications there are, the more robust the findings and is the reasoning used in this research. The cases were chosen ultimately to replicate, extend and verify the findings of the extant literature. Thus a theoretical logic based upon whether the organisations have undertaken BPR and the existence of reengineering teams, rather than a sampling one, which would have been a random process, is being used in the research (Glaser and Strauss, 1967).

The process that the research undertook is described in Figure 1.3 and the figure is also used to provide an illustration to the explanations described in the following paragraph.

Once the research began, it became clearer that in some instances the case studies were assisting in theory building (case studies 1, 2 and 3), whilst in others they were serving the purpose of being descriptive theories (pilot studies 1 and 2). In both situations the supposition made was that there was no hypothesis to form and test. Furthermore, testing would be inappropriate for interpretive research.

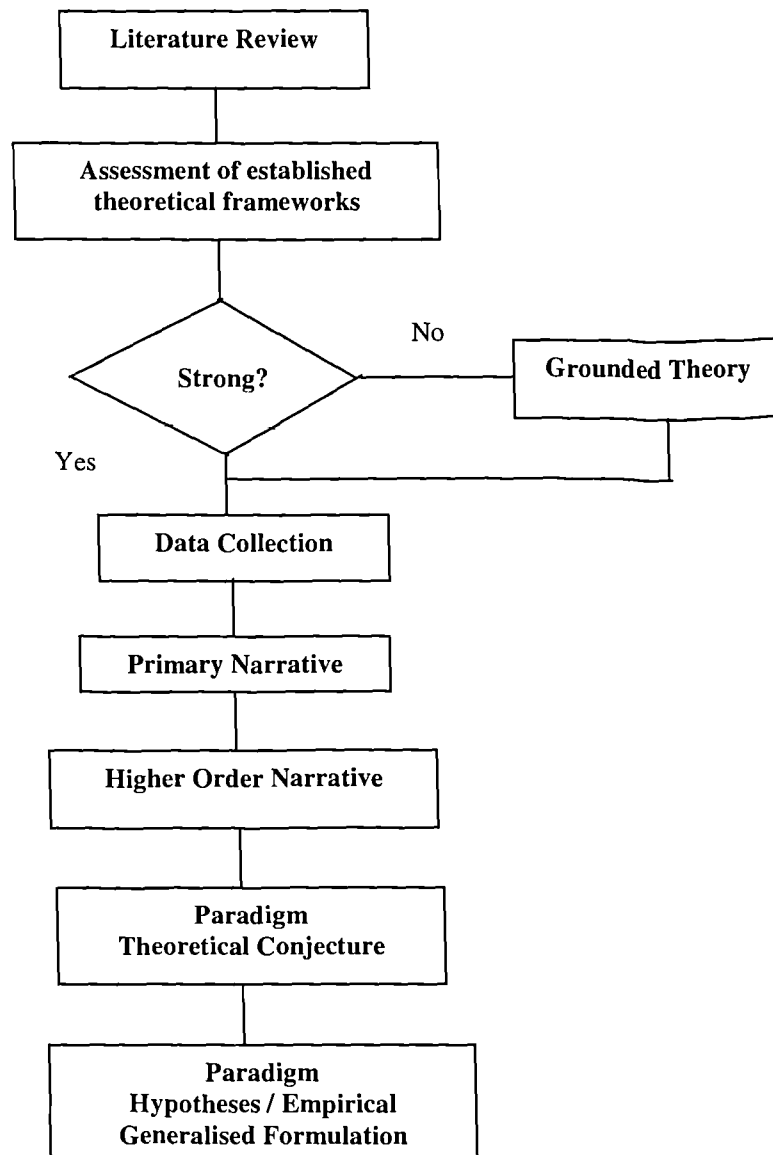


Figure 1.2 The process that qualitative research approach employs

Source: Remenyi and Williams (1996)

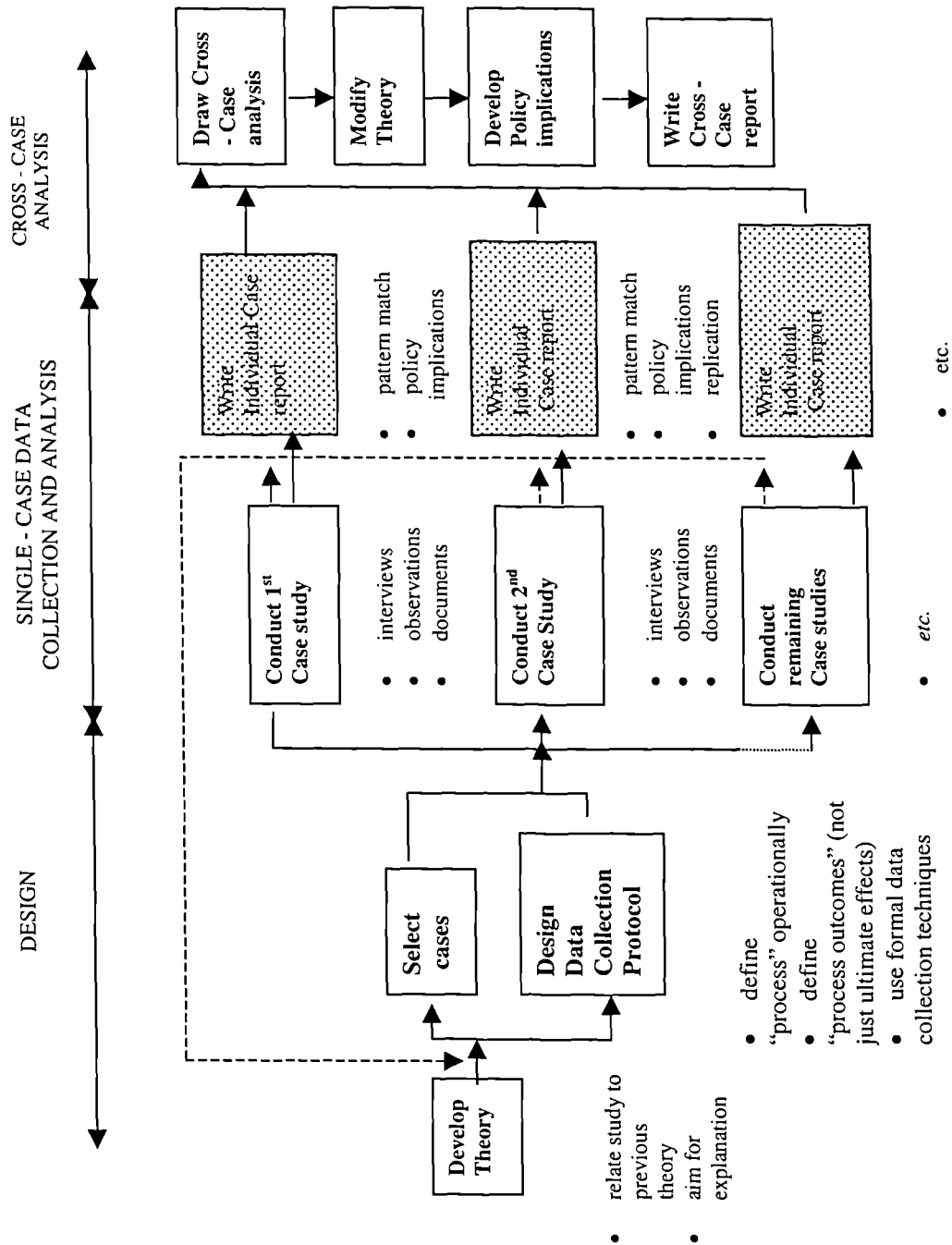


Figure 1.3 The Case Study Process  
Source: Yin (1984)

In the following chapter it will be seen that certain human factors have been cited in the literature, but there is no specific relation stated in the literature between them and the business process change area and that is how the first point in Figure 1.3 (relate study to previous area) holds true. The subsequent chapters will also demonstrate that there are no specific hypotheses to test and as such then the second view (aim for explanation) is also upheld.

Initially, a literature survey of the topics related to the human and organisational aspects of BPR, and teams was undertaken. This was the theory-generating phase and assisted in developing a preliminary framework of questions that could be used within the research. It also assisted the research in identifying areas that could be considered worthy of research. While the theory-generating phase took place, the organisations to undertake the research were selected. Using the findings from the case studies, an initial data analysis that provided an in-depth understanding of the theoretical issues was obtained.

Before the research method was pursued, the research protocol, whereby suitable places and times will be arranged and agreements to be declared was established. Following the interviews, the questions had to be amended accordingly, as each of the organisations used for the case studies were different in nature. When analysing the obtained results, it is imperative to combine different data collection techniques or as Galliers (1992) refers to them, research methods. These would be methods such as, referring to historical or archival documents, or web sites. Combining different methods also arose in the instance of the data analysis. As just mentioned, there was an initial data analysis undertaken. However, although an understanding and verification of the theoretical underpinnings of the research was provided utilising this strategy, the development of theory, that is a major objective as it provides a contribution to the area, had not been achieved.

From the case studies findings, the issues identified in the literature survey were found, however, it was not enough to form a theoretical contribution. For this purpose, a theory developed by Orlikowski (1993) in a different area of the information systems area was found to be suitable. Although the theory was found to be of similar reasoning as this research, minimal



use of the theory was made. Instead, the emphasis of this research was to employ the methods utilised by Orlikowski in obtaining the results for this research.

In Orlikowski's instance, the theory was developed to understand what happens when CASE tools are employed to obtain organisational change. Applying similar ideas as those expressed by Orlikowski and modifying some of the concepts, the theory was also applied to the area of concern in this research. In other words, the research extended and in some instances, applied new thinking to an earlier formed theory. From this, it becomes clearer how some techniques of grounded theory, rather than 'pure' grounded theory are employed in this research. It also has to be understood that the method being used is something that has not been undertaken before in the BPR area, and makes a novel contribution to the area.

### 1.5 RESEARCH OBJECTIVES

When Hammer and Champy (1993) formally introduced BPR to the practising and research world, they asserted "work units change from functional departments to process teams". They also stated that the attributes of the process teams to better performance are to be empowered and educated. However, what they and other authors describing reengineering teams have omitted is an understanding of the human and organisational aspects, management of teams, development and/or implementation. After all, if the reactions of people are vital to change, then so should the team development and implementation issues be important.

Thus the main objective of this thesis can be stated in the form of a research question and in epistemological terms as:

*Understanding the reengineering teams in the context of business process change. The outcome of the understanding should assist in forming a means of better thinking regarding reengineering teams. At this point, it is declared that this research is primarily concerned with reengineering teams rather than business process change.*

*Secondly, an understanding about the organisational change approach followed within the organisations undertaking BPR is obtained.*

To obtain a better way of thinking, the research will not be preoccupied with theory development in the form of a solution. Instead, the research intends to develop a theory that is encompassed by some sort of a model or framework that can assist future research to investigate the area. As it is, there is no structural or purposeful approach to this area and the intention is to overcome that gap.

The way that the research intends to progress is in two parts. The initial part of the research is to conduct a literature review of the BPR area with regards to teams. Identify particular areas that have been investigated in the teams' area that are also evident in the reengineering area and thereafter, undertake practical research utilising case studies. Thus at this point the initial data analysis is conducted to display that the theoretical constructs identified in chapter 2 are applicable in practice and to form an understanding of their nature in both the contexts of reengineering teams and the reengineering area.

The second part of the research is to develop a theory that allows the relationships between the theoretical constructs to be described. Therefore, how do external factors have an impact upon the organisation, how does management interpret this, and how does management in turn influences the formation of teams are some of the issues explored. These issues will be explained using the theory developed by Orlikowski (1993). However, what has also been found in the findings is that the model was not completely applicable to developing an understanding, as some of the issues identified in the literature were not being examined. To develop a full understanding of the question, they needed to be addressed.

What emerged then was a theory that encompassed most of the critical issues that would have to be addressed when adopting and forming reengineering teams. In the new form of theory, reengineering teams are viewed to be pivotal for organisational change and by doing so, the anticipations, explanations and evaluations of the different experiences and consequences of the introduction of reengineering teams can be undertaken.

As it is, there is no theoretical framework that has been developed to demonstrate the role of reengineering teams in obtaining BPR, thus this theory should make an important

contribution to the BPR area. Additionally, the research should make an important contribution to the practising and academic world. To the research world, a contribution in the form of a model that encompasses critical issues and areas will have been formed and something for them to refer to and the same would be applicable to practice.

To understand the research in a better manner, a research question is viewed to be quite helpful. The research question to be used for the research is stated as follows:

*What are the critical issues that shape the adoption and function of reengineering teams in the context of business process change?*

This means attempts to “step back and examine the implicit understanding of design that guides development within our existing tradition of thought” (Winograd and Flores, 1987). The larger goal is to clarify the background of understanding regarding teams in the reengineering area and to grasp its broader implications. Ultimately, a better understanding of these issues should ensure an improvement in team development, that in turn could impact performance and an improvement in the success rates of the organisations undertaking BPR.

Also as the area of reengineering is being considered, the organisational change that categorises the type of BPR being employed by the various organisations that are being utilised as the case studies will be undertaken. Therefore, issues such as whether, a radical change is being followed, what were the processes that the organisation followed and who supported the approach within the organisation will be investigated.

To accomplish this objective case studies will be utilised. The previous section that contained an introduction to the research methodology defined what, why and how a case study is utilised. Additionally, the benefits and disadvantages of the method are discussed. Bearing all these issues in mind, three case studies were investigated. The studies were based upon three different, but large organisations that had undertaken BPR. There were also pilots employed in the initial stages to allow the research to refine the techniques and questions used during the interview stage. These were used in the research more as risk avoidance strategies.

A snapshot approach as opposed to a longitudinal study was utilised. A snapshot approach (also known as cross-sectional studies) is described as research that is “undertaken at a particular time”, while a longitudinal study is compared to a diary where the research is a “representation of events over a given period” (Saunders *et al*, 1997). The research strategies of interviews, archival documents and questionnaires were employed. The intent of the research is to demonstrate the human and organisational aspects within the teams undertaking BPR and how the development and implementation of the teams undertaking reengineering is similar or different within various large organisations. Finally the aim is to provide models and frameworks that can be utilised in future works to understand the development and implementation of teams.

To summarise, the main objectives of this research have been identified above. However, in order to complete the process leading to these objectives, other various objectives have to be undertaken and they are as follows:

- To undertake a comprehensive literature survey belonging to different disciplines. This should assist in establishing a conceptual picture of the foundations of this research.
- To identify and discuss constructs (empowerment, trust, conflict and motivation) identified during the research process mainly from the organisational behaviour and management literature. The constructs are not chosen randomly, instead constructs that have made an impact upon the behaviour of individuals or teams will be considered.
- To understand the role of the constructs on the development of the reengineering teams.
- To validate whether the constructs do have an impact in practice.
- To identify how the selection of teams has been undertaken.
- After collecting the empirical findings, carry out a comparison of both the theoretical and practical results.

- To develop a theory that will consist of a framework and model from the comparisons. These new additions should assist future reengineering teams.
- To build theories from the undertaken case studies (Eisenhardt, 1989).
- To make use of and understand the applicability of a qualitative approach in the context of this research.
- To identify the process involved in forming the new theory regarding reengineering teams.
- To identify an appropriate organisational change model that can be utilised to describe what the organisations have been undertaking in practice.

Having obtained a view of the major and minor objectives, the dissertation will describe the expected contribution to be made to the academic community.

## 1.6 CONTRIBUTION OF THE RESEARCH

Contribution of the research has been described as “the evaluation of the importance of the thesis to the development of the discipline” (Philips and Pugh, 1994). Whetten (1989) associates a theoretical contribution to consist of the following attributes: (1) A significant, new, value-added contribution to current thinking addition to the field of research. (2) Will the theory change the area of research in some way or the other. (3) Is the underlying logic and supporting evidence required and are the assumptions explicit. (4) Does the research reflect clear thinking and is the multiple thinking (What-How-Why-When-Where-Who) covered. (5) Is the dissertation written well with all the thoughts flowing logically. (6) Is the topic of interest to other researchers and will it advance current discussions. (7) Is the research of interest to others.

In most of the research undertaken on BPR, there have been investigations into the theoretical findings (Burke and Peppard, 1995). The emphasis in these cases has been on determining the roles of various disciplines in the BPR area, or tracing the roots of BPR, thus resulting in fewer empirical results that support these findings. The research being undertaken in this dissertation is different in that it is examining a topic that has not been extensively

discussed in the area. This could allow organisations that are utilising reengineering teams to determine whether they are following the same path or a different one or to draw their attention to some of the identified theoretical and empirical results.

As previously mentioned, teams undertaking BPR have been virtually ignored. Apart from stating the composition of an appropriate reengineering team, there is very little that has been mentioned in the BPR literature. In the management area, theories relating to generic teams have been developed in the 1990s by Katzenbach and Smith (1993), however, they cannot assist researchers as differences between the teams undertaking BPR and those teams exist.

For one, the teams being studied in this dissertation are specific to BPR, while those teams described by Katzenbach and Smith (1993) are generic. Thus with the research undertaken in this dissertation, this gap in the academic area should be reduced. BPR is an approach that is currently being utilised within many organisations and as the failure rates by its utilisation are rather high, any research that is undertaken should pay vital attention to these two important facts. Teams are viewed to be important when BPR is undertaken (Hammer and Champy, 1993; ProSci, 1999, 1997). With a lot of the literature paying more attention to other elements and with what is written about teams in the BPR area being very generic and rhetoric, it is intended that this research will narrow that gap.

Additionally, the way the research is presented is unique in its own stride. In previous research the process of BPR has been paid extensive attention, while many researchers in the area have pointed out that the human, political and cultural aspects need to be considered. It is the intention of this research to present an outlook of these issues by identifying important variables using the extant literature, once again demonstrating that whilst an interpretive approach is being undertaken by the research, a purely grounded theory one is not. There has also not been much attention paid to critical issues such as the characteristics of teams, the size and so forth. Thus it is hoped that this will add a new dimension to research conducted in the field.

Indeed the study of the factors affecting the development of such teams can make a contribution to practice by increasing the awareness of practitioners to important issues that require consideration. By utilising interviews and referring to individuals for their opinions, the research also provides practitioners with a way of expressing their concerns. This allows the research to present a “rich” picture of the factors affecting team performance. This alternative is something that most of the previous research has not touched upon and could add a new dimension to research in the team area. As previously mentioned, the BPR area has had a high rate of failure, and one of the contributing factors leading to this rate is the teams area. Thus, practitioners should find this research helpful.

## **1.7 DISSERTATION OUTLINE**

This dissertation is composed of seven chapters. Each of the chapters provides an understanding to various issues viewed to be critical for this research. Chapter 1 began by providing an introduction to the main issues that the research will address. The main issues were firstly identified. Thereafter, the objectives of the research were stated. To obtain the objectives, a certain research methodology is required and an introduction to that aspect was provided.

Having provided a brief introduction to the area of research, the dissertation then began to describe and discuss the theory surrounding the issues to be investigated within the research of this dissertation in chapter 2. By discussing the points the setting for the research issues is provided. These arguments provide a basis for the research topics to be investigated and determined in chapters 4 and 5.

To undertake the research, a certain research methodology has to be followed. The reasoning behind the research methods is stated within chapter 3. The inherent problems within the various research philosophies are stated and the suitability to this research is provided. The research strategies existing within the IS field are also described and discussed within this chapter.

Having obtained an understanding of all the relevant issues for this research, the dissertation then provides a description of the case studies studied for this research. Chapter 4 provides a background to the various organisations and attempts to describe the main issues in the context of chapters 1 and 2.

Chapter 5 then analyses the obtained results utilising the earlier stated theoretical literature. The variations that have occurred in the empirical evidence and advantages of the observed evidence will be stated. Mostly, the aim of this chapter is to acknowledge the presence of the theoretical issues and further extend the theory and provide insight into the empirical evidence. This is considered to be the initial data analysis step.

Chapter 6 is the contribution part of this research where elements or certain techniques of the grounded theory method are used to develop a theory that can assist future research. Drawing upon some of the findings of the research- the understanding of the processes and actions of the organisations, a theory that can assist with future research is developed. A framework and model that could be employed in the future are provided in this chapter.

Chapter 7 summarises the research presented in this dissertation. Additionally, it provides the major conclusions reached about the possible limitations of the research and describes and discusses potential areas of further research.

## **1.8 SUMMARY**

This chapter provided an introduction to the main and important issues that this research covers. By doing so, readers are presented with a brief idea of what to expect in the following chapters. An introduction to the nature of BPR and teams was presented. Then the research objectives and methodology, followed by the contribution that the research should make was presented.

The chapter provided readers with details of the objectives and expected outcomes of the research and at the same time provided examples of the detailed discussions to be provided in



the following chapters. Therefore, this chapter is meant to provide a brief description of the route that the dissertation will take.

## 2 A LITERATURE REVIEW OF ORGANISATIONAL CHANGE, PROJECT MANAGEMENT, AND TEAMS

# 2

### 2.1 INTRODUCTION

The purpose of this chapter is twofold. The first is to provide a detailed analysis and critical appraisal of the topics introduced in chapter 1 (teams and BPR), thereby, assisting in setting the context for this research and secondly, to provide an understanding of the theoretical issues that will be explored in the case studies. The chapter begins by providing a review of the disciplines that are viewed to have an impact on BPR, namely, organisational change and Project Management.

There is a lot of information about these topics in the literature and the purpose of this review is not to describe each and every one of the theories. Instead the aim is to understand the issues from those areas that will be used in the analysis and development of theory in the subsequent chapters. For instance, organisational change has been examined in various ways, including a context specific or process view. The reasoning behind the various approaches that have been applied will be examined and utilised to understand in the formation of the new

theory in this dissertation. There are also limitations to applying these different approaches and a critique will be developed that can identify and assist in informing the reader of the improvements that this research intends to make.

Teams are viewed to be an important factor in the project management area and there has been little theory to determine how teams can be selected, developed or what human and organisational aspects should be addressed and their impacts when the team is being developed in the reengineering area. The questions and theory surrounding these issues will be resolved by borrowing from theory in the teams' psychology and organisational behaviour areas since the reengineering area lacks any such information. The process and reasons for selecting the particular behavioural aspects was described in the introductory chapter, however, this chapter will describe the recent research undertaken in these areas. Utilising that information should assist in the development of a model that should assist researchers an understanding of the area.

Having provided a description of the aims and objective of this research, an outline of the chapter is provided. The chapter describes and discusses the topics that are viewed to be the foundations of this research, namely, organisational change, project management, teams and the human and organisational aspects that include, trust, empowerment, conflict, communication, and motivation. The research related to these topics is classified in terms of established and recent work so as to provide an outlook of how the research has changed over the years. However, the human and organisational aspects are topics that have not been extensively investigated in the Information Systems area and so introductions to the topics are also provided. Additionally, the chapter also consists of critiques upon the topics, a discussion about the research on team development and concludes by providing a model that attempts to relate all the discussed topics and offer a relationship so as to form a clearer picture of the research.

## 2.2 ORGANISATIONAL CHANGE

As mentioned in chapter 1, if the approach of BPR is closely examined, it can be seen that BPR can be defined as a form of organisational change. Previous researchers in the BPR area have made attempts to investigate it in terms of organisational change. For instance, Galliers (1998) used a combination of process and content aspects in his investigations. The foundations of this research also lie in various organisational change models and the following sections will highlight particular aspects of the models that are evident in the BPR theory. Additionally, this section will describe and discuss the recent research that has been conducted within the process change area and this includes the works of researchers such as Galpin (1996), Kotter (1995) and Pettigrew and Whipp (1992, 1985). It has to be remembered that the organisational area is a vast one and so all the topics cannot be discussed in this research.

### 2.2.1 THE CHANGING FACE OF PROCESS ORGANISATIONAL CHANGE

There are several forms of change within the organisational change area, but the ones being emphasised in this research are, Process, Implementation, Planned and Emergent forms of change (Wilson, 1992). The emergent and implementation forms of change have been investigated thoroughly in many areas and so the stance taken in this research is that a valuable contribution will not be made if these forms of change are investigated. Consequently, the focus of the research became the planned and process forms of change. Particular emphasis is stressed upon the process of change models since this should assist in understanding some of the foundations of the BPR area.

There have been several methodologies that have been developed in recent years to investigate the process of organisational change, but ultimately their foundations are underpinned by the most famous and established Lewin's (1947) model (Burnes, 1996). With change occurring more often, present day researchers have begun to find ways to form their own

impressions of the changes taking place, thereby extending the theoretical foundations of Lewin's (1947) model (Kotter, 1995, Galpin, 1996, Orlikowski and Hoffman, 1997 and Armenakis *et al.*, 1999).

Lewin (1947) contends in the model that there are two sets of opposing forces that exist within a social system-the driving forces that promote change and the resisting ones that want to maintain the status quo. Lewin's model has 3 stages that an organisation undergoes to obtain organisational change; *unfreezing, changing and refreezing* (Jones, 1968). *Unfreezing* is the stage at which there is a recognised need for change and actions are taken to unfreeze the existing attitudes and behaviour. This is viewed to be essential to obtain employee support and reduce the resistance to change. Once the actions have been recognised, then the organisation moves toward *changing* to the desired state. After the change has taken place, then the final stage of *refreezing* whereby, a positive reinforcement of desired outcomes to promote the new behaviours and attitudes occurs (Dawson, 1994). Although this step is viewed to take place, it is seen to last for only a short while before the organisation has to prepare to unfreeze once again, particularly as the environment is rapidly changing and organisations have to change in order to survive or operate in the present market.

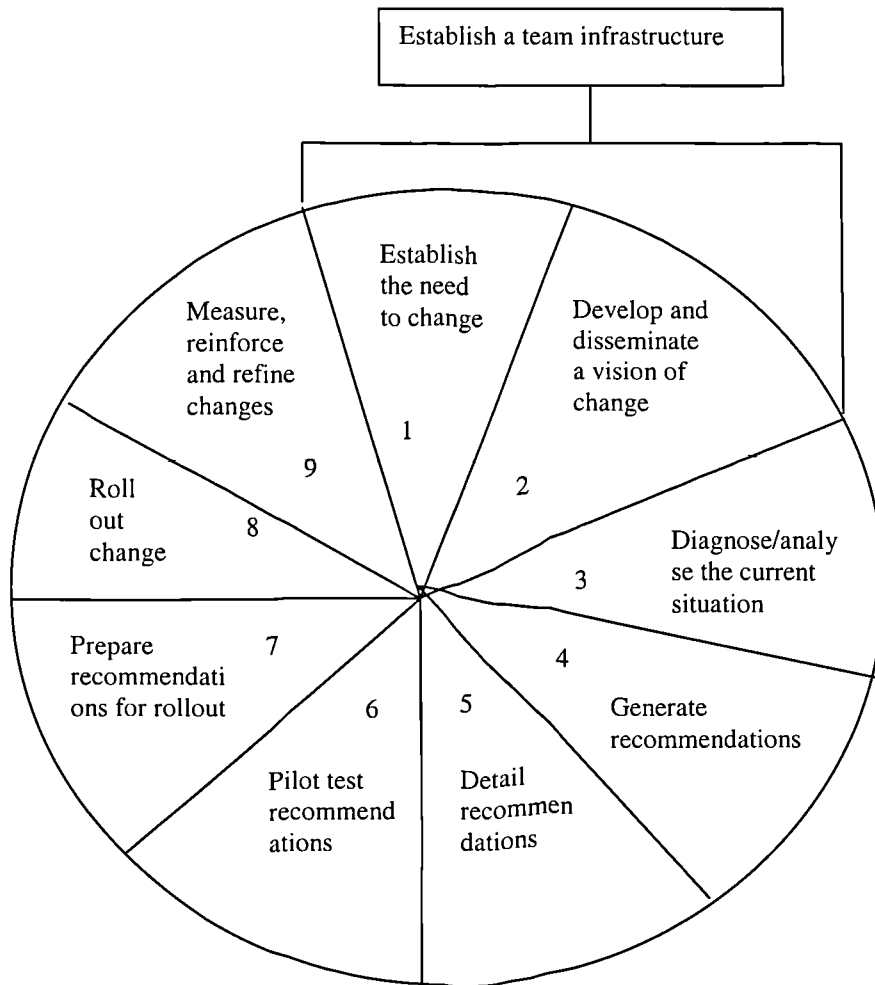
Due to such established models being inadequate for some reason or the other, theorists have attempted to classify organisational change in alternative terms. Judson (1991) examined organisational change in terms of five stages (a) analysing and planning the change; (b) communicating the change; (c) gaining the acceptance of new behaviours; (d) changing from the previous (or status quo) state to a desired state and finally, (e) consolidating and institutionalising the new state. The difference in this research was that Judson (1991) emphasised predictable reactions to change and methods for minimising the resistance to change agent efforts. There were several methods pointed out within the research, the main ones being, alternative media, reward programs, bargaining and persuasion.

Kotter (1995) recommended eight steps for organisational change to occur: (a) establish a sense of urgency by relating the external environmental realities to real and potential crises

and opportunities facing an organisation; (b) forming a powerful coalition of individuals who embrace the need for change and who can rally others to support the effort; (c) create a vision to obtain the desired end result; (d) communicating the vision through numerous communication channels; (e) empowering others to act on the vision by changing other structures, systems, procedures and policies that are not consistent with the vision; and (h) institutionalising the new approaches by publicising the connection between the change effort and organisational success.

Galpin (1996) examined organisational change in the form of a nine-division wheel (shown in Figure 2.1) and also stated that the main basis of his research was to understand the human side of change rather than the technical aspects. To understand the foundation of each division, it was emphasised that an understanding of an organisation's culture as reflected in its rules and policies, customs and norms, ceremonies and events, rewards and recognition, was essential. The divisions within the wheel consist of (a) establishing the need to change; (b) developing and disseminating the vision of a planned change; (c) diagnosing and analysing the current situation; (d) generating recommendations; (e) detailing the recommendations; (f) pilot testing the recommendations; (g) preparing the recommendations for rollout; (h) rolling out the recommendations and (i) measuring, reinforcing and refining the change.

Galpin (1996) further distinguished between *strategic* and *grassroots change*. *Strategic change* is described as the "up-front, initial effort involving executives, senior managers, a small cadre of employees and often consultants who provide an outside view" (Galpin, 1996). This is a broad and organisation wide change and is described from quadrants 1 to 5. *Grassroots change* is the "effort that drives change deep into an organisation" (Galpin, 1996). Implementation at the local level is emphasised and occurs from 6 to 9. The main aim of this form of change is to implement and sustain desired changes. Galpin (1996) also identifies teams as being important to obtain change and identifies their importance in the first and second quadrants.



**Figure 2.1 Galpin's (1996) Organisational Change Model**

Source: Galpin (1996)

Recent research related to the process of change conducted by Armenakis *et al* (1999) proposed two models incorporating both Lewin's (1947) model and Bandura's (1986) social learning theory. The first model examines how the organisation is prepared for change and the resistance that occurs to this. The second shows how the desired change is adopted and institutionalised within the organisation. The underlying mechanism for both the models is the change message being conveyed. The authors identify strategies such as active participation by those affected by the change, human resource practices as being important to obtain the desired change.

This concludes the discussion regarding *process* organisational change where the established and recent research was described and discussed. What has been learnt in this section is that from the simple 3 steps that Lewin's (1947) model illustrated and described, there have been changes added by including descriptions at each step of the change. Additionally, the research displayed the flexibility that Lewin's theory afforded since it can be applied to various situations. The next section continues to discuss organisational change, with emphasis on the alternative ways that include the content and context of organisational change. However, there has also been other research undertaken in this area which is described and illustrated in Appendix B.

### 2.2.2. ALTERNATIVE MEANS OF EXAMINING ORGANISATIONAL CHANGE

Organisational change has not been restricted to only examining processes. The content and context of organisational change have also interested researchers and subsequently, have been examined. The main emphasis of this section is upon the research of established works such as those of Pettigrew and Whipp (1992, 1985) and Burke-Litwin (1992).

The Burke-Litwin (1992) model displays predictions about individual and organisational performance, therefore dealing with the causes and their resultant effects. Sadler (1995) described organisational change in content terms, the time scale and the extent of change. Organisational change was viewed to take the forms of incremental or evolutionary change, transformational or radical change, the 'quick fix' and 'tinkering'. **Incremental change** is a continuous process that involves moderate steps that are taken in order to adapt the organisation sufficiently to the changing environment. **Radical change** on the other hand is viewed necessary either in response to a crisis in the organisation's affairs or fundamental changes in strategy or purpose. As the change is dramatic, the duration for the change to result is a few years - from 3 to 7 years. The results of the change are that an organisation is completely transformed and is hard to recognise. With regards to a '**quick fix**', the organisation intends to



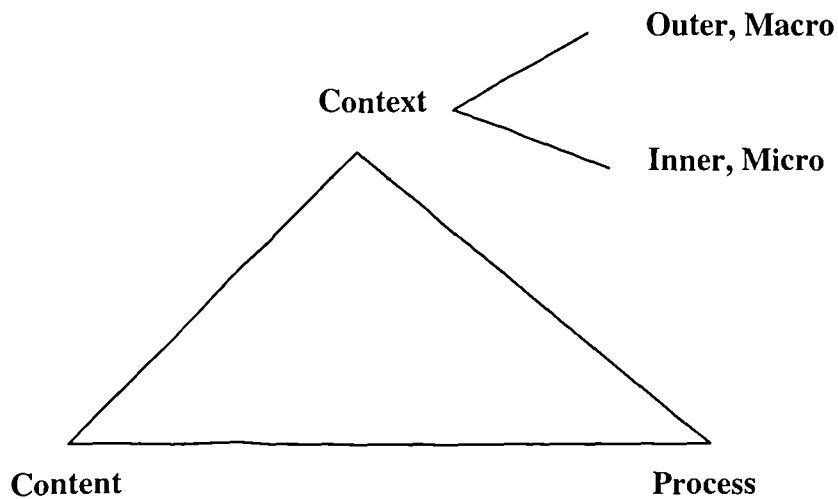
achieve change within a year and this strategy usually ends in failure. 'Tinkering' which is the fourth and final form of change is viewed to be the process of making "occasional unrelated, relatively, minor, organisational changes in the hope that they will lead to improved performance" (Sadler, 1995).

Whereas the aforementioned models have established themselves in the organisational change area, it has been felt that they are limited since they apply only one perspective, for instance, only process, or content (Armenakis and Bedelan, 1999). To overcome that gap, models that encompass the content, context and process of change have been developed (Pettigrew and Whipp, 1992,1985). In this, researchers attempt to find out how change is obtained, what does the change contain and in what instances does it occur. A brief discussion about the framework and the reasons for utilising it are provided in the following explanations.

Pettigrew and Whipp (1992, 1985) assert that the framework should be employed in its original form due to the following reason. "Theoretically sound and practically useful research should involve the continuous interplay between ideas about the context of change, the process of change and the content of change together with the skill in regulating the relations between the three" (Pettigrew, 1992, 1985). This is required as the 3 areas and their interconnections contain a series of research themes and issues.

To provide the researcher and the audience with an understanding and overview of what the framework looks like, Figure 2.2 and the discussion is provided. In general terms, content refers to the 'what' of change (Pettigrew *et al*, 1992). The classification of content could also be according to a set of hypothetical features that may affect adoptability (Pettigrew *et al*, 1992). For instance, some change could be radical, whilst another could be technologically driven. Context refers to the background or setting to the research area. The inner and outer contexts refer to the 'why' of change (Pettigrew *et al*, 1992). The outer (macro) context refers to the national economic, political and social context, as well as the perception, actions and interpretation of policies and events at the national and regional levels. On the other hand, the inner (micro) context refers to the strategies, structures, cultures, management and political

process through which change proceeds in the area. The process of change also known as the 'how' of change refers to the actions, interactions of the various interested parties that obtain the change.



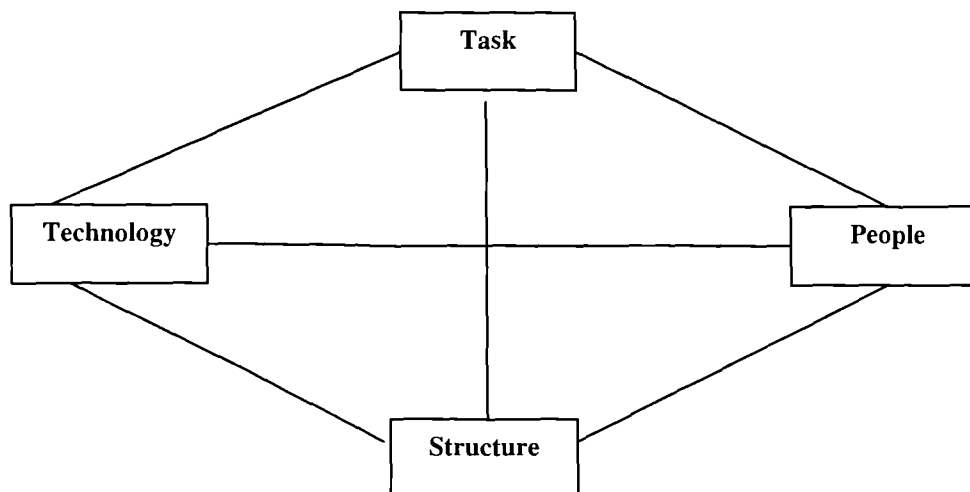
**Figure 2.2** The framework used to analyse the research

**Source:** Pettigrew and Whipp (1992)

As discussed in chapter 1, one strand of BPR can be examined in the context of organisational change. Chapter 1 has described some of the research that has been undertaken in the BPR area in this regard. There may also be other forms of organisational change that can occur, however, the aim of this dissertation is not to discuss each of the other change models in detail, but to highlight aspects of the organisational change area that underpin the research that has taken place. Therefore, the purpose of this section is to gain a better understanding of the research that has taken place in this regard within the BPR area and to determine the limitations they place on the practical side of BPR.

### 2.3 THE IMPACT OF ORGANISATIONAL CHANGE UPON AN ORGANISATION

When organisational change occurs, the impact is not only upon one section of the internal organisation, it affects all the parts of the organisation. This section of the chapter describes and discusses the research related to this area. The organisation was originally viewed to consist of four central sections and Leavitt (1965) depicted the impact of change on these sections as shown in Figure 2.3. The main components of an organisation were described as task, structure, people and technology. These components were placed at the corners of model to emphasise that a change in any one factor would bring about changes in the other factors in order to retain the shape of the diamond. The main reasoning of the researchers was that IT would dramatically alter the shape of organisations and the nature of jobs.

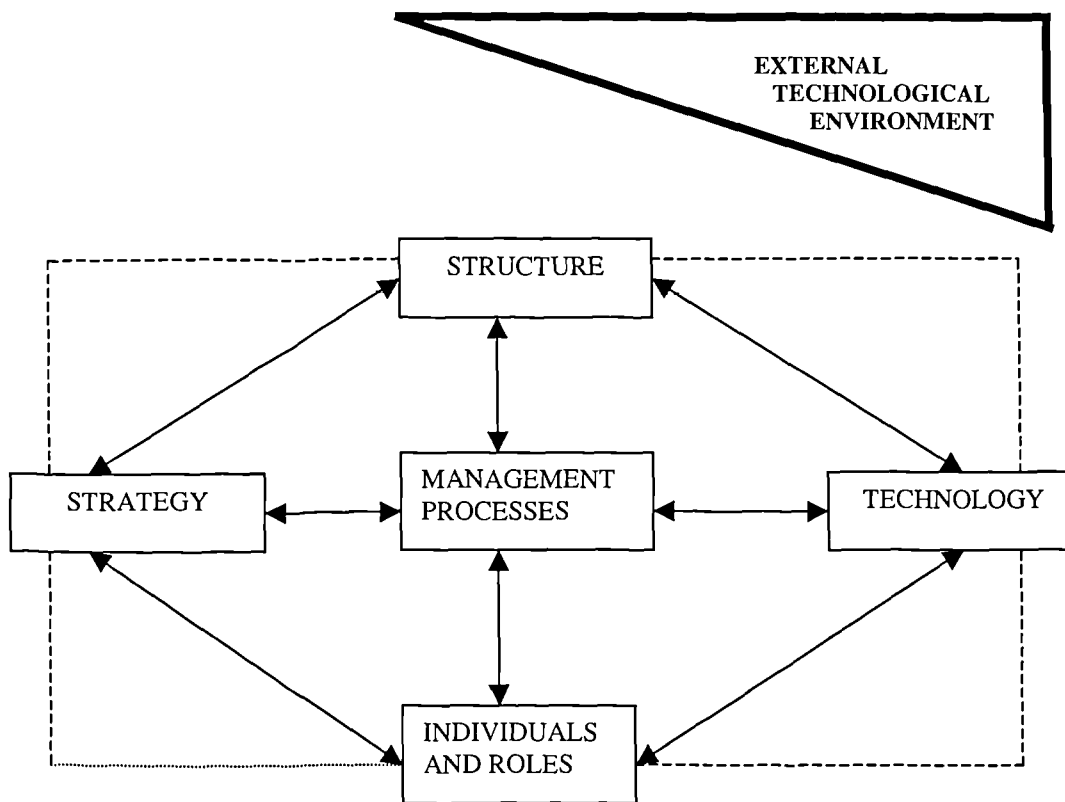


**Figure 2.3 Leavitt's (1965) Model of an Organisation**

**Source: March and Simon (1958)**

The MIT 90s Research program later modified this model as shown in Figure 2.4 since the role of management was deemed to be central in holding the organisation together and in the controlling function. The model demonstrated that the organisation could be viewed to consist of five components in dynamic equilibrium, even though the organisation was subject to external influences. The central role that management has in obtaining change, can also be interpreted as what Hammer and Champy (1993) and other researchers investigating how

change is obtained within organisations term as a 'top-down approach' and is described and discussed in detail in the following section.



**Figure 2.4 The MIT 90s Framework**

**Source: Scott-Morton (1991)**

These models illustrate that when change occurs, an organisation achieves a balance between the four or five components. When practical research was undertaken, the same results were not obtained. Organisations focused upon one component and ended up neglecting or forgetting the other components. For instance, when information systems are implemented within an organisation, it is well known that organisational change also occurs (Boddy and Buchanan, 1986). However, what has also been found is that technological change accompanied by organisational change can lead to failure (Buchanan and Boddy, 1992). A major finding from Buchanan and Boddy's (1992) research was that the failure arose due to the

'people', organisational structure, and project leadership issues, rather than traditional project management and control, or issues directly related to technical developments being ignored. In the IS area, Avison and Fitzgerald (1995) also arrived at a similar conclusion and found that information systems failure occurred due to the human and organisational aspects not being emphasised enough and attended to.

Galliers (1998, 1995) applied Leavitt and Whistler's model to the BPR approach and found that each component of the model needs to be examined and concluded that change does not occur on its own. To implement change, managerial and organisational issues have to be directly dealt with and not as is often thought, the elements of system development and design, thus issues such as analysis and diagnosing processes would not be initially examined. It has been observed that due to the popularity of BPR, a 'bandwagon' effect emerged and some organisations began to apply it to seek a 'quick fix' to their problems (Davenport and Stoddard, 1994). Grover *et al* (1994) emphasise the fact that BPR must be a well thought approach "involving the careful evaluation of the nature of desired process change prior to the application of IT or change in organisational structure." By doing so, failures in the area could be avoided.

With regards to the managerial and organisational issues, Beer *et al* (1990) have emphasised that individuals should initiate the new organisational context and new roles and assign responsibilities. Specifically, change agents have been considered as important factors to implement organisational change and innovation (Park *et al*, 1997; Porras and Robertson, 1992; Ottoway, 1983; Rogers, 1983). To obtain the required organisational change, the use and participation of change agents is needed and this situation rests heavily upon the relationship between decision makers and change agents within the organisation (Gross *et al*, 1971).

Change agents have been broadly defined as professionals, staff specialists, consultants, managers, or teams of individuals who are responsible for initiating and managing change efforts (Beer *et al*, 1990). They are viewed to act as intermediaries between the forces initiating change (usually individuals from high positions within the organisation) and an intervention strategy (Robbins, 1987; Katz and Kahn, 1978). Change agents have also been classified in

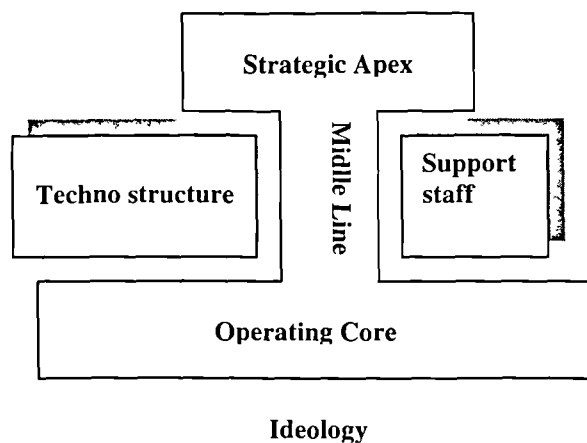
various ways. Some researchers have distinguished them in terms of internal and external change agents (Ginsberg and Abrahamson, 1991) and others in terms of Lewin's (1947) three phase model: change generators, change implementers, and change adopters (Ottoway, 1983). It has also been found that in order to perform their role, change agents must be able to undertake a few tasks. They must envision a new way of doing things, clearly state what must be changed, the form the new design will take and what resources will be needed to accomplish the change (Connor and Lake, 1988).

This research will consider the characteristics and issues regarding a particular group of change agents applicable to this research, reengineering teams. Before discussing certain, relevant issues that have to be determined within the reengineering teams, the research will divert its focus for a short while and consider other topics that are related to the area of teams. In the next section the organisational structures that are likely within an organisation are discussed. This topic was considered important to include, because as explained, changes in the organisational structure of the organisation also occur as a result of the forming of the reengineering teams.

### **2.3.1 INVESTIGATING ORGANISATIONAL STRUCTURE**

When BPR occurs, it has an impact upon an organisation by, for instance, changing the roles and responsibilities that individuals undertake within the organisation. The change in the roles and responsibilities also has an effect upon the organisational structures of the organisation (as shown in Table 1.2). There is no exact definition of organisational structure, however, Mintzberg and Quinn (1998) argued that, "Structure should reflect the organisation's situation- for example, its age, size, type of production system, and the extent to which its environment is complex and dynamic." There is a lot of information regarding this area, however, it is beyond the scope of this research.

For the purposes of this research, the organisation is described as consisting of 6 basic parts and is displayed in Figure 2.5. Initially, the base of an organisation consists of people who are required to undertake the work and this base is known as the operating core. At this point, there is a small, strategic apex, usually one full-time manager, who oversees the whole system. As the organisation grows, more individuals are employed and more managers are needed. They are known as middle managers and within the organisational structure model, create a middle line. The organisation becomes complex as expansion occurs and analysts are employed; they are known as the techno structure. Usually organisations also employ people to assist with the internal operations of the organisation and could include staff employed for distributing mail or legal services; this is the support staff. Finally, the organisation is composed of an ideology, which consists of the traditions and beliefs of an organisation.



**Figure 2.5 Describing the Structure of an Organisation**

**Source: Mintzberg and Quinn (1998)**

While Figure 2.5 is the typical structure of an organisation, there are variations to the structure as organisations change. For instance, some organisations introduce a leaner and flatter structure as the numbers of middle managers are reduced within an organisation. Presently, organisations are more conscious about costs and are obtaining more multi-tasked and skilled individuals and subsequently, they are reducing the number of managers. This is causing a

change in the structure with the middle line part being reduced and the shape changing altogether.

Having briefly described the organisational structure, the research will now consider a different type of organisational change that is occurring more often at present and all due to the presence of an increasing amount of IT.

#### 2.4 A DISCUSSION ABOUT IT ENABLED CHANGE

Organisational change began to be examined in a different manner with the introduction of IT. Initially, the role of IT was minimal and had little impact upon the change that an organisation experienced. However, the role of IT has changed from the 1970s to the 1990s. In the 1970s, IT was being used in a minor role and was used for general administrative purposes within offices. As the potential that it offered came to the forefront, IT began to be employed for managerial, decision-making and strategic purposes. It then became well established that IT has a key role in enabling business change (Zuboff, 1988; Davenport and Short, 1990; Hammer, 1990; Venkatraman, 1991).

Leavitt and Whistler (1958) initiated the speculations about the role of IT in obtaining organisational change and thereafter, researchers have been aiming to identify the exact role of IT in obtaining organisational change. Research from the works of researchers such as Markus and Robey (1988) and Benjamin and Levinson (1993) provided evidence that IT causes change within organisations, and humans are the “agents of social change” (Markus and Robey, 1988).

Markus and Robey (1988) proposed three causal paradigms of relationship between IT and organisational change, namely the technological imperative, the organisational imperative and the emergent imperative. **The technological imperative** stresses the role of IT in determining or prohibiting the organisational change. **The organisational imperative** on the other hand has a social oriented perspective and assumes that the human motives and organisational needs determine and enable change and not IT. **The emergent imperative** is a



combination of the other two views in that it views change as a result of a socio-technical perspective and a balance is required between the technical and social components of an organisation. In the earlier period, researchers in the BPR area were viewed to emphasise the technological imperative, resulting in the other areas not being attended to.

The MIT 90s research program (1991) also attempted to determine the relationship between IT and organisational change and found that with the emergence of IT in the 1990s, the traditional organisational structures and practices were no longer viable. The research based upon Leavitt's (1947) model indicated that jobs and working practices were being altered radically by the changing role of IT within organisations. However, the role of IT in obtaining the change was viewed to be an enabling one and the actual task of changing the job structures was viewed to be a combination of management leadership and employee participation.

Benjamin and Levinson (1993) attempted to provide a framework that displayed the impact of IT enabled change. For this it was noted firstly, that IT enabled change has the potential to have an impact upon many parts of the organisation. For instance, they observed that IT has the potential to change across functions and organisations and can radically change jobs and organisational structures and working practices, a conclusion similar to the MIT 90s program. They then supported Chandler's (1962) view that "change moves an organisation from an old state of relative equilibrium to a new one." However they went further to state that the "change effort must focus on what *must change*, specifically in the area of technology, business process, culture and organisation." Therefore, when considering the culture of the organisation, the human aspects must be considered, while when the organisation is examined, the organisational aspects must be studied, independently.

Despite the fact that the researchers studying IT enabled change emphasised that in order to obtain such a change, the human and organisational aspects have to be considered, researchers in the BPR area (Davenport, 1993; Hammer and Champy, 1993) still continued to pay greater attention to the IT aspect. By doing so, the human and organisational aspects were virtually forgotten or ignored and that is where the problems emerged. The case studies in the

following chapters demonstrate how the human and organisational aspects are issues of greater concern and that the role of IT (whether enabling or otherwise) is not particularly emphasised in practice.

#### **2.4.1 A CRITIQUE OF THE ORGANISATIONAL CHANGE LITERATURE**

Business Process Reengineering can be studied from various perspectives. Organisational change is one of those perspectives that is at the core of this research. Indeed, it was discussed in chapter 1, where the definition of BPR and the ways that it has been investigated by various authors was provided. This chapter then further extended the work in this chapter by discussing different change models that can be utilised to investigate change. Lewin's (1947) model has been the established model to understand the process of organisational change and has been extended in different forms when examining the general area of organisational change.

In chapter 1, a description of how various authors in the BPR area have interpreted organisational change was provided. From the organisational change models that have been described in this chapter, it can be observed that BPR has been examined mainly in the processual way. It was also found that most of the researchers were interested in examining BPR in the context of Leavitt's (1947) model. This is because it is felt that BPR does not have an impact only upon the technological side of organisations, but the task, people and process phases as well. Interestingly, researchers in the BPR area have made attempts to extend the model by considering the influence of external factors upon the model and considered the role of management. This was something that the original model did not consist of. A conclusion that can be made with regards to the models is that none of the models developed so far is useful to investigate BPR because one or the other aspects is missed and subsequently, an overall view of the impact of BPR is not obtained.

Since the research is more concerned with the reengineering teams, the manner that the organisational change models will be used is slightly different. The research will attempt to

determine which one of the organisational change models only mentioned within the research, process, content or context is applicable to this research and their evidence (if evident) in the process involved in forming the reengineering teams. A suggestion that this research will make is to establish what process of organisational change is being followed within organisations when forming the reengineering teams and are they applicable to the organisations undertaking BPR.

## 2.5 MANAGING CHANGE AND PROJECT MANAGEMENT

The other area that is viewed to underpin the approach is the theory belonging to the subjects of Project Management and Teams. When change occurs, it also involves people and it is the people who are viewed to be the success factors to IT implementation (Yeates and Cadle, 1996). As aforementioned, researchers have recognised that the human aspect area has to be considered when implementing BPR.

To deal with the people issues and to include them at every stage of the project in order to ensure that the organisation obtains its desired business benefits is what the area of managing change deals with. Managing change also means being “proactive in identifying and planning for the changes that need to take place within the business to support the new system” (Yeates and Cadle, 1996). When examined closely, these issues belong to the subject of Project Management. “*Project Management is the combination of people, systems and techniques required to co-ordinate the resources needed to complete projects within established goals*” (Dinsmore, 1990). There are a few precise definitions of Project Management in the information systems literature. However, researchers in the Information systems area associate project management with “business change projects and involve the management of change as much as the technical aspects of systems development” (Earl, 1996). Theorists in the area have found that project management is strongly associated with issues such as being on time, in budget, to technical specification of a project (Morris, 1996).

In addition to these topics, chapter 1 also introduced the matter of a vision and that is something rather crucial for project management. A vision states the objectives and aims of the project and if they are not realistic or achievable, it is likely that failure could occur. The overall picture of the project management area has shown that there are several key elements that include a description of the overall responsibilities, authority and reporting relationships between people in an organisation, project planning methods, project control system and cultural ambience (Cleland, 1998).

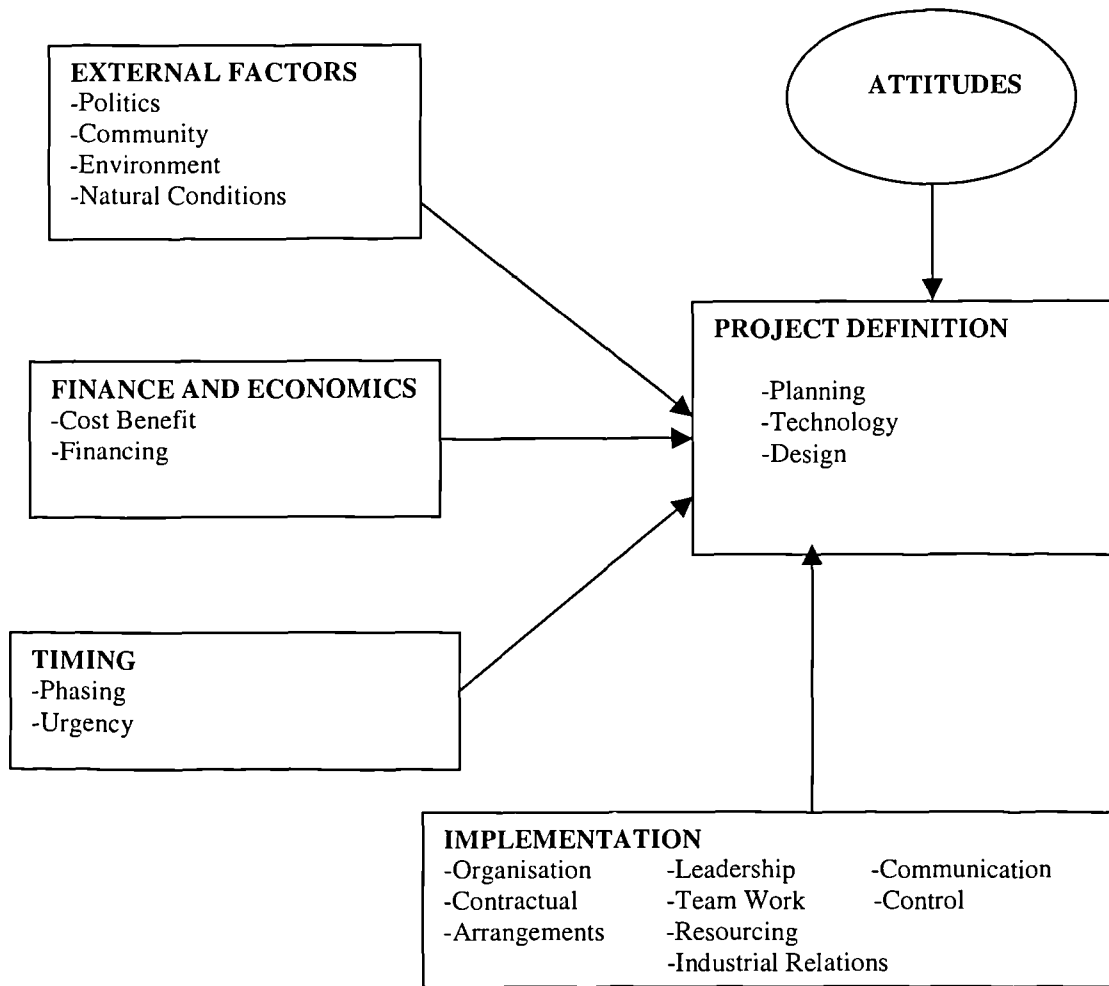
The area of project management, as other disciplines, also has two aspects within it, the hard and soft ones. Tools and techniques for planning and obtaining change form the hard aspect and human and behavioural issues involved in the management of change, the soft one. Until recently, the focus of most research in the project management was upon studying the technical aspects (Partington, 1996) and this can be observed by referring to the number of articles (particularly row 1) published in journals issuing topics related to project management as illustrated in Table 2.1.

**Table 2.1 The subjects that are published in the project management journals**  
Source: Partington (1996)

	<b>International Journal of Project Management</b>	<b>Project Management Journal</b>
<b>Tools and Techniques for project planning and decision making</b>	45	48
<b>Individual project strategies and success/failure factors</b>	25	29
<b>Organisational strategies and structures for multi-projects</b>	19	11
<b>Behavioural and human resource issues</b>	11	12
	100%	100%

Recent researchers (Morris, 1996) have begun to form models that demonstrate the areas of project management that have an impact upon the organisation. This way a clearer impression of the areas that should be associated to the area is being formed. Some of the areas

that project management does emphasise have been encapsulated and demonstrated in the form of a model, as shown in Figure 2.5. However, what the model displayed was the factor given foremost importance is that of attitude.



**Figure 2.6 The Critical Success Factors of Project Management**

Source: Morris (1996)

It is felt that positive attitudes both within the company and amongst the senior management of the organisation can make a project obtain realisation. Following that, the project's definition is given consideration. Definition is viewed to mean both the technical-the configuration and the technical uncertainties posed by the technology, and the general planning required for the project (Morris, 1996). Morris (1996) then found that the definition of the project is affected by several factors and if not monitored and managed the success of the

project is uncertain. The first of these factors are external, followed by finance and economics and finally timing. Timing is meant to be the pace at which the project is developed. Even though these factors may have been considered, the project has still to be implemented and for this a number of tools, techniques and concepts are employed. These include matters of organisational structure responsibility and contract strategy, terms and conditions, issues of personal leadership and management style, resourcing, systems and procedural conflict management and industrial relations, team working and matters of control and communication.

Figure 2.5 reiterates the aforementioned issue of the technical aspects and demonstrates some of the technical issues that Project Management deals with. Apart from models, researchers have also begun to form methodologies based upon the principles of project management (Dey, 1999). Using a BPR framework, the author explains how using an integrated information system and risk management throughout the project lifecycle reduces time and cost overruns. However, in these recent articles, humans are viewed to have an important role as they are required to undertake the work and that is where the role of the team is drawn into the discussion.

There is more evidence in the next section that illustrates the pivotal role of teams, but as an introduction, the following quote by Yeates and Cadle (1996) is used. Yeates and Cadle (1996) state, "*In any project, it is the team who do the work.*" Since teams are viewed to have such an important role, organisations also have to pay particular attention to certain issues regarding teams. Organisations have to consider the selection of the team, how certain issues are dealt with, whether the teams are developed according to the expectations placed upon them and a suitable environment is provided to them. Before reviewing the theory surrounding teams, recent research that has been conducted in the project management area will be reviewed. The aim of this is to provide a better insight into the research area and to illustrate the position of the research in this dissertation.

### 2.5.1 RECENT RESEARCH IN THE PROJECT MANAGEMENT AREA

The previous sections have discussed some of the more established topics that have been investigated within the project management area. To provide a wider outlook to the research and to provide a better view of the impact of this research, the subsequent descriptions are provided.

Until recently, the emphasis in the Project Management area has been placed upon the harder side where attention is placed upon the linear models and structured analysis that can be used as tools and techniques in project management. For instance, Kemerer (1997) attempts to provide a model that can be utilised to estimate the costs incurred within a project and Abdel-Hamid and Madnick (1997) endeavoured to model the dynamics of software development. Amongst their findings it was also concluded that the role of people in the project management area should be highlighted and provide explanations from Cooper (1978) about this deficiency.

*“Perhaps this is so because computer scientists believe that management per se is not their business, and the management professionals assume that it is the computer scientists responsibility.”*

Morris (1999) also contends that while the emphasis on “being on time” and “within the budget”, that is, the timescale and cost are important factors to be considered in the project management area, emphasis should also be placed upon the people aspect. Particularly the criteria that are employed by organisations for a Project Manager are considered and the author identifies some useful attributes that a Project Manager should possess.

Amongst the people and softer issues a topic of immense interest and research is that of teams. Yeates and Cadle’s (1996) views about the importance of teams have already been described in the previous section. Bing (1994) further supports the view by citing as one of the established principles in the Project Management area “there must be a dedicated **team** of qualified people to do the work of the project.”

Research in the area of teams in project management has tended to describe how the team should be organised and the tasks distributed between them. This has been particularly

well considered for software development teams by Pressman (1992) where explanations about the content, which is what the team is and what makes the teamwork, were stated. By providing this explanation, Pressman identified a particular type of team that would be applicable to the IS/IT areas and what are the areas that demand the attention of practitioners.

Research into software development teams has focused upon ways to manage these teams and to reappraise the predominant organisational models used to account for the management of these teams (Button and Anderson, 1992). Additionally, research has tended to concentrate upon finding ways of selecting and monitoring the teams (Warren, 1996). Recent research has moved from describing the composition and management of the teams into assessing the human elements as well. Gobeli *et al* (1998) investigated conflicts within software development teams and found that confrontation is essential at the project level.

In the general area of teams, research has begun to categorise teams, such as the one in this research and the aforementioned, software development teams, and investigations tend to focus upon the interaction, formation of teams, teamworking and the issue of leadership within the team. Vyakarnam *et al* (1999) undertook this task in entrepreneurial teams, Tjosvold *et al* (1999) similarly achieved this in the area of TQM and Wallace (1996) researched into management teams in primary schools. Benders and Hootegem (1999) on the other hand, have progressed from identifying the various dichotomies that exist in the area of teams and attempt to categorise the classifications in terms of German and Japanese teams. They then move on to identify the problems associated with them, and attempt to define to what extent can the identified teams be termed as actual 'teams'.



## 2.6 MANAGING CHANGE

The MIT 90s program (1991) emphasised the critical role that management has when introducing change. Hammer and Champy (1993) also impressed upon the point that BPR should be a 'top-down' initiative rather than 'bottom-up'. It is usually expected that when introducing change, the initiative to propose change has been viewed to be a 'top-down' one where management is seen to push for change and the individuals at the lower levels are 'resistant' to it (Lupton, 1986).

When providing a social construction perspective, Tinaikar *et al* (1995) also emphasised upon this point. "BPR is a purely top-down approach to restructuring organisations..." (Tinaikar *et al*, 1995). The general opinion is that senior management is considered to be the best for this strategy for several reasons including, managers are the ones who are held responsible for anything that occurs within the organisation. This is an issue that has been a subject of many debates between the classical and human relations' theorists when discussing how to plan and manage change.

Classical and traditional theorists such as McGregor (1961), Blake and Mouton (1964) and Likert (1967) emphasised that managers must combine technical and formal administrative competence with skill in getting their subordinates to commit themselves to the goals of the organisation. This objective would be achievable if managers are sensitive and understanding to the needs of their subordinates. By winning the support of their subordinates makes it easier to undertake the task at hand. However, the theorists also stress upon the point that ultimately "it is management, in possession of the attitudes and opinions it has solicited in response to the disclosure of its plans, who decree what is to be changed and how" (Lupton, 1986).

The 'human relation' supporters view that managers work with the theoretical knowledge of human emotions and thought processes and procedures for influencing behaviour beyond that formally in the possession of the worker. Human relation theorists are usually associated with the research conducted at the Hawthorne Studies, in the Hawthorne works of Western Electric

and theorists who have been associated with the organisation include Roethlisberger and Dickinson (1939).

## 2.7 EVALUATING THE RESEARCH CONDUCTED UPON TEAMS

Research in the team area until recently has tended to focus more upon the requirements of teams (Rushmer, 1997), and factors leading to better team working (Drew and Coulson-Thomas, 1996). Rushmer (1997) examined the processual approach to change in a team involved in a organisational development project. It was found that the team members should organise themselves in a way that they know each other and can operate without the presence of their leader.

Drew and Coulson-Thomas (1996) assert that although teams are a critical component of organisational change efforts, it is not such an easy process to obtain. They conclude that attention to change, training and development throughout the organisation is required. Amongst the various recommendations made, the more recognised ones are that teams should reflect on their actions and learn from them, encourage knowledge exchange and use innovative training and learning techniques.

There are a few classifications of teams that have been identified by the research and they will be discussed accordingly. Firstly, the team research that has been conducted in the information systems area has been in the classification of software development teams where a number of issues such as the impact of conflict upon such teams was undertaken (Gobeli *et al*, 1998). The issue regarding the selection, monitoring and management was considered by Warren (1996). Carmel and Sawyer (1998) attempted to find the differences between the software development teams that produce products for the mass market and the customised markets. The study also investigated whether such teams are self-directed or not and the impact upon team cohesion and motivation.

Then self-managed teams were found as a classification. Applebaum *et al* (1999) note that downsizing is occurring on a rapid rate. As a result, organisations do not have the time or the monetary efforts to attend to a team. Consequently, self-managed teams are on the increase. In such teams, the issue of handling or ignoring conflict is dealt with and that is the purpose of this article.

There have also been instances when the context being explored is related to the variable affecting the team's performance. For instance, some teams are viewed to self-managed teams and the research in that instance then attempted to identify the characteristics that are identifiable with such teams (Yeatts and Hytten, 1998). In a similar manner, this research intends to identify the team demographics and human characteristics that are evident within reengineering teams.

As explained earlier, teams are of importance, however, when forming a team, there are many vital components that have to be considered. For instance, are teams suitable for a project, and where will the teams work are some of the issues that are usually dealt with. Amongst the various issues is an understanding of the selection method utilised to form the team.

Katzenbach and Smith (1994) made early attempts to identify a selection criteria that is not associated with any form of psychometric testing in the United States by identifying complimentary skills that a generic team could possess and thereby identified a tangible result that was not an assumption any longer. Belbin (1981) has been undertaking research in this area for many years, however, the research emphasises concentrating upon identifying roles that are evident in various individuals. This task is achieved with the assistance of psychometric testing.

When selecting teams it has to be understood that since there are many individuals to choose from within an organisation, each having different personalities and different skills, and experience, different stakes in the organisation and consequently, the process of selection becomes difficult. Organisations have been employing various methods, however, they have been mainly limited to personality or psychometric tests that include Belbin's questionnaire or

the Meyers-Brigg indicator or the knowledge, attributes and skills phenomenon (Stevens and Campion, 1994).

In the BPR area, Davenport (1993) supports the view that the initial steps that should be taken when forming a team, is to have a stakeholder analysis. By doing so, individuals who are identified to be affected by the change are assigned to the team. When selecting the individuals, the criteria to be used is to have a cross-functional team and that the characteristics and skills that they bring must be carefully weighed against the functional knowledge they bring to the table. "Ideally, creativity and openness will be blended with sound business judgement and the ability to synthesis information from multiple sources" (Davenport, 1993).

When employing psychometric testing, employers are more interested in determining the suitability of individuals to a particular group or team. On the other hand, the knowledge, skills, and attributes criteria select individuals based upon their knowledge, skills or attributes of a subject. This could include determining in say for instance in a reengineering team whether the individuals have project management or business process reengineering knowledge to join the team. On the other hand, the individual could be chosen on the basis that of the ability to deal with issues such as conflict or empowerment.

It also has to be noted that particularly the knowledge, skills and attributes area has had little research done (Stevens and Campion, 1999) as organisations have been busier deciding upon the impacts of the psychometric tests since psychometric tests are increasingly being utilised at present (Jones, 1993). The vital question in this research is to determine which one of the above stated methods, psychometric tests or the knowledge, skills and attributes, is being utilised in the BPR area. By considering this, practitioners and academics would have some idea of the method being used in practice and research more into this area.

### 2.7.1 TOWARDS A MODEL OF TEAM DEVELOPMENT

Teams have been viewed as one of the key enablers leading to changes in the organisational structure of an organisation when BPR is applied (Grover *et al*, 1998). Recognising the important role that teams have in the areas of organisational change and project management has made researchers become more alert to the issues of team development and performance and has made them examine them in more detail (Vechhio and Applebaum, 1955; Tuckman, 1965).

Previous research in the team development area has focused upon comprehending the dynamics of teams when tackling a task (Tosi *et al*, 1990). Recent research in the area has moved to identifying individuals who are best suited to undertake a certain task (Sommerville and Dalziel, 1998; Belbin, 1993, 1981). By identifying the information relating to the interaction that individuals have in a team, it is felt that the development of teams can be improved (Sommerville and Dalziel, 1998).

Hartford (1971) employed Tuckman's model and her own experiences to develop stages (Table 2.2) that could be utilised to describe the process that a group follows.

The BPR area lacks any such theory regarding teams and yet it cannot be expected that teams can develop on their own. It is not necessary that the new theory will be different, but at least there will be a theory that can be referred to, only in the context of BPR. There needs to be some form of a model or framework that could be used for guidance purposes and could provide some form of a structure to the area and codify existing and new information in the area.

Table 2.2 Hartford's view upon Group Development

Source: Hartford (1971)

<b>First stage: pre-group planning</b>
1. the organiser plans
2. the agency is involved
3. group members are contacted
<b>Middle stage: cycles of</b>
• integration
• disintegration and conflict
• reintegration, reorganisation and synthesis
• group maintenance
<b>Ending stage:</b>
1. planning to end
2. carrying out the ending
3. arranging the post group phase

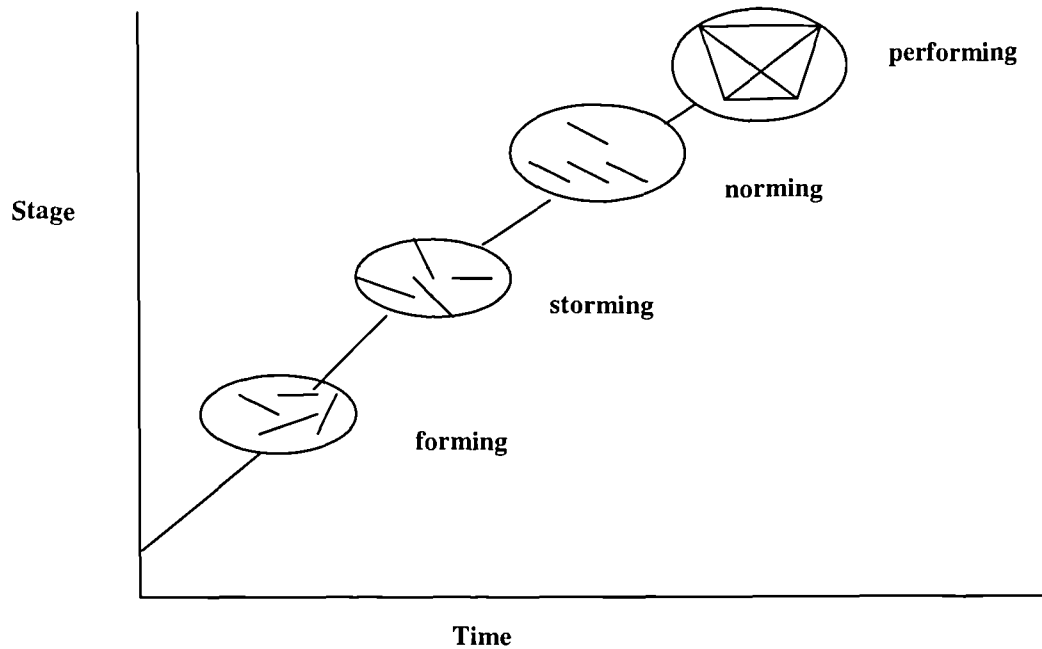
Tuckman (1965) developed the foremost of models describing team development. In the model he identified four crucial steps required for team development, *forming*, *storming*, *norming* and *performing* and these are displayed in Figure 2.7. Researchers (Vernelle, 1994) have emphasised that a fifth phase, ending, or mourning should also be added to the model. However, this research will be analysing the four stages of team development. At the stage of forming, the team is new and uncertainty exists. Anxiety exists, as the team members are unsure about anything that is occurring. The team members are concerned about what particular decisions are acceptable and unacceptable within the team. In the storming stage, the division of power and added responsibility begins. As familiarity begins, members then begin to strive for power and control. The ground rules of the team are set and tested. At the norming step, the team members' confidence and assertiveness begins to grow and becomes evident in the work

being performed. Agreements about the ways of working and the norms of the team appear. Team members begin to feel at ease within the team and are prepared to disclose more about themselves. During the final step, the team establishes some roles and responsibilities that help them accomplish their goals. Table 2.3 summarises an example that the processes and outcomes of this model would obtain and Figure 2.7 displays the steps in a diagrammatical form.

Tuckman (1965) provided explanations of the steps in the model, but the model has been applied in various different scenarios. For instance, Appelbaum *et al* (1999) utilised the model to investigate the impact of downsizing and the emergence of self managed teams. The author identified several crucial characteristics, for instance, communication and attempted to determine its role in the development of teams. Tuckman's model has also been observed to take place at various times. One of the views is that a team has to repeat endlessly a cycle of development, and the other, is that a team goes through a series of steps until the team disbands. When a team forms, it may go through a variety of steps and in the process may also change their minds at every phase. The cyclical stages could occur in an instance where stress appears. When such a situation emerges, the team may revert back to a behaviour characteristic of the stage before any trust between members was developed. The model was beneficial in that it provided a description of the steps of development, but it was viewed to be weak in that it did not provide content to the stages (as demonstrated in table 2.3) that groups pursue (Vernelle, 1994).

Stewart (1997) has also employed Tuckman's steps of development. Stewart (1997) explains the development of teams in terms of behavioural models of teams and their associated communication patterns. In the paper, the original stages of Tuckman's model are assigned different names and their behaviour and communication patterns are then examined. The *forming* stage is the anomic reaction model, *storming* is the intercon model, *norming*, the team cult model and finally the performing stage, the team primacy model. The findings concluded that as each step of development occurred, different behaviours, relationships between the team

members arose and the patterns described in terms of inter and intra communications were also changing.



**Figure 2.7 The Stages of Team Development**

**Source: Tuckman (1965)**

In a similar manner, the research in this dissertation endeavours to provide a reference model that is driven not only by the steps stated in Tuckman's model, but one that identifies particular behavioural aspects. These aspects have been chosen due to their presence in the extant literature in the organisational behaviour area. For instance, motivation and conflict have been noted as two characteristics that have been studied extensively within the work psychology, organisational behaviour and teams areas (Arnold *et al*, 1998; Jehn, 1997; Tjosvold, 1991a) and for this reason, the researcher considered them as two very important issues to be studied. In addition to that, it is well known that communication is an aspect that cannot be ignored. "The amount of effort that can be successfully be put into communication is often underestimated. ...communication is an essential prerequisite to changing attitudes, behaviours, ways of work..." (Beckhard and Pritchard, 1992). Trust, empowerment, training



and education, leadership and the role of consultants also emerged as areas that should also be researched.

**Table 2.3 An Example of the Process and Outcomes of Team Development**

Source: Based on Tuckman (1965)

Stage of Development	Process	Outcome
<b>Forming</b>	Anxiety; Dependence on the leader; Testing to determine nature of situation and acceptable behaviour.	Members find out what task is; Find out what the rules are and what methods are appropriate.
<b>Storming</b>	Conflict between sub-groups; Rebellion against leader; Opinions polarised; Resistance to control by group.	Emotional resistance to the demands of task.
<b>Norming</b>	Development of group cohesion; Norms emerge; Resistance overcome and conflict patched up; Mutual support and sense of identity.	Open exchange of views and feelings; Cooperation develops.
<b>Performing</b>	Inter personal problems resolved; Inter personal structure becomes means of getting things done; Roles are flexible and functional.	Solutions to problems emerge; Constructive attempts to complete tasks; Energy now available for effective work.

The ultimate objective of this research is to provide a model that displays the development of teams with an explanation about the impact of each of the characteristics of the model. For instance, at the forming stage, there could be an explanation about the selection criteria used by each of the different settings and the impact of this upon the roles and responsibilities within the team members. Thereafter, at the storming stage, are the new roles and responsibilities clear to the team members or do conflicts arise in such an instance. At this point, a distinction between the types of conflict will also be made. At the norming stage, some sort of a resolution could be utilised to resolve the conflict. At this point, motivation or empowerment could be utilised as the team members who are in conflict could be proposed some solution utilising these two issues. Once this is all resolved, the team moves onto performing its task.

Communication is an aspect that is particularly evident at each of these stages and the way it is utilised will also be discussed. Also changes that occur as team development takes place is that the role of the leader changes, from say for instance, a dictatorial to a more democratic role, where empowerment amongst the team members appears and very little reliance upon the leader is demonstrated.

The characteristics that have been identified as important for this research are conflict, motivation, trust, communication, and empowerment (explained earlier in chapter 1). However, when explaining these topics, other characteristics such as training and education, leadership, and the role of consultants may have to be considered and this is being emphasised at this point so as to avoid any astonishment at these topics being mentioned anywhere else within the research. There is little that has been written about training and education, the role of consultants as such and it would not be wise to discuss them in depth as this widens the area of research too much and it would be difficult for the researcher to investigate all the topics.

### **2.7.2 CONFLICT**

When decisions are made without consulting the people who are undertaking the work, the likely consequence is going to be conflict. This is due to a feeling of undermining authority amongst the individuals who are undertaking the task begins and they may not comply with the directions that have been passed and in such an instance, conflict is likely to arise. Conflict is not likely only in such an instance. Conflict can also occur as described in the following example. When obtaining change, at the earlier stages, management may have several proposals about the design analysis and disagreements could occur about the suitability of a particular type of analysis, the number of people to be utilised for implementation or other such issues. Some people could have personal reservations about employing a particular method as they are not completely aware of its benefits and are fearful and may just resist utilising it and conflict could arise. The term “conflict” is being referred to, and yet there has been no description of it

so far. Conflict is defined as an “opposition between ideas or interests” (Collins Paperback English Dictionary, 1999) and is associated with the attributes of stress and threat, which increases the emotional responses and negativity amongst individuals (Thomas, 1992)

The earliest reference to conflict was made in the 1920s when Follett (1924) advocated that conflict should be addressed and emphasised rather than being hidden and neglected and being viewed as something that is not beneficial for the organisation. Further, it was contended that conflict achieved progress for an organisation.

*“It is possible to conceive conflict as not necessarily a wasteful outbreak of incompatibilities, but a normal process by which socially valuable differences register themselves for the enrichment of all concerned...”* (Follett, 1924).

Follett (1996) also made the earliest claim that conflict should be considered as a joint problem where all affected parties work together to determine a solution. By doing so, a feeling of satisfaction along with organisational learning and progress will be achieved. Such results were also found in practice (Van de Vliert and De Dreu, 1994; Tjosvold, 1991, Eisenhardt and Schoonhoven, 1990).

Researchers in the organisational analysis area have found that in certain cases, conflict has been viewed to be detrimental to performance (Blake and Mouton, 1984; Pondy, 1967; March and Simon, 1958), whilst in others it has been viewed to be beneficial (Pelled, 1995; Jehn, 1995; Tjosvold, 1994). For example, it has been found that task related conflict can improve performance within an organisation as an ‘enhanced’ understanding of the various viewpoints and existing options is obtainable (Eisenhardt and Schoonhoven, 1990; Bourgeois, 1985).

Conflict can occur in several forms, but the two dominant ones that have been studied in organisations are ‘affective’ and ‘substantive’ conflict (Guetzkow and Gyr, 1954). Affective conflict refers to conflict occurring in interpersonal relations and substantive is conflict involving the teams task. One of the forms of conflict refers to the relations between the individuals and is of a personal nature, whilst the other is to do with the work at hand. These

two taxonomies have also been referred to as “cognitive, task related and socio-emotional conflicts” (Priem and Price, 1991) and “goal oriented” and “emotional” conflict (Coser, 1956). In the second of the taxonomies, goal oriented conflict is one in which individuals pursue gains specific to the task, and in the other, there is projected frustration resulting from interpersonal interaction (Coser, 1956).

Conflicts that involve interpersonal relationships are viewed to have a negative impact upon productivity (Wall and Nolan, 1986; Gladstein, 1984). More time is spent on analysing the relationships between the team members and less on the technical aspects of the task at hand (Deutsch, 1969), and results in tensions and animosity. Such a form of conflict is also viewed to achieve inefficiency and ineffectiveness (Argyris, 1962) and tends to prevent cognitive functioning in assessing new information provided by group members (Pelled, 1995).

Task related conflict on the other hand is seen to improve decision-making outcomes and group productivity by increasing the decision quality through constructive criticism and individuals adopting a “devils advocate” role (Amason, 1996; Schwenk and Cosier, 1980). Recent research has shown that having task related conflict is beneficial as this allows the exchange of ideas and assists in better performance amongst the group members (Jehn, 1995). Other identified benefits include that it enhanced the identification and understanding of task issues (Putnam, 1994); improved group learning and accuracy of situation assessment (Fiol, 1994); promoted the development of new ideas and approaches (Baron, 1991) and achieved high quality decisions since individuals confronted problems (Schwenk and Valacich, 1994). However, this also depends upon type of task undertaken (Van de Ven and Ferry, 1980; Gladstein, 1984).

Task conflict has been further categorised into two types, **unstructured/non-routine** and **routine/structured**. Unstructured task conflict requires problem solving with few set procedures and a high degree of uncertainty and groups in this category benefit (Van de Ven *et al*, 1976). Structured task conflict on the other hand has been viewed to hinder and interfere

with efficient processing (Guzzo, 1986) that are based generally on standard operating procedures (Gladstein, 1984) and reduce productivity (Hackman *et al*, 1976).

To resolve or manage conflict various measures exist, including arbitration, establishing rules and procedures, open debates, confrontation, separation and neglect (Handy, 1993). From this discussion it can be seen that research in the earlier days was intent upon determining the exact nature of conflict and has progressed to categorising it and describing means of resolving the concept.

### 2.7.3 EMPOWERMENT

The term empower is defined as “to give (someone) the power or authority to do something” (Collins Paperback English Dictionary, 1999). There was no exact definition of empowerment and researchers have been making attempts to define it in terms of the responsibility and change in roles that individuals undergo as a result of this concept (Hammer and Champy, 1993). In the management area, early attempts were made to define the concept in terms of motivational processes and changes in cognitive variables (also known as task assessments) (Conger and Kanungo, 1988; Thomas and Velthouse, 1990).

Usually the early studies conducted upon empowerment concentrated upon teams. Consequently, it has become a concept often associated with teams. Although early research in the management area focused upon determining the nature of empowerment and steps taken to introduce it (Wellins *et al*, 1991), recent research has begun to suggest ways of solving the problems associated with it. For instance, Frey (1993) attempted to describe how there is an improvement in empowerment by the introduction of profit sharing schemes. Therefore, research has now progressed from the early days of ‘having a feel’ of the concept to investigating its problems and benefits and how to improve it further.

For instance, in the BPR area, Sayer and Harvey (1997) found that empowerment imposed upon individuals had to be predetermined, and that the individuals selected to have the

increase in power could form a resistance. However, this was not viewed to have any impact upon the success of the BPR project. Therefore, the authors concluded that empowerment has to be well thought of and preparations to introduce it have to be undertaken. Additionally, empowerment is not easily bestowed upon individuals, particularly middle managers.

Wilkinson (1998) explored the term 'empowerment' by examining its foundations and its use in total quality management. They concluded that the term had arisen from the employee involvement initiatives of the 1980s and was largely aimed at the shop floor workers in order to increase productivity and commitment to the employers' goals. Empowerment is viewed to be more beneficial for employers than employees.

As earlier mentioned, there have been attempts to demonstrate or describe the process of introducing empowerment and that is described in Appendix C.

#### **2.7.4 MOTIVATION**

In order to function to the desired potential, an organisation requires the assistance of several resources including that of the people working for it. Katz and Kahn (1966) found that to have the utmost performance from the individuals, three particular requirements have to be fulfilled: (1) In addition to attracting the individuals to join an organisation, measures to ensure that they remain in it must also be taken. (2) The individuals must perform the tasks they were hired to do and this must be done in a dependable manner. (3) The workers must go beyond the dependable role performance and engage in some form of spontaneous, creative and innovative behaviour at work. In simpler terms, these requirements were viewed to be dealing with the motivational problems of stimulating both the decisions to work and to participate (March and Simon, 1958).

Motivation has been defined in several ways as each researcher has interpreted it according to his/her reasoning. The dictionary defines motivation as "to inspire and encourage someone to do something" (Collins Paperback English Dictionary, 1999). Some of the ways that

motivation has been described are detailed in Table 2.4. From the definitions three particular attributes that define motivation were noted. "Motivation is primarily concerned with: (1) what energises human behaviour; (2) what directs or channels such behaviour; (3) how this behaviour is maintained or sustained" (Steers and Porter, 1987). Simply stated, motivation concerns the energy, drive and persistence within individuals.

**Table 2.4 Defining Motivation**

Source: Steers and Porter (1987)

Author	Date	Definition
Jones	1955	"...how behaviour gets started, is energised, is sustained, is directed, is stopped and what kind of subjective reaction is present in the organism while all this is going on."
Atkinson	1964	"...the contemporary (immediate) influences on the direction, vigour and persistence of action."
Vroom	1964	"...a process governing choices made by persons or lower organisms among alternative forms of voluntary activity."
Campbell and Pritchard	1976	"...motivation has to do with a set of independent/dependent variable relationships that explain the direction, amplitude and persistence of an individual's behaviour, holding constant the effects of aptitude, skill and understanding of the task, and the constraints operating in the environment."

In the project management area, research on motivation has tended to focus upon how to understand motivation in order to form a foundation to determine the way the team works (Yeates and Cadle, 1996). On the other hand, in the management and psychology areas, research upon motivation has progressed from understanding the theories of motivation and the various theories it consists of, to ultimately finding steps to increase performance within individuals in an organisation from this understanding (Buschardt *et al*, 1989). In the IT/IS area, with the increase of technology occurring within organisations, the role of technologists becomes more important and the question then arises, how can the motivation amongst such individuals be increased (Trower and Straub, 1991). Other issues such as the impact of individual goals and performance and team composition have on an IS team's performance are examined (Trower

and Moore, 1996). Burn *et al* (1992) found that the motivation within IT workers in Hong Kong is low. A suggestion made is that the need for social interaction is high amongst these workers and the managers needed to develop a participative approach where employees set goals and the managers provided feedback to them.

There are several theories within the motivation area and for further information, the reader is referred to Appendix D.

### 2.7.5 TRUST

Trust is a behaviour that has been recognised particularly essential for teams (Tjosvold, 1991b). It is important because in a team there is inter dependence, sometimes upon the leader and in other instances upon the colleagues to undertake tasks and if this feeling of security and dependence disappears, the task may not be completed. The research undertaken on trust is approximately 40 years old where the earlier emphasis was upon the intentions and motives of individuals (Read, 1962; Mellinger, 1956; Deutsch, 1960, 1958). Mellinger, for example defined trust as an individual's confidence in another's motives and intentions and the sincerity of that person's word. Recently, the focus is upon the behaviour of individuals (Hosmer, 1995; Mayer *et al*, 1995) and to obtain a detailed understanding of the behaviour.

Trust has been viewed to be an essential characteristic of high performing teams where team members believe in the integrity, ability and character of each other (Robbins, 1996). To determine the presence of this issue, and to provide some guidelines to researchers, Schindler and Thomas (1993) found that there are five dimensions that underlie the concept of trust and they are as follows:

- **Integrity** Honesty and truthfulness
- **Competence** Technical and interpersonal knowledge and skills
- **Consistency** Reliability, predictability and good judgement in handling situations
- **Loyalty** A willingness to protect and save for a person



- **Openness** Willingness to share ideas and information freely

The way that the five dimensions appear above has been the way that their importance appears when trust is examined. Therefore, when trust is examined, integrity seems foremost to appear, followed by competence and then consistence, loyalty and openness. This is an area that is not considered too often in the research as organisations feel that there is always an element of trust and the need to investigate it further is not always required.

In the BPR area, Hammer and Stanton (1995) recognised trust as an essential element of team building and used the term in the context of the team members trusting (that is relying) upon one another in moments of stress and confusion. “The team members are going to have to rely upon each other in moments of stress and confusion” (Hammer and Stanton, 1995).

#### 2.7.6 COMMUNICATION

Kanter *et al* (1992) researched into the topic of organisational change and found that organisational development experts have been supporting the importance of “communication” for decades. In simple terms, communication is “the exchange of information, ideas or feelings” (Collins Paperback English Dictionary, 1999). Communication in organisations has been defined as the “process by which messages are transmitted from one person to another” (Williams, 1978). The human relations theorists supported the view that there should be openness in communication. Thus information is seen to flow freely within the organisation. This is achieved by building a foundation built on mutual trust (Pescarella, 1993). In such an environment, top level managers establish a policy in which subordinates at all levels are invited to present their grievances and ideas directly to them and not to go through a hierarchy of command. Communication has been seen to assist organisations undergoing change by breaking down the resistance amongst workers and increasing their trust in the impending change (Graham and LeBaron, 1994). Since the required information is being provided, workers do not fear change and are ready to face it when it arrives.

When examining the topic of communication within organisations, authors have made two distinctions (Steers and Porter, 1991). Interpersonal communication, is the first one and is the communication primarily between two individuals and secondly, organisational communication, the communication amongst several individuals or groups. Communication can take place in several forms and they are oral, written and non-verbal communications. Research in this area has tended to focus upon determining the process of communication (Collins, 1990) or recently to determine the impact of the different forms of communication, namely computer mediated communication versus face-to face (Introna and Whitley, 1996; Whitley and Scothern, 1997).

Since this research is focused upon the relationship between teams that consist of several individuals, the discussion will pay greater attention to organisational communication. Organisational communication is usually described in terms of communication networks. Communication networks are the pattern of interpersonal communication among the members of a group or organisation and can take place in essentially two forms that are described as Person-to-person and Electronic networks. The person-to-person category consists of networks such as the chain, wheel, circle and star while the electronic networks consist of technology oriented ones. These include networks such as electronic mail or e-mail (Steers and Porter, 1991).

Beckhard and Harris (1977) also noted that one of the first and foremost critical steps to manage the change that an organisation goes through is to develop and communicate a clear image of the future. Mankin *et al* (1996) conducted some research on teams and found that “seven times out of ten” when something goes wrong on a project, the cause is a breakdown in communication - not a breakdown in technology.

### 2.7.7 CRITIQUING THE AREA OF BPR TEAMS

Teams have been identified to be important for obtaining and managing change in the above descriptions. As mentioned earlier, in terms of organisational change, Beer *et al* (1990) have broadly defined teams as change agents. On the other hand, teams have been viewed to be important to manage a project (Yeates and Cadle, 1996).

Even though teams have been considered important for reasons such as the ones mentioned in this survey, researchers in the BPR area have not particularly attended to the area and consequently, many issues in the area have been downplayed. Bearing this in mind, the importance of issues such as team selection, and development have been neglected. Instead the focus of BPR researchers has been to identify a particular behaviour, such as empowerment, without providing any reasoning for its presence within the area of BPR. Therefore, issues such as, any of the processes involved in forming a team, the criteria employed to select team members or their development have not been emphasised. Consequently, no particular structural framework or model that deals with any of these issues has been developed and that is why there is no particular structure that can be attached to them.

Katzenbach and Smith (1994) attempted to provide an explanation for team selection in terms of the knowledge, skills and attributes; however, it was in generic terms and without any particular emphasis to theory. Although generic, it has been found that researchers in any area, for instance, BPR, refer to the works of researchers such as Katzenbach and Smith (1994) rather than forming any theory that can be used in the future. By having a theory, a rich picture of the topic can be formed and a model that is easily referable to can be produced. By forming a model that includes higher and lower levels of the selection criteria would assist in identifying and understanding the area more than at present. This can be asserted by examples used in the HCI area where, referring to frameworks or models displaying the main issues to be considered for topics, say for instance, reengineering teams could assist in providing a visual display. It has

been found that individuals relate to frameworks or models much better than just plain text (Preece, 1994).

Although the idea of team development is not new to the teams area as shown by Tuckman's model and Stewart's research, it has not been investigated in particular contexts. By identifying team development in a certain context, practitioners and academics could benefit since reference to models developed in a particular context exist. Therefore, whereas previously, the generic literature regarding the teams area was referred to when assessing or understanding team development in any context, it would not be necessary to do so. Therefore, results of the findings in this chapter could result in demonstrating that by borrowing theories from the general area of teams can provide a better understanding of the reengineering teams and statements made about the reengineering teams without any supporting evidence will have confirmation in the future. Additionally, such understanding could assist in bringing the team and BPR areas much closer. Previous researchers from different areas (Mumford, 1995; Willmott, 1995; Armistead and Rowland, 1996) have identified ways that areas such as operations management, socio-technical approaches and human resource management have founding and similarities to the area and have left it at that. This research also identifies ways that theories from the teams area can be applied to the BPR area and utilising the undertaken case studies, demonstrate that theory from the team area is evident and applicable to the reengineering teams. As stated earlier, this research can then establish statements or observations made about the reengineering teams with some supporting theory.

In chapter 1, one of the main objectives of this research is to form an understanding of the reengineering teams in the context of business process change. Ultimately, a model should be developed that provides future researchers to form a better understanding of the area. Chapter 1 also suggested ways of developing a model and considered forming a model that will encompass the processes involved in forming the team. This model can then be interpreted in several ways. First, the organisational change models that have been described in this chapter have described several steps that an organisational change encompasses, however, this research

will go further and demonstrate that some of the steps are also involved when forming the teams. By doing so, the applicability of organisational change will also be demonstrated and secondly, a description of the processes can add some more to the area by providing a specific framework or model that describes the processes rather than just having mental pictures for researchers to go by.

The particular areas that could have an impact upon team development were identified through a long process that initially involved referring to literature regarding the teams area in general, work psychology, information systems and management areas. This strategy was adopted because the reengineering area itself does not offer any theory behind the behavioural aspects such as conflict or empowerment and yet reference to the behaviours have been made in the literature (Hammer and Champy, 1993; Hammer and Stanton, 1995).

After obtaining some information regarding the issues that are important when considering the reengineering team, the next step was to refer to the literature regarding management. Management was referred to since references in the reengineering area drew attention to it. However, in the background, searches in established journals such as *MIS Quarterly*, *Sloan Management Review*, and *Harvard Business Review* were being conducted, where it became evident that the issues being identified by this research were in fact issues being researched into at present and were on-going research areas.

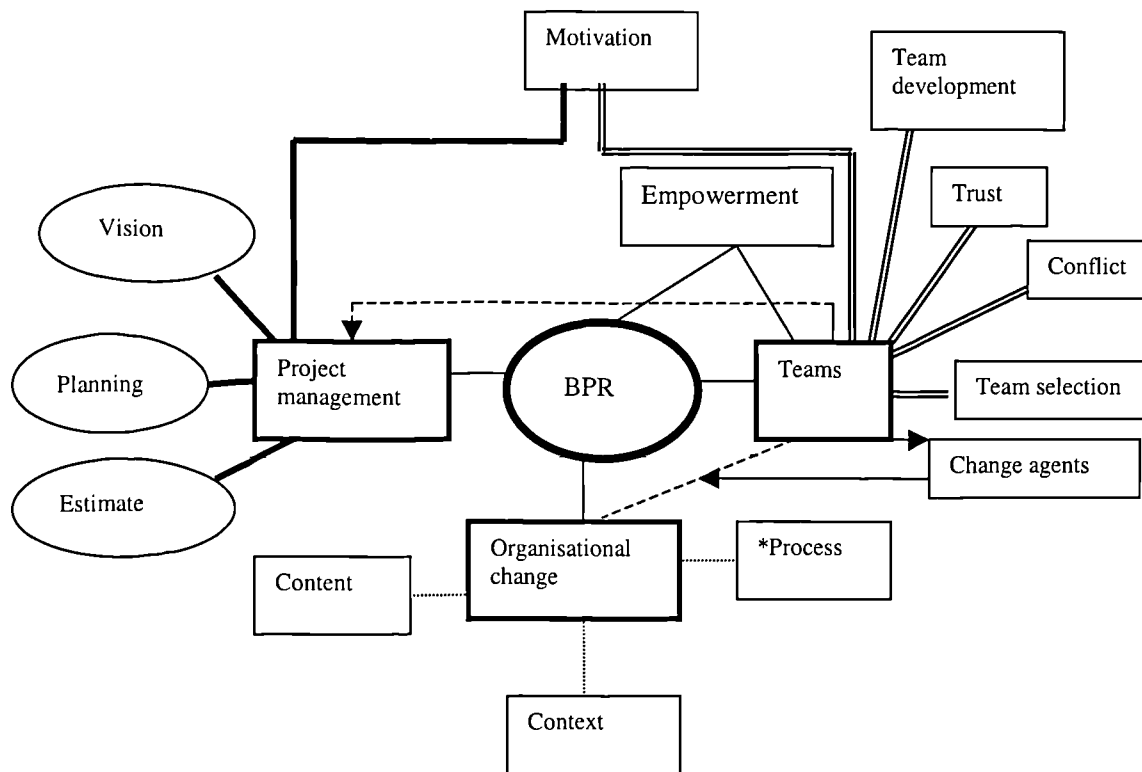
Then the management literature made references to the work psychology area and surveys carried out in that area also indicated that these areas were of interest. Thereafter, discussions with researchers within the university and organisations from where the case study findings were to be obtained confirmed that these were appropriate areas to examine and that if any further research was undertaken, it would be making a contribution and not just remaining on the shelves. That is the process of identifying the behavioural aspects of conflict, trust, motivation and empowerment. To further verify and validate that such research had not been undertaken previously and was recent, articles written upon the suggested topics of conflict, trust, empowerment and motivation within particularly the BPR area were also referred to.

It was found that interest has been received from researchers in the BPR area in these areas, however, theoretical underpinnings or research into their particular natures were missing and as such, research was limited and added an incentive for this research to continue with the investigations.

## **2.8 CONCLUSIONS**

Until now a theoretical understanding of the basis of the research has been provided and from this a model that describes the discussion so far can be formed. Figure 2.7 illustrates the center of the research topic being BPR, whose foundations lie in organisational change, project management and teams. Further teams are related to the organisational change area due to them being change agents. Teams are also viewed to be associated to project management. Therefore, an important role that teams have in the area has already been identified. As described earlier, teams contain individuals who are required to operate and manage the tools and techniques of project management. Finally, the role of teams being critical for the implementation of BPR forms an ally between the two areas.

The areas of project management that the research focuses upon are vision, planning, estimating and motivation. On the other hand, the teams' area has been dealing with issues such as empowerment (also associated to BPR), conflict, trust, motivation, and team development. This also assists in providing some more detail that should be included in a model that will form an understanding of the area.

**Note:**

\* means this is the main description of organisational change being used in the research

**Fig 2.8 Forming a relationship of the theoretical discussion**

## 2.9 SUMMARY

The theory that this chapter examined contained several issues including the role that organisational change has in the BPR area. The organisational change models that have been utilised in the area for analysis have been discussed, described and critiqued. It is at the critique level that the limitations of the existing theory were pointed out. It was found that the organisational change models addressed one aspect of organisational change, for instance, process change and ignored the others, consequently, an overview, rather than a detailed picture of the implemented change is obtained.

Additionally, the theory surrounding teams and the areas that the research will consider were emphasised as this is evident in general and in the IS literature in particular. The human

and organisational aspects were also described and discussed and this included explaining issues such as, empowerment, trust, conflict and motivation. Also included within the chapter was a discussion about team development and organisational structure.

It was important to discuss and explain all this at this point because, this should assist in providing some sort of a conceptual framework or model that could be grasped and understood by individuals searching for information regarding reengineering teams.

In the next chapter the means of data collection or the approaches that the research was based upon will be amongst some of the topics that will be explained.



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## 3 A RESEARCH METHODOLOGY TO STUDY REENGINEERING TEAMS



# 3

### 3.1 INTRODUCTION

Academics within the Information Systems field have been requesting for chosen research methodologies to be explicitly stated and reflected upon (Orlikowski and Baroudi, 1991; Walsham, 1995; Cornford and Smithson, 1996). Of particular concern to the academics was the fact that amongst the various doctoral dissertations, few researchers had examined alternative research approaches and identified the suitability of the preferred method. Galliers (1995) asserted that as an examiner of PhD dissertations, he found little consideration being paid to alternative research methods, or indeed the philosophy underpinning the method within PhD dissertations. This is also an essential component for any research that is undertaken as it convinces readers that the researcher is aware of the theoretical understanding of the method of investigation and is able to justify the selections made (Cornford and Smithson, 1996).

This chapter describes and discusses the research methodology applied to this research. To understand the research topic, validate and understand the theoretical findings and to obtain the required data, qualitative research was utilised. The philosophical foundation utilised for

guidance is interpretivism. A multiple case study strategy was employed. The data collection techniques utilised to collate the data were interviews, referring to archival documents and in some instances, observations. This chapter will describe and discuss the selected research method and also provide explanations for the selection of the aforementioned issues. While this chapter provides an introduction and discussion of the research methodology to be applied in this research, the subsequent chapters will also provide further explanations about the research methodology, but more of a practical outlook will be provided in those chapters.

### 3.2 QUALITATIVE RESEARCH

To conduct the research in this dissertation, the qualitative research approach was employed. Qualitative research has been defined in many ways including "any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification" (Strauss and Corbin, 1990). Thus statistical results obtained from an experiment conducted in a laboratory does not constitute as qualitative research. On the other hand, results obtained by observing the actions of the individuals conducting the experiment (that is, their actions and thoughts) are findings of qualitative research.

Miles and Huberman (1994) described qualitative research as simply, research based upon words, rather than numbers. A more generalised, but appropriate definition is: "Qualitative research is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter" (Denzin and Lincoln, 1994). This definition implies that qualitative researchers study things in their natural environment and understand events in terms of the meaning people assign to them and this was the strategy applied in this research.

Due to the application of Interpretivism guiding their research, qualitative researchers conduct research in a manner different to the quantitative ones. Qualitative researchers employ ethnographic prose, historical narratives, first-person accounts, still photographs, life histories, fictionalised facts and biographical and autobiographical materials amongst others. This

research uses first person accounts, by conducting interviews, documentation in the form of reports and information downloaded from the Internet.

Quantitative researchers on the other hand, utilise mathematical models, statistical tables, and graphs, and often write about the research in an impersonal, third person written or spoken form (Denzin and Lincoln, 1998). "Over recent years, qualitative analysis has become an area of increasing interest to researchers in many social sciences, including psychology, anthropology, organisational behaviour and social policy" (Cornford and Smithson, 1996). The reason that qualitative research is being pursued could be attributed to the increasing use of Interpretivism (Orlikowski and Baroudi, 1991) in the IS area and also for the following reasons.

Qualitative research is beneficial as it allows the close involvement of a researcher in the situation, resulting in a considerable insight into the events, actions and actors concerned. The research methods employed allow the barriers between researcher and actors to be lowered. The method also allows the researcher considerable flexibility as interviews and observations can be repeated, or allows the chosen approach to be changed, thus taking different observations and asking different questions of the various actors (Cornford and Smithson, 1996).

Benbasat *et al* (1987) also found similar benefits of qualitative research and listed them as: (1) the researcher can study information systems in a natural setting, learn about the state of the art, and generate theories from practice; (2) the method allows the researcher to understand the nature and complexity of the process taking place; (3) valuable insights can be gained into new topics emerging in the rapidly changing information systems field.

On the other hand, there are also disadvantages associated with this type of research, which include the fact that qualitative data has certain, rather problematic characteristics, which set it apart from quantitative data (Miles and Huberman, 1994).

Qualitative data is usually predominantly textual, with a richness that can be lost when aggregation or summarisation occurs. The data can be fairly unstructured and unbounded as it concerns peoples behaviour and attempting to understand their perception of a particular situation. It is often longitudinal, to a greater or lesser extent as the observations may continue for an extended period of time and interviews may be repeated at intervals of a few days, weeks

or months. Lee (1991) also identified the disadvantages of qualitative analysis as “a lack of controllability, deductibility, repeatability and generalisability.”

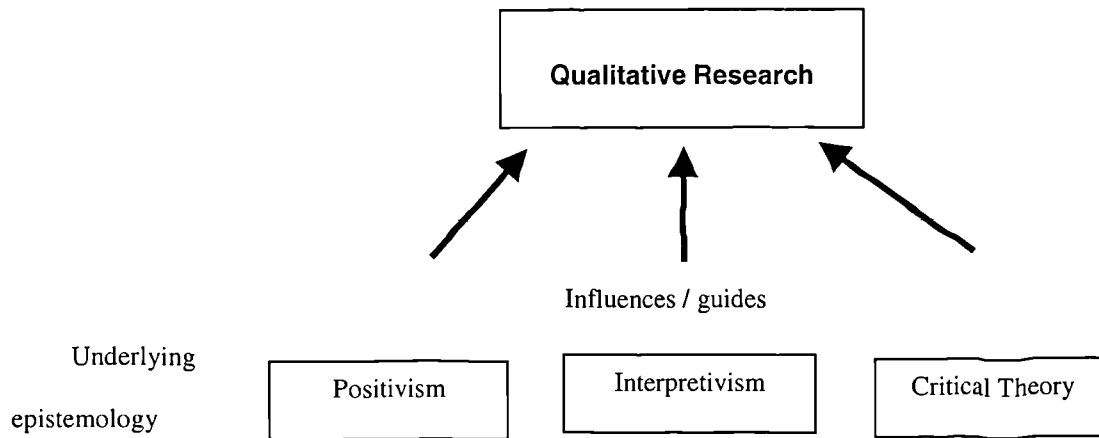
Cornford and Smithson (1996) found that there are more drawbacks to qualitative research, but more in ‘scientific’ terms. As the research is specific to, at best, a small number of cases (perhaps only one case), it is difficult to generalise it to a wider range of situations. Secondly, since the data is rich and complex, it means that it is open to a number of interpretations, such that researcher bias is a constant danger. Thirdly, researchers involved in dynamic cases where the situation is changing frequently, face inherent problems in trying to make controlled observations (to set against ‘control groups’), controlled deductions (using mathematical and statistical methods) and predictions. This makes validity and verifiability constant worries for researchers.

Bearing these points in mind and due to the research method being followed in this dissertation, qualitative research was still selected to be most suitable for this research. The reasons for this are as follows:

The issue regarding generalisations is overcome by using Walsham's (1995) comments in that interpretivist case studies offer four types of generalisations, thereby overcoming this particular issue. This issue is dealt with and demonstrated in chapter 6. The bias that is considered to be a danger in a qualitative research approach was overcome by using a triangulation of methods and data sources. Alternatively, bias is considered desirable for interpretive research as it is viewed to be a window to perspectives that underpin it. Having dealt with the weaknesses and overcoming them, the next question that remains to be determined is to establish the nature of qualitative research where the philosophical foundations of interpretivism are considered.

The philosophical foundations of qualitative research are a confusing issue as qualitative research is viewed to be an umbrella term for Interpretivism (Denzin and Lincoln, 1994). This is not meant to imply that Interpretivism is the only paradigm supporting qualitative research. It is that this research method is naturally strongly associated with the Interpretivist approach (Cornford and Smithson, 1996). Essentially, qualitative research has philosophical foundations

in the three paradigms existing within the IS area (as shown in Figure 3.1): Positivism, Interpretivism and Critical theory (Myers, 1997), and the foundations are then applied according to the direction that the researcher intends to apply.



**Figure 3.1 Underlying philosophical foundations of qualitative research**

Source: Myers (1997)

Interpretivism is the research paradigm that is being applied in this dissertation. There is a lot of theory supporting this research paradigm, some of which is described in the following section. The emergence and full description of Interpretivism is beyond the scope of this dissertation and is not appropriate, therefore only the most relevant explanations are stated.

### 3.2.1 THE RESEARCH APPROACHES IN THE INFORMATION SYSTEMS FIELD

In the IS area, it is conventional to refer to epistemology and ontology when investigating research approaches (Hirschheim and Klein, 1989; Burrell and Morgan, 1979; Archer, 1988). ‘Epistemology’ refers to our theory of knowledge, in particular how we acquire knowledge (Hirschheim, 1992). ‘Ontology’ refers to the underlying assumptions made about phenomena under study-theories of reality (Cornford and Smithson, 1996). These two activities are often mentioned in the IS research process. However, ‘epistemology’, ‘ontology’ and ‘methodology’ complete the whole research picture and combined together define the complete research

process in the social sciences area (Denzin and Lincoln, 1994). The terms, epistemology, ontology and methodology are also known as *activities* that define the qualitative research process (Denzin, and Lincoln, 1994) and are encompassed in a net known as a *paradigm* (Guba, 1990).

Qualitative research is being used in this dissertation and from the manner that the research is conducted; the basis of this research approach is that of Interpretivism. In the following paragraphs, an introduction to the taxonomies of research approaches existing within the IS field is provided in order to provide a fuller understanding of the philosophy of interpretivism and also to demonstrate that all the philosophical approaches have been considered before deciding upon this particular research approach.

Generally when the literature for epistemologies in the IS area is surveyed, it can be noted that two research approaches are usually referred to (Burrell and Morgan, 1979). They run from Positivism to Anti-Positivism (Interpretivism). In terms of popularity, Positivism has been the dominant research approach in the IS area and has been defined in several ways. One of them includes that of Kolakowski (1972) who defined Positivism in terms of doctrines:

- (1) the rule of phenomenalism, which asserts that there is only experience; all abstractions, be they 'matter' or 'spirit', have to be rejected;
- (2) the rule of nominalism, which asserts that words, generalisations, abstractions, etc., are linguistic phenomena and do not give new insight into the world;
- (3) the separation of facts from values;
- (4) the unity of the scientific method.

Burrell and Morgan (1979) defined Positivism as an epistemology 'which seeks to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements'.

To provide the IS area a view of the extent that each research approach has in the area various surveys have been undertaken. The most dominant one is a survey conducted by Orlikowski and Baroudi (1991). The paper began with a description of the various research approaches existing in the IS area and thereafter examined which one of the approaches is

dominant. Orlikowski and Baroudi (1991) found that Positivism was the dominant paradigm of the two: "Positivism is clearly the dominant epistemology of the two." However in the results of the survey, it was noted that Interpretivism was receiving increasing attention in the social sciences field.

To determine whether the position regarding the paradigms had changed or was the same, Walsham (1995) also carried out a study and found similar results. Both groups of authors concluded that many IS journals were becoming flexible with regards to the paradigms used by the research community, but there was still a large gap to be filled before Interpretivism became as popular as Positivism.

### 3.2.2 THE NATURE AND HISTORY OF INTERPRETIVISM

In the above section a description of the epistemologies and their role in the IS area have been provided in brief and this moves the dissertation move a step closer to some of the requirements that the academics are setting for the research methodology area. However, Galliers (1995) and the others have called for the philosophy of the research methodologies to be provided. "Philosophy" is defined as "1) the academic study of the knowledge, thought and the meaning of life, 2) the particular doctrines of a specific individual or school relating to these issues, 3) any system of beliefs or values" (Collins Paperback English Dictionary, 1999). The second definition is applicable to this dissertation.

It can also be noted that up to this point there has been no mention of the definition, theory or application of Interpretivism in the IS area. Thus, the following sections will attempt to eliminate the gap. However, before that, the background to the emergence of Interpretivism is provided. This is to provide readers with a further understanding of the area.

There are several descriptions of Interpretivism as each is adjusted according to the way that the researcher utilised the approach. However, the clearest definition and most appropriate to this research is that by Orlikowski and Baroudi (1991): "Interpretist studies assume that people create and associate their own subjective and intersubjective meanings (inductive

process) as they interact (processual) with the world around them (contextual).” Therefore, the research attempts to understand issues of interest by accessing the meanings that participants assign to them. The deeper issues rather than generalised ones, evident from a setting are employed to obtain the required results. In other words, as explained above, interpretivism is understood by adopting an inductive, contextual and processual approach.

Interpretivism emerged in the latter part of the 19<sup>th</sup> century. It was felt that the Positivists were “neglecting meaningful experience, which was really the defining characteristic of human phenomena” (Hirschheim, 1992). One of the greatest proponents of Interpretivism (also known as Anti-Positivism) was William Dilthey (1948). He suggested, “that individuals do not exist in isolation, but they need to be understood in the context of their cultural and social life.” Thereafter the thoughts of Interpretivism emerged in the works of individuals such as Wilhelm Wundt, Franz Brentano and in particular, Edmaund Husserl, William James, George Herbert Mead and Martin Heidegger.

In recent times, Burrell and Morgan (1979) have provided the clearest description with respect to the suitability of Interpretivism. They explained how Interpretivism was viewed to be unproblematic and satisfactory on at least two counts. Firstly, within the Natural Sciences area (known as *Naturwissenschaften*) human values were noted to intrude upon scientific inquiry and thus leading to a variation in the results. It was noted that the actions and behaviour of the scientific observer were becoming more prevalent and as such, the scientific method could no longer be value free. In the second realm of the cultural sciences (*Geisteswissenschaften*) its “essentially spiritual character” distinguished the subject matter. The authors explained how a person as an actor could not be studied through the methods of the natural sciences (as explained earlier). As a result, in the cultural sphere it was held that “man was not subject to law in the physical sense, but was free...As a result of this disenchantment with sociological positivism, idealism assumed a new lease of life.”

Despite the popularity of Interpretivism, there have been found to be deficiencies in the application of this approach. Fay (1987) suggests four deficiencies and they are:



- Interpretivism does not examine all the conditions that lead to a situation. Often the external factors that describe other certain meanings and experiences are not examined.
- Explanations to the unintended consequences of an action are omitted.
- Structural conflicts within the society and organisation are not addressed and contradictions that are commonly found within social systems are ignored.
- Interpretivism neglects to explain historical change.

These deficiencies were stated at a much earlier period when little was known about interpretivist research. Recent investigations (Klein and Meyers, 1999) in the information systems area have begun to address these deficiencies by emphasising a set of principles that can be used to evaluate interpretive research in the information systems area. The principles especially concentrated upon the practice of anthropological research and the understanding of the philosophies of hermeneutics and phenomenology. To a certain extent this research also addresses these deficiencies by providing descriptions of these principles and how they will be employed in this research.

### 3.2.3 THE ONTOLOGY OF INTERPRETIVISM

When describing the various ways that interpretivism can be applied and defining the term, the epistemology aspect of Interpretivism is answered and earlier in the chapter, the term 'Ontology' was described. Ontology refers to the underlying assumptions made about the phenomena under study - theories of reality (Cornford and Smithson, 1996). This part of the chapter will discuss and describe the 'Ontology' of Interpretivism. This will be achieved by describing some of the earlier works that have been conducted utilising Interpretivism. The ultimate aim is to bring out the most relevant distinctions in the clearest possible way, and by focussing on the central insights. This way the whole area of Interpretivism is covered in depth and the assumptions about the approach are discussed.

The first body of works that encompass the Interpretive approach is that by Winograd and Flores (1986). In their book, *Understanding Computers and Cognition*, they sought to

understand the relationship between computers and humans and their actions. Rather than understanding the effects on an organisational level, the effects of computers on individuals is assumed. In the book the investigation was described as:

*“Our goal is to clarify the background of understanding in which the discourse about computers and technology takes place, and to grasp its broader implications. Ultimately we are seeking a better understanding of what it means to be human”.*

The theory that they used to obtain their results was based on the works of the philosopher, Heidegger (1962). Heidegger stated, “Distinguishing subject (I) from object (the thing perceived) is at odds with actual experience, where understanding operates without reflection; the separation of subject and object denies the unity of being-in-the-world”(Walsham, 1993). He also stressed upon the importance of prejudice or pre-understanding as a necessary condition of being able to interpret anything in the world, and argued that the interpreter and the interpreted do not exist independently.

The second principle comes from the works of Boland (1985, 1979). He used phenomenology and hermeneutics as the philosophical basis of his work. Phenomenology can be traced back to Husserl (1931). He used it to understand the phenomena, which he believed to be the totality of what we know. “Hermeneutics began as the study of the translation and interpretation of sacred texts and now is taken to be concerned with the interpretation of any sacred material” (as quoted in Walsham, 1993). Hermeneutics is viewed to be an integral strand of Phenomenology as the interpretation of texts is an important part of the search for meanings and the essence of experience. Boland draws upon the works of Gadamer (1975) who argued that language is fundamental to our being in the world, and that every reading or hearing of a text constitutes a hermeneutic act of giving meaning to it through interpretation. Gadamer (1975) belongs to the school of thought that closely associates phenomenology with hermeneutics. Boland (1985) discusses the application of Hermeneutics in the use, design and study of Information systems where the emphasis is upon reading and interpreting various actions as demonstrated below:

*“...the use, design and study of information systems is best understood as a*

*hermeneutic process...In using an information system, the available output is a text that must be read and interpreted by people other than its author.*

*This is a hermeneutic task. In designing an information system, the designer reads the organisation and its intended users as a text in order to make an interpretation that will provide the basis for a systems design. This is also a hermeneutic task. In studying information systems, social scientists read the interaction during systems design and use in order to interpret the significance and potential meanings they hold.*

*Boland (1985)*

Hermeneutics is viewed to serve two roles in the research area. The first is that of serving as an underlying philosophy and the other as a mode of analysis (Klein and Myers, 1999). As a philosophical foundation, it provides the philosophical grounding for Interpretivism and in the other the principle is used as a way of understanding textual data. In this context, there is an “attempt to understand from the whole to the part and back to the whole” (Gadamer, 1976). As Hermeneutics is also being used in this dissertation, a brief discussion on Hermeneutics will also be provided.

The third set of works used to establish the foundations of Interpretivism in the IS area is based on the Soft Systems Methodology (SSM) by Checkland (1981). SSM embodies a “philosophy of organisational intervention that sees different individuals and groups as constructing interpretations of the world, the interpretations having no absolute or universal status” (quoted in Walsham, 1993). A special feature of SSM is that it uses a number of different ‘human activity systems’ or ‘holons’. These are conceptual models of the area of interest based on a ‘root definition’ representing a particular view of the core purpose of the activity system. The holons are compared to the real world as epistemological devices in an interpretive debate between the organisational participants. Checkland (1981) noted “SSM implies a model of social reality in the phenomenological tradition deriving sociologically from Weber and philosophically from Husserl. SSM thus links to the work of Winograd/Flores and

Boland, and thus provides a further basis for IS research in an Interpretative tradition” (Walsham, 1993).

The other strand that is viewed to build upon the foundations of Interpretivism is that of Critical Theory. However, the exact role of this philosophy in understanding Interpretivism is indeterminant. The relation of Critical theory and Interpretivism has been one of the controversial issues in defining the Interpretative research approach (Walsham, 1993). Indeed, many authors make a distinction between Critical theory and Interpretivism (Hirschheim and Klein, 1989; Orlikowski and Baroudi, 1991).

From these discussions, it becomes clearer that ontologically, interpretivism highlights the importance of subjective meanings, social, and political as well as symbolic action in the processes through which humans construct and reconstruct their reality (Morgan, 1983). Simply stated, the ontological belief of Interpretivism is that there is no objective account of subjects and actions (Burrell and Morgan, 1979). Social reality is considered to be inside the minds of the human actors and created as a result of collective human action (Giddens, 1984). Thus the observations and interviews used to collect the raw data provide results to the researcher and the researcher clarifies all the issues when the evaluation or contribution stages of the research take place. Additionally, the symbolic actions, and participation of the participants allows the researcher to obtain the desired results.

### 3.2.4 THE EPISTEMOLOGY OF INTERPRETIVISM

The questions regarding Interpretivism in the IS area, or how Interpretivism has been obtained, that is the ‘epistemology’, has been analysed in various ways. The following discussion investigates this question by discussing the works of individuals who have made recent contributions to the area.

In the instance of Orlikowski and Baroudi (1991), interpretivism was stated as a general research approach where an in-depth discussion of the epistemology, methodology and ontology assumptions surrounding it were provided and compared to those of Positivism and the Critical

theory. Also included within the paper were some of the deficiencies and benefits regarding the research paradigms. Orlikowski and Baroudi (1991) provided no descriptions of how Interpretivism can be applied. However, according to them, Interpretivist studies are defined “as those assuming people create and associate their own subjective and intersubjective meanings as they interact with the world around them” (Orlikowski and Baroudi, 1991). They also found that Interpretivist researchers attempt to understand phenomena through accessing the meanings that participants assign to them. Ontologically, it was found that Interpretive information systems research “assumes that the social world (that is, social relations, organisations, division of labour) are not (given). Rather the social world is produced and reinforced by humans through their action and interaction. Organisations, groups, social systems do not exist apart from humans, and hence cannot be apprehended, characterised and measured in some objective or universal way” (Orlikowski and Baroudi, 1991). These authors utilise Interpretivism to describe the research approach being followed by providing an in-depth understanding of it. Therefore, the epistemology in this instance is to do with the subjective meanings obtained from the symbolic actions.

The epistemological belief that constitutes Interpretivism is that “Social process is not captured in hypothetical deductions, covariances and degrees of freedom. Instead, understanding social process involves getting inside the world of those generating it” (Rosen, 1991). This is in direct contrast to Positivism, which asserts that there is a difference between everyday social practices and the language used to describe them. This is why Positivism encourages deterministic explanations of phenomena and the researcher focuses on the validity and control of the research procedures. Once again, the emphasis is on the subjective meanings that are obtained by understanding the social process.

The paragraphs above provided more of a theoretical outlook to the way that Interpretivism is obtained. They also demonstrate how various authors have utilised the “philosophy” of research approaches to determine which one of the paradigms is most influential in the IS area. The following paragraphs will describe the practical ways that

Interpretivism has been applied; therefore how the knowledge was obtained in a different context in the IS area.

Walsham (1993) attempted to understand the multi-level context of a computerised information system and the process of organisational change within which the information system is but one element. He uses Interpretivism to state his epistemological position, but does not provide an in-depth understanding or comparisons with the other research approaches as Orlikowski and Baroudi (1991) did. He defines Interpretivism as “an epistemological position, concerned with approaches to the understanding of reality and asserting that all such knowledge is necessarily a social construction and thus subjective” (Walsham, 1993). Walsham (1993) applied Interpretivism in a different manner to Orlikowski and Baroudi (1991) as he stated his epistemological position and research philosophy and then followed on to utilise the epistemology as a research approach. This is different to that of Orlikowski and Baroudi (1991), as they do not apply the research epistemology within their research approach. They state it for the reader’s sake and proceed on to use case studies. Walsham (1993) on the other hand states his epistemological position and proceeds from there to utilise it in his research. “The style of research that is being used is *broadly interpretive methods* of research, aimed at producing an understanding of the *context* of the information systems, and the *process* whereby the information system influences and is influenced by its context.” Whereas Orlikowski and Baroudi (1991) attempted to provide an understanding of the research paradigms being followed, Walsham (1993) follows a different path by stressing on the research methods being followed to provide his results.

Denzin and Lincoln (1994) on the other hand, have applied Interpretivism in a different context by referring to Interpretivism as a covering term for *qualitative research*. “Qualitative research is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them.” This is also a view shared by organisational researchers such as, Lee and Fielding (1991). He made the distinction between Interpretivism (ostensibly qualitative) and Postivism (ostensibly

quantitative) in terms of the following ways. In an Interpretive approach “the social scientist must collect facts and data describing not only the purely objective, publicly observable aspects of human behaviour, but also the subjective meaning this behaviour has for the human subjects themselves.” For a Positivist approach it is asserted, “The Positivist approach makes the claim that its methods - are the only truly scientific ones.” He then compared the two approaches and found the following differences “While the Interpretive approach makes the counterclaim that the study of people and their institutions calls for methods that are altogether foreign to those of natural science. Thus, the positivist and interpretivist approaches would appear to be in opposition.”

From this discussion, it can be seen that Interpretivism can be applied in various ways depending upon the perspective of the researcher and thereby answering different questions in a research area. It is also seen that the knowledge required for Interpretivism, the ‘epistemology’ is in direct contrast to the Positivist approach and is obtained by conducting observations and interviews of the situation. The phenomenon is understood from the point of view of the participants directly involved with the phenomenon under study (Pouloudi, 1998). Whereas, the Positivist view asserts that a theory is true only if it is repeatedly not falsified by empirical events (Chua, 1986). In the following section, the principles supporting Interpretivism, the ‘ontology’ will be provided. This will assist in stating and making the stance of the conducted research and researcher clearer.

### **3.2.5 SUMMARY: ‘EPISTEMOLOGY’ AND ‘ONTOLOGY’**

For the benefit of the research and the reader, the ‘epistemology’ and ‘ontology’ of this research is similar to that followed by Orlikowski and Baroudi (1991) and Walsham (1995).

Orlikowski and Baroudi (1991) state their epistemology “as those assuming people create and associate their own subjective and intersubjective meanings as they interact with the world around them” (Orlikowski and Baroudi, 1991). In the following chapters, it will be seen how this research applied its own meanings to the collated data. They also found that Interpretivist

researchers attempt to understand phenomena through accessing the meanings that participants assign to them.

Ontologically, it was found that interpretive information systems research “assumes that the social world (that is, social relations, organisations, division of labour) is not “given”. Rather the social world is produced and reinforced by humans through their action and interaction. Organisations, groups, social systems do not exist apart from humans, and hence cannot be apprehended, characterised and measured in some objective or universal way” (Orlikowski and Baroudi, 1991). In chapter 6, this comment will become much clearer when the research forms a theory based upon the assumption that the organisational change context is not separate from that of the team.

### 3.3 HERMENEUTICS AND SEMANTICS

As hermeneutics was used to guide this research, an understanding of it was required, therefore, the following description is provided. Hermeneutics is an approach to the analysis of texts that stresses how prior understandings and prejudices shape the iterative process (Denzin and Lincoln, 1998). The primary concern of this approach is the meaning of a text or text analogue. An example of a text monologue is an organisation that the researcher understands through oral or written text (Myers, 1997). There are various forms of the approach ranging from “pure” through to “critical” hermeneutics. This research did not apply the various forms, however, hermeneutics was employed in the research analysis, thus the reason for this discussion. However, since all the other forms were not utilised, a discussion of the various forms is considered beyond the boundaries of this discussion.

In this area, when interpreting the text, the notion of a hermeneutic circle is utilised. The Hermeneutic circle refers to the “dialectic between the understanding of the text as a whole and the interpretation of its parts, in which descriptions are guided by anticipated explanations” (Gadamer, 1976). To obtain the required understanding a movement is occurring from the whole to the part and back to the whole. Gadamer (1976) described this process as follows: “It



is a circular relationship...The anticipation of meaning in which the whole is envisaged to becomes explicit understanding in that the parts, that are determined by the whole, themselves also determine this whole.” Therefore, to understand a phenomenon, firstly, it must be placed in a larger context in which it has its function and in turn, also means letting our grasp of this particular phenomenon influence our comprehension of the whole text. For instance, a chapter is understood by comprehending how it functions in the overall plan of the book, but our understanding of the chapter is equally indispensable for our grasp of the whole work.

Theorists in the hermeneutics area support the view that an important source of pre understanding is language. Therefore, hermeneutics on its own could perform certain functions of understanding, however, a full and appropriate awareness would be possible by combining semantics with hermeunetics. With claims such as “language already conceals within itself a developed mode of conceiving” (Heidegger, 1977), language is seen to be important for understanding phenomena. Language allows us to grasp things in both their complex similarities to and distinctiveness from other things. This is the semantic function of language. By searching for new ways to speak about new situations and experiences, language develops.

### **3.3.1 APPLYING INTERPRETIVISM, HERMENEUTICS AND SEMANTICS IN PRACTICE**

The objective of this research is to understand reengineering teams in the context of business process change. For this purpose, the reasoning about the teams, causes for teams being selected, what were the intentions of the organisation in employing the team needed to be understood.

Until now, there has been little research to understand the theory surrounding reengineering teams or to validate any of the theoretical underpinnings of reengineering teams. Once the research process began, it became abundantly clear that the collated results were attempting to establish whether the theoretical underpinnings of the BPR area do withhold in practice. Therefore, the view that BPR is a form of organisational change and attempting to

determine the type of organisational change model that is applicable to it when examining the approach in practice was a vital part of the research.

Additionally, an understanding of some of the reasoning behind some views expressed in earlier BPR research was also occurring. For instance, if there were reward schemes established within the organisation for the reengineering team, then the theory of motivation could provide supporting theory for this reasoning, rather than to have a generalised statement without any backing to support it being provided.

It would have been difficult to conduct in-depth research into generalised statements utilising some hypothesis (as in the case of Positivism) or to utilise some form of a statistical method for several reasons. Firstly, the information being obtained from the research did not allow this and secondly, it was not considered appropriate according to the research methods being employed. A hypothesis was difficult to produce in the earlier stages as there was little information to determine the impact of certain variables and more importantly, the methods being utilised for data collection indicated that an Interpretivist approach was the suitable research paradigm to apply, thus discounting the production of a hypothesis. As aforementioned, Interpretivist studies attempted to understand the issues by accessing the meanings that participants assign to them. By undertaking in-depth interviews, the researcher has attempted to provide a meaning such that the research would make a contribution that has not been made to the field before.

For this research, the hermeneutic circle had an important role when interpreting the results. When understanding the reengineering teams the theory supporting teams and other theories was essential as it allowed the researcher to obtain an overall view of the research in the work and research conducted in the past. In the proceeding chapters as the research results will be provided it will become clearer that parallels of some of the principles supporting Interpretivism are evident. That is, the researcher had to form meanings from the data collected from the case studies. The Hermeneutics circle also comes into play because the results from the interviews could not be interpreted on their own. Rather the researcher also had to consider the organisation as a whole when forming the impressions. That is, the responses received were

only one view and by referring to the nature and environment of the organisation and any other source, then a whole picture could be obtained. Therefore, a consideration to only a single view does not constitute the whole organisation's experiences and that is what the hermeneutic circle emphasises. Applying this to the reengineering team, the organisation determines what the team does and yet the actions of the team influence the organisation. That is the simple explanation of the hermeneutic circle applied to this research.

Since interviews were the main data collection and speech was the main consideration, semantics came into play as the listener could interpret what the respondent provides as a reply in a different manner. For instance, in the initial interviews at one of the organisations, the researcher was attempting to obtain the respondents views regarding 'empowerment', however, the context of the term was not provided. The respondent attempted to answer the question but with a lot of difficulty. Later on, the respondent informed the interviewer that the difficulty in answering the question was due to the various meanings attached to the term and that such issues should be clearly defined and stated. Therefore, semantics allows the clarification of terms and issues that have various meanings attached to them to be verified according to the viewpoint of the research.

### **3.4 QUALITATIVE RESEARCH METHODS: THE CASE STUDY METHOD**

The case study method is the most widely used research method or strategy in the IS area (Myers, 1997; Cavaye, 1996; Orlikowski and Baroudi, 1991). Case studies can be applicable to both qualitative and quantitative research (Stake, 1994), and can be carried out using a positivist or interpretivist stance (Cavaye, 1996). In the instance of this research, the case study is being used to analyse qualitative data and is employing the Interpretivist perspective.

Before deciding upon the case study method, the researcher attempted to understand the other methods. The other research methods are action research, field study, application descriptions and ethnographic research.

Field studies have been described as taking place within the natural environment of the fact. The researcher enters the site with prior constructs, relationships or hypothesis in mind and employing certain techniques attempts to collect and record the data. In this instance the researcher is an observer and has no intention of manipulating or controlling variables (Stone, 1978). This was something that this research did not follow and was not even considered as an option before the practical aspect of research began.

Action research involves combining observations with participation. In this case, the researcher does not enter the research site with any prior thoughts or ideas; instead, the problem is solved by the results obtained from the site. As in the previous strategy, the researcher has no control over variables. The intention is not only to observe and record, but additionally, to participate (Mansell, 1991).

Application descriptions are accounts of the actual events surrounding a phenomenon and may be written by either the practitioner or researcher. The descriptions are utilised to illustrate to the audience, particular issues or successful developments (Bonoma, 1985).

Ethnography attempts to understand the meanings of phenomena that participants attach to the phenomenon (Sanday, 1979). The data is interpreted from the viewpoint of the participants. After examining these methods, it became clearer that the method being pursued within this research was pursuing the case study method.

Having considered all the other strategies, the research then proceeded to determine the strengths and weaknesses of the case study method. It was found that there are various benefits attached to the application of case studies and for this reason, case studies are being increasingly employed and are popular within the IS area. However, there are also disadvantages associated with its usage and both these issues are presented Table 3.1.

**Table 3.1 The Strengths and Weaknesses of Case Studies**  
**Source: Cavaye (1996)**

<b>Benefits of the case study</b>
1) The manner, by which case studies are undertaken, allows for the capturing of 'reality' and detail by studying a phenomenon in its natural context. Unlike an experiment in a laboratory where the environment is controlled, the case study is undertaken in the natural environment and therefore impressions of 'reality' are obtainable.
2) Case studies enable the study of a large number of variables and different features of a phenomenon.
3) The method is useful for developing and refining concepts for further study. The utilisation of a pilot study allows for the development of theory and by undertaking further case studies, the theory can be refined.
4) Making use of the multiple case study method allows the researcher to examine and relate the differences in context to constants in process or outcome.
<b>Disadvantages of the Case Study</b>
1) It is not possible to generalise case research findings statistically to a population. There are very many factors that have to be considered when a case study referring to the population would be undertaken. Therefore, the way that case studies are conducted makes it difficult or impossible to do so and that is why it is known that the results of case studies cannot be generalised to a population.
2) By conducting research utilising case studies, the researcher has no control over independent variables and this may limit the internal validity of any conclusions.
3) Case studies may establish the relation between variables, but cannot indicate the direction of causation.

Despite its frequent usage there is confusion about the exact suitability of the method. A misconception is that case studies are useful only for exploratory purposes; however, case studies studied through time have certainly disproved that view (Yin, 1984). It has been found that case studies can be also used in the aforementioned manner and in the explanatory as well as the descriptive phases. Situations that case studies would be most suitable for have been summarised and demonstrated in Table 3.2.

Table 3.2 Linking Different Research Strategies to Different Situations

Source: Yin (1984)

<i>Strategy</i>	<i>Form of Research Question</i>	<i>Requires Control over Behavioural events</i>	<i>Focuses on Contemporary Events</i>
Experiment	how, why	yes	yes
Survey	who, what, *where, how many, how much	no	yes
Archival analysis (e.g. economic study)	who, what, * where, how many, how much	no	yes / no
History	how, why	no	no
Case study	how, why	no	yes

Table 3.2 demonstrates particular situations that each of the strategies is most suitable to. This does not mean to say that a particular strategy is mutually exclusive to a situation, rather suggestions about the situation in which a strategy works the best at, is provided. So for instance, the case study is best suited to a situation where how and why research questions are asked. The questions relate to contemporary events in which the researcher has no control over the behavioural events. Also the strategies can be combined and utilised when undertaking the research.

There are several definitions to describe a case study. Yin (1984) described it as:

“A case study is an empirical inquiry that:

- investigates a contemporary phenomenon within its real life context; when
- the boundaries between phenomenon and context are not clearly evident; and in which
- multiple sources of evidence are used.”

To prevent any further confusion about the strategy, and to state that the case study has more qualitative and interpretivist roots than quantitative and positivist ones, Eisenhardt (1989)

described a case study “as a research strategy which focuses on understanding the dynamics present within single settings.”

However case study research results are not only restricted to a single case study. As long as the above-mentioned conditions are fulfilled, results from multiple case studies can also be utilised. Theorists support the view that a single case should be employed, particularly when exploring a previously unresearched subject (Yin, 1984), or for theory testing by confirming or refuting theory (Markus, 1989). When a single case study is used, a phenomenon is investigated in depth and a rich description and understanding are acquired (Walsham, 1995). These types of case studies can also enable theory building by developing and refining concepts (Pettigrew, 1985).

A multiple case study design is considered suitable when the purpose of the research is to describe, explore and explain. That is, the cases could be utilised to predict similar results (literal replication) or to produce contrasting results for predictable reasons (theoretical replication) (Yin, 1993). Eisenhardt (1989) is one of the foremost who strongly supported the view that a multiple case study strategy should be applied when research is conducted. Yin (1984) found that the multiple case studies strategy was on the increase. Benefits such as the evidence from such a strategy being more affective and the whole study is considered to be more powerful, were provided.

Miles and Huberman (1994) also support this strategy and assert the following views. Multiple case studies enhance generalisability. This strategy allows researchers to determine the relevance or applicability of the obtained results in similar settings. Secondly, multiple case studies provide a deeper understanding and explanation. Multiple case studies can determine specific conditions in which a result can occur much more easily than a single case study and assist researchers in forming general conditions of how these conditions may be related. They assert further that although studying multiple cases may not provide the same rich descriptions as studies of single cases, multiple cases enables analysis of data across cases. By doing so, the research verifies that the findings are not merely the result of idiosyncrasies of the research setting (Miles and Huberman, 1984).

Herriot and Firestone (1983) also found that the evidence from multiple case studies are often considered more convincing, with the overall study being considered more robust. However, the disadvantage of the multiple case study strategy could lie with the fact that an independent researcher may find it difficult to cope with the extra-required resources, mainly in the form of time and manpower (Yin, 1984). This is viewed to be a disadvantage, but, if appropriate, project management techniques and tools are used, this can also be virtually eliminated. This reasoning was beneficial in providing the research with the opportunity of displaying that all the pros and cons of the multiple case study strategy have been considered.

The reasoning behind the selection of the case studies is usually a question of debate since usually the appropriate number of cases are not pre-determined, but usually defined by research factors such as, how much new information is being obtained and other such issues (Irani *et al*, 1998). Previous researchers have viewed an appropriate number of cases to be between four and ten (Eisenhardt, 1989); however, recently, the opinion has become that there should be no more than four (Creswell, 1998). If there are more than these amounts, then it is held that “*generalisability* occurs and that is a term that holds little meaning for most qualitative researchers” (Creswell, 1998). Dyer *et al* (1991) specify that the reasoning to be used when determining the appropriate number of cases should depend upon “how much is known about the phenomenon, and, how much new information is likely to emerge from studying further cases.” The reasoning in this research is a combination of Dyer *et al* (1991) and Creswell’s (1998) opinions and Eisenhardt’s (1989) reasoning that the cases should be such that are “likely to extend or replicate the emerging theory.”

An additional view regarding multiple case studies is that the basis for selecting the case studies to be used for the research should not be on a random sampling basis, but on a theoretical sampling one (Eisenhardt, 1989). Theoretical sampling is sampling on the basis of concepts that have proven theoretical relevance to the emerging theory (Strauss and Corbin, 1990). Thus, attention should be paid to the theoretical relevance and purpose of the cases. In this research, emphasis was upon the presence of BPR and whether teams were used and is shown in Table 3.3. All the cases revealed that reengineering teams were utilised and that



business process change had occurred. A point to be made is that the research was limited to considering organisations that had undertaken BPR (as stated in the explanations provided by the respondents). However, any theory that would be formed still had to be applicable to different environments in order to demonstrate its applicability, and to identify the various change processes that are undertaken. To overcome this issue, cases that were different in nature and scope of business were sought. A large, manufacturing and servicing organisation, retail and leisure organisation, teaching hospital and a local authority were selected.

**Table 3.3 The Theoretical Criteria used for the Site Selection of this Research**

ORGANISATION	THEORETICAL SAMPLING CRITERIA USED FOR SITE SELECTION	
	Presence of BPR	Presence of Reengineering Teams
<i>Pilot Case 1</i>	Yes	Yes
<i>Pilot Case 2</i>	Yes	Yes
<i>Case Study1</i>	Yes	Yes
<i>Case Study2</i>	Yes	Yes
<i>Case Study3</i>	Yes	Yes

The number of case studies to be undertaken for this form of research is an issue that is debatable in theory and the recommendations about this have already been made. Eisenhardt (1991) suggests that the number of case studies could depend upon (a) how much is known about the phenomenon after studying a case and (b) how much new information could emerge after studying further cases and initially the reasoning was used when selecting the cases.

The first 2 pilot studies were used only for research strategy purposes. They served a dual purpose later in that they also assisted in confirming that the developed research data collection methods were not only applicable to one but three situations. The pilots assisted in refining the interview techniques utilised in the research. The case studies developed later verified that the questioning techniques developed as a consequence of the pilots were suitable.

### 3.5 CONDUCTING THE CASE STUDIES

In chapter 1, Figure 1.3 described the process that a researcher goes through, once a philosophical foundation and the research methods have been selected. The first step in that diagram referred to forming a research question. Thereafter, the process of collecting the data begins. Case studies are conducted in a number of ways. The usual ways of collecting qualitative data within a case study include observations, interviews and referring to historical documents.

#### 3.5.1 OBSERVATIONS

Observations have been defined as “the act of noting a phenomenon, often with instruments and recording it for scientific or other purposes” (Morris, 1973). Usually, when referring to observations, the notion is that only visual gathering methods are used. This is far from true. All of the senses that humans possess could be involved in the activity, from smells to taste, touching and hearing. From this assertion observation could be described as including gathering impressions of the surrounding world through all relevant human powers. In other words, direct contact with the subjects of observation is required. There are situations such that, remote observation is required and in such an instance, recording of the data with photography, audiotape or videotape and studying it either concurrently or later (Denzin and Lincoln, 1998). The benefits and disadvantages of this technique are described in Table 3.4 and clarify some issues with regards to this research technique.

Table 3.4 The Disadvantages and Advantages of Observations

Source: Frankfort-Nachmias and Nachmias (1996)

Advantages and Disadvantage of Observations
<p><b>Advantages</b></p> <ul style="list-style-type: none"> <li>• <i>The ease through which researchers gain entry to settings.</i> This technique has been found to be unobtrusive and does not require direct contact with participants, therefore, observation can be conducted in an unobtrusive manner (Webb <i>et al</i>, 1966).</li> <li>• <i>The technique is least likely to have observer effects.</i> Generally, when observational research occurs, there are many ways that researchers could have an impact upon the actions of their subjects (Kidder, 1981). The observational role has been considered very natural and combined with its having no (or very little) contact with the subject, makes it the least noticeably intrusive of all research techniques (Phillips, 1985).</li> <li>• <i>The emergence within the technique.</i> Rather than undertaking research with predetermined categories, observation researchers create their own theories from their results, generate new categories and determine the linkages between them. Compared to other structured methods, such as interviews, observations have the flexibility to obtain insight into new realities or new ways at looking at old realities (Kidder, 1981)</li> <li>• <i>Combining observation with some other technique produces results that can be considered more thorough.</i> Interviews are sometimes considered to contain bias as it is the recollection of the subjects that generate the final results, whereas the results obtained through observation are considered to be hard evidence. This is especially beneficial when cross checking results (Douglas, 1976) or triangulation (Denzin, 1989). Therefore, observation combined with some other technique enhances consistency and validity (Denzin and Lincoln, 1998).</li> </ul> <p><b>Disadvantages</b></p> <ul style="list-style-type: none"> <li>• <i>Validity.</i> Due to the way that the technique is conducted, observers are usually thrust into a situation such that their perceptions of the situation generate the results. Without the support of the opinions of the subjects or interobserver crosschecks, the generated results are likely to contain a bias (Denzin, 1989; Schatzman and Strauss, 1973).</li> <li>• <i>Reliability.</i> Researchers have found that unless statistical analysis to prove the significance of observed patterns or trends is not undertaken, there is no way to ensure that the achieved results are real and not just occurrences of chance (Denzin, 1989; Kidder, 1981).</li> </ul>

### 3.5.2 INTERVIEWS

Interviews are considered to be the favourite tool of the qualitative researcher for data collection (Denzin and Lincoln, 1998) and one of the frequently used data collection tools utilised for this research. Additionally, since the interpretive approach is also being followed, interviews are viewed to be the main and appropriate source from where data should be collected (Walsham, 1995). Interviews are favoured because they allow the researcher the “best access to the interpretations that the participants have regarding the actions and events which have or are taking place, and the views and aspirations of themselves and other participants” (Walsham, 1995). An added benefit is that it allows researchers to step back and examine the interpretations of their fellow participants in some detail. This is an advantage that the other methods may not allow.

There are various forms and types of interviews in existence. The three major types of interviews are *structured, semi structured or unstructured* (Denzin and Lincoln, 1998). These interviews are also known as the schedule-structured, non-schedule structured or non-structured (Frankfort-Nachmias and Nachmias, 1996). Interviews can also be undertaken in various forms, personal interviews, face-to-face group interviewing, mailed or self-administered questionnaires, and telephone surveys. For further information about these various forms, refer to Appendix E. The duration of an interview is also not specific, as it could last as a five minutes conversation on the telephone, or it could take place over lengthy, multiple sessions (Frey and Fontana, 1991).

Questioning within the interviews can also vary from being open ended to close ended. Open-ended questions were used mostly during the interviews that the researcher conducted. However, this was not always the case. When questioning initially began, the questions were tightly constructed to the theory in chapters 1 and 2. That is, if the questionnaires in Appendix F are referred to, it can be seen that the definitions provided in the textbooks were used to determine whether an organisation had undertaken BPR. However, it became clearer to the researcher that the required information was not being obtained and even if the information was

being obtained it was not deep enough to warrant an understanding. At that time, the questions were also more tightly construed. It was then decided that a simpler and open method should be used to question the other organisations and better results were obtained.

### 3.6 THE PRACTICAL WAY OF CONDUCTING THE CASE STUDIES

For this research, face-to-face interviews (also known as personal interviews) were usually conducted at the pilot studies. Using the distinctions above, it was determined that the interviews were a mixture of the focused and the non-directive interviews. The initial interviews were more of the non-directive nature and later as the area became familiar to the researcher, a focused or non-schedule structured interview style was adopted.

These interviews were usually held at the premises of the organisation with the individual who consented to the interview. In most cases, the participants were individuals who had knowledge of the project and had a high position within the team. For instance, in one of the organisations, the respondent was a Project Manager or someone who was brought in specifically to that organisation to oversee the project. The face-to-face interviews lasted for a duration of 1 to 2 hours. In certain instances, it was not possible to arrange a meeting with the respondent and in such instances, the next best alternative, the telephone was employed.

As just mentioned, there were also telephone interviews used in place of face-to-face interviews. The telephone interviews lasted for approximately one hour. In most cases the conversations were tape-recorded. Tape recordings were used as they offer benefits that are not available with other forms, such as note taking, of data collection. Tape recordings are viewed to be advantageous as they reflect the consciousness of the subject (Vygotsky, 1987). They also allow the benefit of retaining the original data; when something about the data is not clear, the recordings become a source of checking for accuracy, and allows interviewers to determine potential weak areas in their interviewing techniques that can be improved (Seidman, 1993). Prior to beginning the recording, the prior approval of the subjects' was sought. In both instances, the researcher had to be aware of the fact that a time limit was provided from a very

hectic schedule and that is why the interviews were usually focused, with few pleasantries exchanged. Table 3.5 summarises the types and number of interviews conducted.

**Table 3.5 The Research Strategies Employed in the Research**

Organisati on	Type of Interview	Respondent Position In organisation	Respondent Position In the BPR project	Respon dent in Case Studies	Number of Interviews	
					Formal	Informal
<i>Pilot Case 1</i>	Face-to- Face E-mail questions	Year 2000 Programme Manager	Overseeing the management of the BPR project	Mr. A	10	2
<i>Pilot Case 2</i>	Face-to- Face and Telephone	Managing Director	Responsible for the BPR project	Mr. J	1	3
<i>Case Study 1</i>	Telephone	IT Director	Change Director	Mr. P	6	1
	Telephone	Business Process Manager	Team member	Mr. F	1	1
	Telephone and e-mail questions	Director of Retail Development	Team member	Mr. L	4	2
	Telephone	Director of Personnel	Team member	Mr. M	1	0
<i>Case Study 2</i>	Telephone	Head of the Center of Best Practice	Program Manager	Mr. B	4	1
	Face-to- Face and Telephone	Works in the Center of Best Practice	Team coach	Ms. A	1	1
	Telephone	Works in the Center of Best Practice	Lead Coach and Change leader	Ms. B	1	0
	Telephone	Change leader	Team member	Mr. D	5	1
<i>Case Study 3</i>	Face-to- Face	Director	Responsible for overseeing some of the management of the project	Ms. C	2	4
	Face-to- Face and Telephone	Project Manager	Project Manager	Mr. H	8	12
	Telephone	Assistant Director of Education	Team Member	Mrs. N	1	0
	Telephone	Assistant Director of Social	Team Member	Mr. K	1	0

		Services				
	Face-to-Face and Telephone	Project Officer, Libraries and Trading Standards	Team Member	<b>Mrs. M</b>	<b>1</b>	<b>1</b>
	Face-to-Face and Telephone	Personnel Manager	Team Member	<b>Ms. D</b>	<b>1</b>	<b>1</b>
	Face-to-Face and Telephone	Officer in the Strategy Department	Team Member	<b>Mr. G</b>	<b>2</b>	<b>2</b>

The terms 'Formal' and 'Informal' have also been illustrated in Table 3.5. When the interviews were formal, they were focused only upon the research and dealt with in a strict manner, that is, no pleasantries and general questions regarding the work of the respondents was sought. Also when visits were made, the interviews were conducted in a meeting room. On the other hand, when informal interviews were conducted, the atmosphere was generally more relaxing since the interview location could be a cafeteria meeting and general questions regarding the respondent as well as the research could also be attended to.

In Case Study 3, the researcher was also invited to a session amongst a series of workshops. This accounted for the observational technique being utilised within the research. There was also the usage of secondary data where reference to archival documents in the form of electronic memos or background company information and any documents formed or distributed during the project were used for the data analysis. The source documents or supplementary material used for this research are also classified according to the organisations and a table summarising this is displayed in Table 3.6.

Table 3.6 Classifying and Describing the Secondary Data used in this Research

Organisation	Types of Secondary data used for triangulation purposes
<i>Pilot Study 1</i>	<ul style="list-style-type: none"> <li>• Management summary report,</li> <li>• Analysis report,</li> <li>• Two published articles,</li> <li>• Book titled “Reengineering’s Missing ingredient: The Human factor”, Oram and Wellins (1995)</li> <li>• Reference material downloaded from the organisational website regarding the market that the organisation serves, type of business, and organisational structure.</li> </ul>
<i>Pilot Case 2</i>	<ul style="list-style-type: none"> <li>• Background document regarding the organisation</li> <li>• Document from the quality manual</li> <li>• Company profile document utilised for advertising purposes</li> </ul>
<i>Case Study 1</i>	<ul style="list-style-type: none"> <li>• “Reengineering’s Missing Ingredient: The Human Factor”</li> <li>• Information downloaded from the website</li> </ul>
<i>Case Study 2</i>	<ul style="list-style-type: none"> <li>• Unpublished thesis written by the project champion</li> <li>• “Reengineering’s Missing Ingredient: the Human Factor”</li> <li>• Report evaluating the outcome of BPR</li> <li>• Report about the BPR experience</li> <li>• Video recording the experience and results of the change approach</li> <li>• Unpublished article by one of the main champions of the approach</li> </ul>
<i>Case Study 3</i>	<ul style="list-style-type: none"> <li>• Management Summary Report</li> <li>• Leaflets describing impending change</li> <li>• Newsletters</li> <li>• E-mail memos used to inform the team of recent developments</li> <li>• Report describing likely changes occurring in the organisation</li> <li>• General information downloaded from the website</li> </ul>

The process of combining data collection techniques is known as triangulation, or the use of several kinds of method or data. Triangulation is not a tool or strategy, but an alternative to validation (Denzin, 1989; Fielding and Fielding, 1986; Flick, 1992). By conducting a variety of methods or data, an addition of rigor, breadth and depth to an investigation takes place (Flick, 1992). Four types of triangulation have been identified:

- Data triangulation: the use of a variety of data in a study;
- Investigator triangulation: the use of a variety of researchers or evaluators in a study;



- Theory triangulation: the use of multiple perspectives to interpret a single set of data;
- Methodological triangulation: the use of multiple methods to study a single problem.

From these definitions, it can be concluded that data, investigator and methodological triangulation are being employed in this research and these results are summarised and illustrated in Table 3.7.

**Table 3.7 The types of Triangulation used in the research**

Organisation	Was triangulation applied	
	Yes / No	Type of Triangulation applied
<i>Pilot Case 1</i>	Yes	Data and Methodological
<i>Pilot Case 2</i>	Yes	Data and Methodological
<i>Case Study1</i>	Yes	Data, Methodological and Investigator
<i>Case Study2</i>	Yes	Data, Investigator and Methodological
<i>Case Study3</i>	Yes	Data, Investigator and Methodological

In the initial interview (whether telephone or face to face), questions relating to the role of the individuals, backgrounds of the organisation and general facts about the project were asked. These questions were open ended. This strategy was followed due to the researcher wanting to obtain as much information as possible and not limiting the respondent in any way. As more research into the area took place, the questions posed to respondents became more focused.

These questions were also used as questionnaires for some of the respondents. Some of the respondents asked for a questionnaire that was then used in the telephone interview. It can be noted that the questionnaires also contained a declaration so that the respondent could ensure that the information being used was for research purposes and also that nothing would be released without their permission. For an example of some of the questions asked and the questionnaires, refer to Appendix F.

An interview protocol was also established. At the outset of the interview, the researcher always declared to the respondents that a tape recording was being used and asked if there were any objections. This also assisted the research in establishing a bond of trust between the researcher and the respondent. The views regarding interviews were based upon opinions such as:

“I attach high priority to careful interviewing technique. Several issues are important: to build a degree of trust between interviewer and interviewee; to ask informants for their personal accounts of the situation, being open to whatever is 'on their mind'; to try not to prejudice responses by using not too structured an interview technique; to help in reconstruction of past events by leading up to them with questions about the present. I found it more helpful to do several open-ended interviews over a period of time with the more candid, articulate individuals” (Symons, 1991).

### 3.7 SUMMARY

This chapter examined the research methodology to be applied within this dissertation. A discussion of the chosen epistemologies and their suitability was initially provided. This allowed the research to determine how the research should be undertaken. Thereafter, the types of research strategies that are available and reason for selecting particular ones were provided. In addition, the problems faced by applying the various methods were outlined and discussed and arguments for the suitability of a particular method were provided. What remain to be determined are the results that this methodology will produce and their suitability.

In the next two chapters the collated empirical results will be described and analysed. They should illustrate some of the issues that have been described within this chapter. However, the ultimate evaluation of the research and development of theory from the data findings and analysis will be undertaken in chapter 6 and that is when the suitability of the adopted research methodology will be determined.

## 4 DESCRIBING AND DISCUSSING THE CASE STUDIES



# 4

### 4.1 INTRODUCTION

This chapter describes and discusses the pilot studies and three case studies used for the research in this dissertation. The purpose of the cases was (i) to validate the previously developed theory provided in chapters 1 and 2 by verifying that the theoretical issues provided in the chapters are obtainable in practice; and (ii) to ultimately present a theory that can be used to analyse future research studies (the results of which are shown in chapter 6).

In this research, the qualitative data analysis approach that has its foundations in interpretivism is being applied. To obtain the results, a multiple case study strategy as well as pilot studies are being used. The case studies are being used to determine whether the chosen strategies of interviewing, and referring to archival documents can be used in a research of this kind. Additionally, the pilot studies in particular allowed the research to focus upon questions that should eventually allow the development of a theory.

An issue to be borne in mind when analysing these results is that “interpretive researchers are not saying to the reader that they are reporting facts; instead they are reporting their interpretations of other people's interpretations” (Walsham, 1995). Therefore, when analysing

the empirical evidence it has to be understood that the collated data is an attempt by the research to interpret the information relayed by the participants.

When an interpretative case study is undertaken, the following information is encompassed within it: (a) details of the research sites chosen, (b) the reasons for this choice, (c) the number of people interviewed, (d) what hierarchical or professional positions they occupied, (e) what other data sources were employed and (f) over what period the research was conducted. When analysing the data, reporting should include *how* the field interviews and other data were recorded, the analysis and the iterative process followed between field data and theory over time.

This chapter provides the empirical results of the case studies that were used further in the analysis stage. The chapter also describes some of the research methodology research that was specific to only the case studies. So, for instance, the reasons for selecting particular case studies are provided. Further, when questioned about say, the selection method used by the organisation, particular individuals provided replies and their statements are stated. However, the main purpose of the chapter is to describe and discuss the empirical results.

#### 4.2 REASONS FOR UNDERTAKING THE PILOT STUDIES

Case studies are viewed to fulfil three roles in research, exploratory, explanatory or descriptive, depending upon the purpose (Yin, 1994). *In this case, 2 pilot studies were used to determine whether the theoretical issues identified in the earlier chapters are prevalent in practice and to investigate whether some of the research techniques developed for the research are suitable or whether they require changing. Pilot case 1 was a large, international organisation whilst, pilot case 2 was a small organisation. Further descriptions about them are provided in Appendix G. These results were placed in the appendices because apart from assisting in refining the questioning and interviewing techniques, the pilot cases did not assist in the analysis and not of further use. To determine what would be an appropriate research technique to adopt when collecting the data would be a difficult task since there would be no*

determining the suitability or appropriateness of the technique without any so called 'trials' and this was what the pilot studies assisted in eliminating.

In the pilot studies, the initial constructs for the research were ground only in the theoretical background information obtained from chapters 1 and 2. For instance, when questions attempting to determine whether BPR was being applied within an organisation were asked, then the background literature assisted in providing definitions to refer to. As questioning took place between the respondent and the interviewer it became clearer how the construction of the questions focusing on the BPR and reengineering teams could be made more comprehensible and precise. For example, when questioning the respondent about the reengineering team, it was brought to the attention of the researcher from the replies that the reengineering team used in this organisation was composed of two categories. One was the facilitating, design, analysis, and planning team and the other the implementation team. The facilitating team was more of a mediating, strategy and team development skills branch of the team. Therefore by asking what was the reengineering team's nature and tasks such issues were brought to the forefront. Using the same style of questioning resulted in a better construction of the data findings than previously.

In other words, the studies assisted in refining the research techniques, and clarifying issues that were not clear. Thus, it was used to avoid any risks associated with the research data collection techniques. It was felt that the studies were very critical to the research since they were viewed to be means of reducing the risks involved by following a 'blind' path-whereby no clarification or development of issues is made. That is, by conducting a pre-trial of the questions, the research was able to modify the questions in a way that the most and relevant information could be obtained for the research. Thereby, assisting in forming better constructs of the research.

A pilot case study has been described by Yin (1984) as studies that "help investigators to refine their data collection plans with respect to both the content of the data and the procedures to be followed." Yin also noted that pilot cases assist research by allowing researchers to develop relevant lines of questions. Thus this view is upheld by the pursued research strategy.

At the same time, Yin (1984) also warns that a pilot is not a pre-test. Allowing the investigator to develop relevant lines of questioning is a formative use of the pilot study. A pre-test on the other hand, is the intended data collection plan that is employed as a final test run; in other words, a pre-test is a “formal dress rehearsal” (Yin, 1984). An additional warning provided is that it has been noted that many researchers utilise the data collected from the pilot study in the analysis of subsequent case studies. “You should not permit slippage from the exploratory (or pilot) phase into the actual case study to occur” (Yin, 1984).

In this research, the pilot studies were used as instances to clarify the questioning techniques and to add any other information that could assist the questions used in the interviews in the other case studies. Therefore, a new theory was not developed at this point and although the results that emerged from the pilot studies and subsequent case studies may be similar, they were not used in the analysis and so a situation to avoid any slippage from the exploratory phase could not occur.

When selecting the pilot studies, Yin (1984) observed that the reasons for selecting a particular site could be due to convenience, access and geographic proximity. The reasons for selecting pilot studies 1 and 2 were for several reasons including, convenience, having undertaken BPR, accessibility and being the first 2 to begin the research process at. These particular sites were close to the research base and on the other hand, being so close, contact could be established easily than the others. Additionally, contact was made quicker and access to information and the selected respondents was provided *easily than any other organisations* approached at the time. These organisations were at the time that the research began, one of the few to have undertaken BPR and were willing to share their experiences and information.

To collate the data, the personal interview technique was mainly utilised. Initially, unstructured questions were posed and very little prompting was employed. Gradually as the research became more focused, a structured line of questioning with minimal amounts of prompting was utilised. Prompting was usually in the form of either completing a sentence for a respondent, clarifying the answers received at the interview or from the questionnaire or

reminding the respondent at the next meeting what was said about a particular topic or issue and to continue the topic from there.

The interviews usually lasted for an hour, however, there were instances when they extended to nearly one and a half hours. The interviews were conducted at the pilot sites in one of the meeting rooms and were conducted face-to-face between the researcher and respondent. The interviews were tape-recorded and transcribed on the same day. This approach was utilised to ensure that all the information and any further details were recorded and not missed out. Initially, hand written notes were made and it was found that information was being missed and not fully detailed. By missing out important information, the interpretations by the researcher were being missed and this was not fulfilling the objective of Interpretivism and the hermeneutic circle.

Additionally, it was found that the information provided by the one source was not enough and provided the opportunity for bias to enter the research, thereby making it more difficult to substantiate the results (Darke *et al*, 1998). To prevent such a situation, reference to secondary data such as unpublished reports presented to the Board, published previous articles and information downloaded from the World Wide Web regarding the organisation, was downloaded. This method is known as triangulation or the use of several kinds of methods or data (Denzin and Lincoln, 1994). Therefore, a triangulation of the data collection methods was employed to prevent a bias. As mentioned in chapter 3, triangulation can be utilised to prevent a bias. Using this assertion, the research subsequently *gathered results from this organisation*.

#### 4.2.1 THE PROCESS OF EXAMINING THE FINDINGS OF THE PILOT CASE STUDIES

When the questions for the pilot studies were formed, the research was still in the early stages. This was a very theoretical stage with knowledge only about the issues regarding organisational change, the composition of reengineering teams, conflict, motivation, and empowerment being guided by the literature. This meant that the constructs were very closely

linked to the theory. In the following sub-sections, a description about the way that the constructs were formed is given.

### **Organisational Change**

The literature review undertaken earlier assisted in identifying the main issues that the research would be concentrating upon, namely, organisational change and the establishing of reengineering teams. Organisational change has been utilised to form the foundations of BPR is an assertion in theory, however, there is little to substantiate that this is necessarily true in the real life situations. These sorts of observations were also mentioned during the interview and sometimes, the respondents used them to explain some of their experiences. The questions at the time asked, “Were there three steps followed when obtaining the organisational change? Could you describe the details in the followed steps?”

The respondent agreed that there were some steps followed and described how the organisation firstly undertook an analysis of the current situation. Then, the processes that were going to be changed were identified. Thereafter, the team was formed to undertake the task and after the Board considered their suggestions suitable, was reengineering undertaken.

After transcribing the conversation, it was noted that the processes followed by the organisation were similar to those explained by Lewin. However, it was also concluded that at the next study, the question should be rephrased to ask, “Could you describe the processes that were followed to obtain the desired change?”

There was also mention of different theoretical models such as that by Galpin (1996) and Kotter (1995). However, these are activities or processes that are undertaken theoretically and in the context of organisational change and not so well known in practice, and so the questions had to be amended in order to relate to practice. Business Process change is also viewed to have underpinnings from the organisational change area and it was decided to investigate whether the undertaken activities are addressed in real life scenarios or do different results occur. Usage of the first set of questions did not assist in providing the required replies, however, the amended version obtained the appropriate answers.



Another issue with regards to organisational change was to determine what particular type of change was being pursued. That is, was a radical change actually being undertaken and does it conform to any of the theorists' descriptions, or was it an incremental change but practitioners had described it as 'radical change'.

### **The Reengineering Teams**

With regards to the reengineering teams, the research intended to identify several issues. Initially, the research intended to identify what were the constituents of a reengineering team. Thereafter, as more information was obtained both from the literature survey and the practical experiences, other issues became vital for the research. Issues such as attempting to determine what particular activities were undertaken for the reengineering team to form; what is the criteria used to form the team and once the teams are established, what are the interactions between them needed to be investigated.

To investigate the interaction amongst the team, it was found that particular behavioural aspects from the work psychology, organisational change and management areas could be applied and a better understanding could be developed. The findings in chapter 2 are also theoretical findings, with no context-specific theoretical or methodological approach supporting them. On their own they are just descriptions with very few practical examples provided and consequently, are particularly difficult to apply to real life situations.

It also has to be understood that in the earlier stages of the research, the focus for the research was a purely theoretical one. That is, the researcher had not experienced instances such that the theoretical issues could be related to practical examples and so the questions were very theoretically focused. As a result the questions were phrased in examples such as "was empowerment evident in your organisation?" Before the respondent replied, a clarification about the context in which empowerment was being referred to was sought. This also assisted the research for the next case. In the next case, the question was clarified by providing the definition of empowerment provided by Hammer and Champy (1993). However, this was also found to be limiting and a wider definition was then applied.

Although the participants in the organisations stated that BPR was undertaken and that reengineering teams were formed, a basis of assessing that this was truly the case had to be formed. Initial interviews were conducted and by comparing the empirical evidence with the literature review findings gathered from the extensive literature survey, it was asserted firstly, that BPR had been undertaken and secondly, that a reengineering team was formed. This strategy was followed in the instances of both the pilot studies and subsequent cases. A note about pilot study 2 at this point seems most appropriate. Pilot case study 2 was a small to medium sized enterprise and did not offer too much information regarding the human and organisational aspects. The small size of the organisation and minimal information also accounted for the findings being scarce, as demonstrated in the latter part of the chapter. With little information regarding the human and organisational aspects, there were also fewer means by which the form of questioning could be refined. What was learnt was that the small to medium sized enterprise could not provide much of the required information for the research and such organisations could prove to be difficult to use for the analysis part of the research. It was at this point that pilot study 1 a large, international organisation assisted the research.

This process was followed for all the questions used during the research process. The routine that was followed can be summarised as follows:

Read the literature. Form some constructs based upon the literature findings. For instance, when the issue regarding the selection of teams arose, the research was more familiar to psychometric tests, knowledge, attributes and the skills criteria or interviews as a result of personal experiences.

When the respondent in the pilot organisation was asked about this question, the questioning was in the following form: "What method of the three, personality tests, knowledge, skills and attributes or just plain interviews, were used for selecting the team?" It can be seen that the question was very close to the theoretical finding in chapter 2. The response received there was that the knowledge, skills and attributes criterion was used. Since this was the initial mention of the issue, the answer was accepted. However, upon further probing, it was found that

there was a particular knowledge, skill and attribute that the organisation was searching for in their team members.

Using this experience, then the questioning at the first case study was amended and posed in a more appropriate manner. The researcher then asked “What was the selection method used for selecting the team members?” “Was the knowledge, skills and attributes criteria used when selecting teams and what particular issues regarding these areas were investigated?” This amended form of questioning led to a better and suitable answer. It was at this point that it was declared that the “knowledge regarding the department and the organisation were considered vital” (Mr. P, 1999).

#### 4.2.2 EVALUATING THE RESEARCH PROCESS USED AT THE PILOT SITES

As mentioned, it was imperative for this research that any organisation used for the research should have undertaken BPR and used reengineering teams. During the initial stages, to determine whether BPR had indeed occurred, the definitions of Hammer and Champy (1993), and Sadler's (1995) were initially used. However, it was quickly realised that Hammer and Champy's definition described BPR as a radical rethinking of business processes and when the question was posed to the respondent, the respondent asked what was the term radical being defined as. Quick thinking on the researcher's part mentioned Sadler's definition of a radical change being one that lasts for 2 to 7 years and brought about job losses. This also brought a comment such as “our BPR project lasted for about 2 years and the job losses were no more than usual” (Mr. A, 1999). This example demonstrates some of the few ways that the respondents at the pilot sites assisted the researcher in clarifying issues for further research.

Since the organisation had undertaken the approach, the respondent had practical as well as theoretical knowledge and was aware of many issues that the interviewer had not really considered. When the research was begun, only a theoretical knowledge of the area was available to the researcher, as a result the practical issues related to the theory were absent. For

instance, when examining the concept of empowerment, the reengineering area only refers to it in the context of an added responsibility (Hammer and Champy, 1993).

When interviewing the respondent at the pilot site, it was brought to the attention of the interviewer that there are many different contexts that empowerment could be used and this was something that they had come across. Additionally, the respondent commented upon the fact that the additional responsibilities were not readily acceptable by all the team members. This is something absent from the literature and assisted the researcher in the subsequent case studies.

That there are other forms of interpreting empowerment prompted the interviewer to refer back to the literature and examine the other areas of organisational behaviour and work psychology. It was there that the different ways of investigating empowerment were mentioned. This also emphasises the importance of finding an organisation that had undertaken BPR and not any other management change approach or a change, such as implementing automation and claim that it was BPR.

However, at the time that the research began there was limited information regarding reengineering teams. Cleland (1996) has provided definitions regarding the reengineering team, Hammer and Champy (1993) describe the team as having between five and ten people and Hammer and Stanton (1995) provide some little detail about the reengineering team being composed of mainly females.

Utilising this minimal information, the results generated by the initial interviews at the pilot site confirmed that the organisation was undertaking BPR and did have a reengineering team. What was also evident was that the team consisted of about ten people, and did contain a team of mainly females. However, the interviewee also maintained that this was not a conscious decision. It just happened. For the following case studies the researcher then prepared questions asking about the mix of the team and if one of the genders dominated, was it a conscious decision or was it a coincidence.

To confirm that the opinions and results being obtained were not just those of one person, and a biased view was not being obtained, a method of triangulation where reference to archival documents such as a management summary and analysis reports were used. The reports detailed

information about a lot of the processes and information regarding the reengineering teams. This proved to be beneficial since the information provided by one source was limited and by using this technique, the gap was overcome. Also using triangulation assisted the research by pointing out that this method can also be used. That is, it demonstrated that the ideas expressed in triangulation are applicable in practice.

Finally, the questions used in pilot case 1 were much broader and less focused upon the research issues than at the other sites. This is also something that was confirmed by Yin (1984), "The inquiry for the pilot case can be much broader and less focused than the ultimate data collection plan."

At the pilot study, the constructs used were more focused upon the theory surrounding this research than the objective of the research. This resulted in the responses not developing any theory, but substantiating the results. As the analysis of the findings in practice was undertaken, it was found that the questions had to be focused upon other issues apart from only proving that the earlier formed theory is evident in practice. Consequently, the questions were amended and it was found that there was more data in the responses than just provided by linking the questions too closely focused to theory.

#### **4.2.3 DESCRIBING THE FINDINGS OF PILOT CASES 1 AND 2**

After developing an appropriate form of questioning and developing a suitable rapport with the respondent, responses that provided the data for this research were obtained and are explained in Appendix G. As stated earlier, the findings of the pilot cases were not used for the analysis part of the research and further, to prevent confusion, the results were placed in the appendices part of the dissertation. In addition to the interviews, the reference material in the form of analysis and management summary reports, published articles in journals and chapters from a research book provided additional information (this is particularly attributable to Pilot Case 1) and clarified that the information being provided is compatible with that of others within the organisation.

The findings were constantly analysed to determine whether the answers generated could be used for theory generation or to validate the theoretical findings of chapters 1 and 2. This also assisted in improving the questions used during the interviewing sessions and questionnaires for both the other case studies and the pilot study. To confirm that the correct interpretations had been formed from the interview process, the interviews always began with a summary of the findings from the previous session and at the conclusion of the research, the results were sent to the respondent.

#### 4.2.4 LESSONS FROM THE PILOT CASE STUDIES

Yin (1984) noted that a difference between the pilot study and actual case study reports is that the pilot reports are “more explicit about the lessons learned for both research designs and field procedures.” Similar reasoning was used in this research and as a result, the following discussion about the lessons learned is presented.

The literature review provided in chapter 2 instilled a source of knowledge into the research, but what was missing from this was the ‘real life experience’ of organisations. Contrasting and comparing the information to the practical experiences, the information was complemented by adding a rich and detailed picture of the practical experiences. This provided a rich setting where the whole spectrum of the issues identified in the earlier chapters could be further explored.

A more important observation that can be made by using the case study method is that additional issues that would have been difficult to capture in a purely theoretical study were made possible. Issues such as the organisation's background, practices and working habits would have been missed and yet they also assisted in the research. Additionally, if a purely theoretical study had been undertaken, then the process of developing questions that require the consideration of the practical experiences would have been foregone.

However, pilot case 1 highlighted how difficult it is to interpret theoretical findings in practice. By having questions too focused upon proving the earlier formed theory, the research

seemed to be generating no new theory and that was not the aim of the research. Data analysis had begun quite early on in the research, a suggestion made by Yin (1984) and that proved to be beneficial for the research. By amending the questions to include some of the theoretical issues as well some of the practical experiences that the researcher has and the comments about practical experience from the respondent, assisted in forming a better data collection and better findings from the analysis.

Pilot study 2 in particular assisted the research by illustrating the various different ways of defining BPR and this proved to be beneficial for future research. It was also useful in allowing the researcher to develop an interview technique that could be used for the subsequent cases. For instance, when the research began, the interviewer was aware that questions had to be formed and that the respondent should be provided with some time to respond; however, what was known what type of questions should be asked and also when to clarify issues. An example of this is at a very early visit to the site, the respondent asked the respondent background information, the reasons for undertaking BPR and the type of BPR. After the interview, it was concluded that a question like this should not be asked at one time. Instead, it should be broken down into parts and particularly when asking about the type of BPR, examples and definitions should be provided. This form of questioning was applied to Pilot Study 1 where much better results were then obtained. The limitation with regards to Pilot Study 2 was that the size and the organisational structure arrangements were such that verifying the human and organisational aspects of particularly, *conflict, or team development were not possible* and also the BPR undertaken there was not similar to any of the definitions used in the research. Consequently, fewer interviews could be conducted. This also explains the reasons for the fewer findings in the instance of Pilot Study 2 in Appendix G.

Finally, it can be concluded that the pilot studies were beneficial in that they provided valuable insight to the knowledge accumulated through the background literature review and allowed the research to develop better questions that could contribute to the generation of the theory. This would have been a difficult and problematic task had it not have been for the pilot studies taking place.

Using these lessons, the research then went on to gather the data for the following case studies and they are described in the following sections.

#### 4.3 THE OBJECTIVES AND SCOPE OF THE CASE STUDIES (CASE STUDIES 1, 2 AND 3)

The organisations used for the research were contacted at almost the same time as the pilot studies. However, the main reasons for selecting the pilot studies were mentioned earlier and assisted in forming some of the questions for the subsequent cases and that is why those cases qualified as the pilots. When contacting the case study organisations an alternative route was employed.

In the instance of case study 1, the Head of Department of Information Systems and Computing, Brunel University sent a letter of introduction or reference to the proposed organisation. When initial contact was made, the people with whom contact was made asked for a letter of introduction in order to ascertain that the research is taking place and for their own records.

The three cases used for the research were large organisations, which were different in nature. The first was a large organisation in the leisure and retail industry in the private sector, whilst the second was a large teaching hospital that was *semi-public in nature*. The third was a large public sector, local authority. In the instance of the first two cases, BPR had been undertaken several years prior to this research, thus affording the advantage of reflections about decisions made at the time. The disadvantage was that as *Hammer and Champy (1993)* also found, the team members had moved on to other jobs that were different in nature to the previous BPR projects, in other organisations or departments and thus made the number of individuals to be interviewed lessen. The third organisation was a BPR project that had recently begun and thus more of a 'living' example of the approach. The advantage that this case obtained was that the research could obtain a better view of the approach and in some instances could achieve a first-hand experience of a BPR project, an instance not possible with the former two cases. The disadvantage was that the success of the project still remained to be determined;



however, this was not an issue that the research objectives concentrated upon and was thus placed aside. Against such a background, the objectives for the research then became:

- (1) To examine whether the questions that were developed from the pilot were indeed applicable to the subsequent cases. There were occasions during the interviews that the researcher felt that the answers being provided were not too detailed and although, they had worked in the pilot, they needed to be amended. This then resulted in some of the questions either being formed during the interview or amended to get as much out of the answer.
- (2) Whether BPR had taken place, what were its results and to obtain detailed descriptions of the processes undertaken by the organisation.
- (3) Determining the role of the reengineering team in BPR and also issues such as the nature of the team. These included asking questions related to the team demographics.

#### **4.3.1 THE INTERVIEW PROCESS**

An interview protocol was established with the respondents at the initial meetings or conversations. This was also something that was learnt from the experience of the pilot studies. This meant that detail about the way that the interview was going to be conducted was described.

Thereafter, declarations about the research, which included describing some of the objectives of the research, were provided. At the time, mention about the conversations being tape-recorded was also made. This was in order to emphasise that nothing is being kept in secret from the respondent and also that an element of trust between both parties was built.

As soon as the interviews were completed, the recordings were transcribed. Thereafter, the findings were classified into categories close to the ones developed for the literature review. This was done in order to identify the data and to prevent the data from being mixed up, thereby, reducing the confusion when analysing the data. There were other issues such as the

modelling techniques that were also obtained during the interviews, however, as the objective of the research was not to examine that, they were disregarded.

#### 4.3.2 THE EMPIRICAL EVIDENCE FROM THE CASE STUDIES

It also became evident during the process that qualitative data, in other words, data in the form of words was being collated, which also verified that the original research intention of obtaining qualitative data was achieved. What also had to be remembered that Interpretivism was being used, therefore, an understanding of the reality of the BPR approach, by obtaining descriptions of the process and the role of the reengineering team had to be obtained.

With regards to the hermenutic circle and semantics that were mentioned as part of the research process in chapter 3, it can be seen that until now, the case studies have attempted to display and validate the theory that was discussed in chapter 2. Further work will have to be undertaken to show their significance as part of the BPR area. That is something that the proceeding chapters should achieve. It can also be seen that semantics are something that can have an important role as the expressed words could have further meanings attached to them and that was an issue that the researcher had to be very considerate to. At certain points during the interview, there were issues that had to be cleared in order to make the work as clear for the audience as possible and to avoid situations where alternative interpretations regarding only the research, could be made. This was a benefit that the researcher received from triangulation.

The process followed by the research to make some sense of the collated raw data is as follows:

When the data was first obtained, there was no structure or boundary to assign it to. That is, in its raw form, the data was just that 'data' and there was no means of forming any interpretation. Using Yin's (1984) within case analysis and Miles and Huberman (1994) formation of cross-case patterns, the data was provided with some form. A suggestion made by Miles and Hubermann (1984) about forming categories was then applied, the results of which can be viewed in this chapter. The data was initially assigned to categories established in the

literature review. This proved to be especially useful since say for instance, the size of the reengineering team could be assigned to the category of team demographics.

From the result of the analysis of the findings, it was concluded that bearing in mind the original objective and the results, two phases to the research process had to be developed. The first was to validate that the theoretical underpinnings used for this research were evident and this was achieved in chapter 5. The second to develop a theory from the findings and the results are stated in Chapter 6.

In the following sections, the result of the data collection that is used for the analysis and development of theory for this research is presented in the following sections.

#### **4.4 RESULTS OF THE EMPIRICAL EVIDENCE: CASE STUDY 1**

As mentioned, the data in its raw form was not easily identifiable and difficult to understand. To overcome this, Yin's (1984) multiple case analysis and Miles and Huberman's (1994) cross case patterns strategies were used (Discussed and shown in Chapter 5). This resulted in categories or themes being formed and the data being more applicable to this research.

##### **4.4.1 BACKGROUND OF CASE STUDY 1**

This case study researched an area of a large organisation that deals in the international hospitality and leisure industry, is quoted amongst one of the top FTSE 100 companies and operates in the three business sectors: hotels, leisure retailing and branded drinks. Its competitors include the Rank Group plc, Accor, Scottish and Newcastle plc and Whitbread plc. The study refers to the branded drinks and leisure retail side of the business that is located in the Midlands.

The organisational structure of the organisation is a hierarchical one where progression to a senior management position is expected to occur within 8-10 years. The organisation is a keen

supporter of the development of its workers and provides training and development programmes to keep them up to the times. There are structured development programmes that employees can also follow and they are performance-related opportunities to develop to MBA levels.

The organisation operates as a “strategic business unit”, as opposed to previously, when a geographic structure was used to identify each section of the organisation. Thus, whereas previously the organisation was referred to in the context of one of the 6 geographic locations, now reference is made to a strategic business unit where the people are more empowered than previously to undertake their work. Presently, the organisation is also undergoing change where the aim is to form a core centre for the strategic business units. “This is being done by referring to some identified core processes of the business” (Mr. P, 1999).

#### 4.4.2 REASONS FOR UNDERTAKING BPR

The reason that case study 1 undertook BPR was due to two external factors. The first was that in 1996, the company purchased another brewing company. As a result of the purchase, the organisation's market share rose dramatically and this action prompted a referral to the Monopolies and Mergers Commission (MMC). While the MMC was still deliberating upon an appropriate decision, governmental elections took place in 1997.

The results of the elections brought along with them a change in the political parties, from Conservatives to Labour and a change of policies in the MMC. Margaret Beckett came into power at the MMC and she vetoed the take-over deal. This caused a problem as the deal was made on condition that all obstacles would be handled beforehand and there would be no problems. Only if there were no problems, would any further developments occur. However, in June 1997, the organisation discovered that it was not going to obtain the benefits that it would obtain as a result of the acquisition since the deal was revoked in the middle of the process and the purchase was not going to be allowed to proceed.

As a result of the decision of the MMC, case study 1 had to disregard the deal as they were facing a £100 million-deal loss and any additional synergies loss. Not to be beaten, the

organisation decided to overcome its problems by having a closer inspection of its own operations and contemplated on completely reinventing the organisation. The detailed scrutiny showed that the cost base of the organisation was rather high. A decision was then made to reduce the cost base of the organisation and to completely transform the operations of the organisation.

An example of the closer scrutiny and results of the action are explained by a member of the team: "Prior to BPR, the organisation was split in terms of geographic positions, but this was not achieving the success that we wanted. Rather than having a similar organisation in every position of the economy, we were obtaining little competitive units that were costing the organisation a lot in the long term. It was found that by obtaining BPR, strategic business units could be established and they obtained better results in terms of operations and overall profits. We are so encouraged by this, that we want to form a core centre that will be a roof for the strategic business units" (Mr. P, 1999). The second reason for the change was once again an external factor and was related more to the emerging trends in the market place. The recession in the early 1990s had changed customers' preferences from drinking in the pubs to drinking at home. That is, consumers were careful with the spending of their money and had found it cheaper to drink at home, rather than the pub and this began to have an impact upon case study 1's sales. The drinking at pubs is known as on-trade (a term commonly used in Case Study 1), while drinking at home is off-trade. Case study 1 found that there was a significant rise in off trade sales and a fairly flat drop in the on-trade. In overall terms, there was a flat drop in on-trade terms of 1.5% to 2% to more than that. Therefore, there was a flat, declining market.

A new Chief Executive was appointed to the Board and this person was not one who was going to let the organisation continue on its same path and not make the profits that it had the potential to obtain. He persuaded the rest of the Board to join in his vision and from thereon he continued the conversion to the new forms of change. Senior managers communicated to the people working for the organisation the newly formed vision, Directors talked to the people and workshops and 'skip level meetings' were held throughout the country. 'Skip level' meetings were ones where a team of directors would attend meetings consisting of the employees of the

organisation. The meetings were held randomly and at any location. There were also road shows held and totally, sixty-five were held.

To prevent the BPR project from being an isolated incident and not having anyone being aware of it, a communication programme was established. This informed individuals within the organisation about the impending changes and also made the organisation aware of the thoughts of both members of the public and employees of the organisation towards the suggested project. "After all, the repercussions were going to have an impact upon the rest of the organisation and we wanted to ensure that everyone was involved in the utmost in it" (Mr. L). Mr. P agreed with this when asked about this issue and described the methods used for this purpose. "Leaflets and internal newspapers were published to inform both the organisation and members of the public about the impending changes. A web site that allowed individuals to ask questions about the new changes and bulletins that were published once every four weeks were the main forms of communication." Once the support of the whole organisation for the project was obtained, the selection of the reengineering team began.

#### **4.4.3 SELECTING THE REENGINEERING TEAM**

Selection of the team members was done on the basis of the tasks to be undertaken and whether the team members could work together. Additionally, the interests, values and personalities of the candidates were also analysed. Also familiarity to the organisation, which meant, how accustomed to the operations of the organisation and how well the individual was known to the senior members of the organisation were the additional requirements. These were the guidelines provided to and used by Mr. P. Mr. L, affirmed this and provided additional information: "We looked for personnel experienced in their own fields and in the organisation. All should also have worked for the company for at least 10 years. The skills required were the usual standard ones for individuals of such positions, presentation, analytical and team working ones."

When joining the organisation, psychometric tests are held and from that point onwards, there are no more tests and so, when forming the teams, there was no utilisation of psychometric tests as that task is performed at the initial point of entry into the organisation. The individuals selected to be the team members were usually senior managers and graduates, ranging in age from the late thirties to fifties. The predominant gender within the team was male, although there were also females included. Since they were managers, they tended to report to the Board and for this reason, when a final selection list was compiled; the advice of the members of the Board was sought.

The department heads were also approached at this point to inform them of the developments taking place. Once the team members were selected and approved by the Board, they were asked whether they would be interested in the new, temporary positions. Only if the response was positive, would the department heads be informed and arrangements to fill the gap made. At this point, secondments were usually arranged and therefore, the managers also had to acquaint the temporaries to the routines of their jobs as well as to mentally prepare themselves for the newly allocated role and responsibility.

#### 4.4.4 THE CHANGED PROCESSES

All the processes that had an impact upon the performance of the business were examined. The top and bottom of the business was inspected, from the way that the sales force interacted with the customers to the manner by which the organisation transacted with its suppliers and everything in between. In all, 15 core processes were examined and the decision was made to change them. "The only thing that was not changed was the brewing process itself" (Mr. P).

The project that this research investigated affected the process of on-trade sales. This was a core process that was viewed to be particularly important as a large part of the business depended upon the on-trade sales aspect and therefore, this was deemed to be very important for the organisation. As a result of BPR, there has been an increase of about one- percent in volume

terms, which also means that there has been an increase in the market share of the organisation. To obtain a successful result, the organisation had to change its policies by becoming more systematic and becoming committed to the clients. This was done by offering statements such as 'a Composite order will be delivered within 2 working days of receipt of the order'. "This meant that if a client placed an order by telephone or via the electronic ordering system, then the products would be delivered within 48 hours of receipt of the order. A same day delivery service was also introduced to improve the service and increase volume. Thus, if a customer telephoned the organisation and ordered one of the brands offered in the available service before midday, then the product would be delivered on the same day" (Mr. F, 1999).

Additionally the sales force attitude towards work was changed. "The sales force was used to dealing with individuals in the traditional way, where sales people would approach organisations, show them the products being sold and attempt to sell the benefits of the products to the customers. By having the change, the sales people were transformed from being just ordinary sales people to becoming account managers where the customers' business opportunities were advanced and the account managers became responsible for business units (which were not prevalent before BPR). The improvements made by case study 1 have been quite dramatic so much that a competitor observed that case study 1 can "now do a thousand things, one percent better than most of us" (Oram and Wellins, 1995).

By introducing BPR, the role of Information technology as an enabler of change also became more evident. For instance, a whole new approach to e-commerce was generated. "The organisation is presently trading with a significant amount of their suppliers employing the Internet and providing catalogues to them utilising the facility" (Mr. P, 1999).

The changed sales force described above was made more aware of the capabilities of IT as they were supplied with laptop computers that provided them with the required information as and when it was required. "The sales force was changed as a result of BPR. Whereas previously they had to ring the office and find out the required details, they could access the information when needed by using the supplied laptops. This way, the time taken to find out details by ringing the office or finding a desktop computer that they had access to was saved and



the service to the customers was greatly improved” (Mr. P, 1999). This afforded them the benefit of becoming mobile and allowed the organisation to spend less time thinking about the provision of space for the salespeople. This benefit also spilled into the customer service as it allowed the salespeople to spend more time with the clients, provide a better service and spending less time in the office, but obtaining better overall results for the organisation that were not obtainable previously.

#### 4.4.5 PREPARING THE REENGINEERING TEAM

Once all the initial preparations such as establishing secondments and informing the team members of their appointment to the team were made, the organisation made further preparations to ensure that the team members would be familiar with one another and the areas that they were going to be working upon.

A core team that was composed of an approximate number of 8 senior managers undertook the whole project. The individuals belonged to different departments; for instance, there were people from the production, information technology, accounts, or supply chain departments. These individuals were employed on a full-time basis and were led by a member of the Board. Since the teams were located in one place, communication was usually face-to-face. However, to exchange ideas outside of the allocated working space, an Intranet was used and established within the organisation. The managers were of mixed gender, both female and male, however, *there were more males than females*. There were no financial incentives that were provided to the team members, but a guarantee was given and this ensured that at the end of the project, the managers would return to a job (equivalent to their current job). In other words, “if you like, they were given a letter of comfort” (Mr. P, 1999).

However, the project was of a large scale and therefore, there were part-time teams also employed, but utilised only when required. There were also instances when the team members were not fully knowledgeable in the fields of BPR and gaps existed, this was particularly evident in the initial periods of the project. To overcome this gap, case study 1 sent the team

members away for a few weeks for some induction training where a familiarity with the required concepts was provided. The courses were also more for mentoring and coaching purposes and were held at an established educational institution (the Worcester College, University of Oxford). Additionally, case study 1 utilised the expertise of some external organisation's consultants and their purpose was to provide the members with the information regarding issues in subjects such as Project Management or BPR. Once again, there were two consultants utilised, however, it has to be understood that they were brought in to provide knowledge regarding the methodology of the area and not for facilitation purposes.

#### 4.4.6 EMPOWERING THE TEAMS

To ensure empowerment, case study 1 firstly had considerable discussions with the senior management that consisted of about 100 people. The talks consisted of the ultimate aims of the achieved objectives and clear accountabilities of each team member. Thereafter, a clear framework that encompassed the objectives and accountabilities was established. Once that was established, the individuals selected to be part of the team were viewed to be mature and reliable enough to undertake the newly added responsibilities. Finally, there were detailed plans and milestones established, and thereafter, the team was allowed to get on and achieve what they could within the set boundaries. It was also felt that this was a good strategy to follow as the members were not resistant to the change and instead acquired the new roles and responsibility with little difficulty. "It was made sure that the people who became part of the team were responsible enough and could undertake the assigned tasks with the least efforts" (Mr. L).

Mr. P agreed with the earlier made claim and provided the interviewer with an example of this, "Referring back to the example of the sales force in the aforementioned section, the sales force thinking had to be changed. Prior to empowerment, the salesmen responsibilities were described as from just selling a product and being responsible to their managers for the sold amounts and their commission rates, and the managers being responsible for the budget and for other major decisions. Thereafter, when empowerment was introduced, the responsibility had

been transferred to the individuals themselves and the responsibility of selling or buying certain products had been changed to the sales force. This made the individuals become account managers themselves and make the final decisions, a situation that was different to previous periods.” It also has to be noted that the individuals had to be provided with a lot of training in order to acquaint them to the newly formed powers. The new powers were found to be difficult to comprehend and grasp in some individuals instances and was also something that the senior members observed as well, however, they attempted to eliminate as much of the difficulties as they could by providing as much assistance as possible.

Mr. P provided the example of managers of the organisation’s leisure section provided another example of empowerment. “Prior to empowerment, the managers in the sections had limited powers for instance; say in the pricing policies offered within their particular establishment. Due to the formation of the team and the new approach's philosophy, the managers were provided with the opportunity to hire individuals of their choice, establish their own pricing policies to deliver budgeted gross profits, devise and implement promotional plans for their outlets. As a result, the managers felt that they also had the power to make important decisions and consequently, will want to achieve even more since their motivation is increasing as their desires and needs are being met.”

Due to empowerment the role of the project leader within the team also altered, however, not to a great extent. Initially, the leader's role was viewed to be one of setting the tasks and responsibilities of the team members. The initial role was a prescriptive one where the Board set up the objectives of the project and the project leader was responsible for setting all the individual accountabilities to the objectives. As the team's role changed, this role changed very quickly to one of facilitating, advising, encouraging and monitoring as the team members were self-starters and there was very little need for the original role. Therefore, the initial role was that of setting the ground rules.

Once work on the project began, the team attempted to avoid any confusion and becoming clear about the objectives by having open discussions about the contribution that each team member made. This prevented anything being hidden from the other members and made

issues much clearer. The team worked in a separate suite of offices that were located away from the main building completely. This perspective was adopted because (a) the organisation did not want the team members dragged back to their day jobs; (b) some of the issues being dealt with were somewhat damaging and to prevent any unpleasant repercussions, this position was adopted. Finally, (c) for the team to get along and work together, it was felt as a necessity to have them in one place.

#### 4.4.7 CONFLICTS IN THE REENGINEERING TEAMS

Good working relationships were developed between the team members and the members worked with one another to achieve the end product, despite the existence of conflicts within the team. There were instances when a decision made within the team was not to the liking of the others and conflicts occurred.

Conflict also occurred in the working relationship of the team. If a task was allocated to certain members and it was not completed correctly or was not completed at all, then there were more likely chances for conflicts to occur. Conflicts were something that occurred constantly within the reengineering teams. However, it was felt that in certain cases conflict needed to be encouraged in order to get a result that was best for the business. "Positive conflict is not a bad thing, however, negative conflict obviously is" (Mr. P, 1999).

It was also known that by forming a team consisting of diverse senior managers, there was going to be a division of views. This can also be seen in a positive aspect in that you get different views, however, on the other hand, there is a danger that there are likely to be more conflicts. For instance, since accountants and salesmen were part of the team, they tended to examine issues differently. The salesmen were more interested in how they were going to increase sales and how that would be achieved. The accountants on the other hand were more interested in how profits would be increased from every department and the impact upon the taxes and the profit and loss statement. At the established meeting days, attempts had to be made to bring the two sides to similar thinking and this caused conflicts due to the differing

opinions. As an example, the salesmen described how particular consumers were more prone to drinking a particular brand due to the offered price. However, to improve the sales on other closely tasting products and not only the popular brands, the opinion was that the organisation should offer lower prices. On the other hand, the accountants would be assessing the impact of such a strategy upon the profits and would most likely differ in their opinions and offer a different suggestion that would be different to the ones expressed by the sales force.

To resolve the problems dealing with conflict, a certain day was set aside. Usually, Friday afternoons were organised to review problems encountered by the team. The meetings were a frank and formal exchange of ideas and would aim to solve any problems, including those related to conflict.

#### 4.4.8 COMMUNICATION IN THE TEAMS

As mentioned, the team worked in one place and thus there was no potential to utilise e-mail and other forms of electronic communication. Face-to-face communication was the main mode employed and assisted in clarifying issues in a quick and reliable manner. To establish that the team members were receiving the same message from the higher authorities and one another, open panel discussions were held. During these meetings, questions that required long lengths of discussion were dealt with and any other issues of concern and confusion handled. This also saved time and assisted in obtaining excellent results that would not have been obtained if these actions were not undertaken.

To provide management with progress reports and determine the suitability of the proposals brought forward by the team, meetings were held every 4 weeks. Once again, these were face-to-face meetings held in selected boardrooms. On the whole, a communication programme that consisted of publishing newsletters and having workshops that emphasised the work being undertaken within the organisation was established.

#### 4.5 RESULTS OF THE EMPIRICAL EVIDENCE: CASE STUDY 2

This case related to the experiences of one of Europe's largest teaching hospital located in the North of England. The organisation is of a semi-independent Trust status presently, but was previously controlled by the National Health Service. The organisation has been in existence for over two centuries, thereby indicating why the hierarchical structure of the organisation is very traditional.

The organisation operates as a regular hospital, but is also very active in research and teaching. For this, special buildings on the site have been built where the research and teaching facilities are located. The organisation is extremely supportive of education and training. This was established from the interviews with several individuals who all indicated that they have the full support of the organisation for their improvements. For this purpose, the organisation has developed secondment programmes and training and educational programmes that allow individuals to obtain their educational training and/ or qualifications. "I have attended several courses that have provided me with the opportunity to undertake several difficult tasks that I would not have been able to do before I acquired the knowledge. Presently, I am working on attempting to determine the impact of a personality test developed by Belbin on our organisation" (Ms. A, 1999). To confirm whether other members of the organisation would share a similar view, others were also asked the same question. Ms. B agreed with the view that the organisation is supportive of its employees and explained, "We are currently interested in finding out what are the affects of personality tests and I am currently working on the Meyers-Brigg indicators and what do they exactly tell us about the people within a team."

As a result of its interest in research, the working practices of the individuals are fairly modern and up to date, particularly with regards to the implementation of change. Due to its additional research facilities, the organisations that it can be compared to vary from between other large teaching hospitals who are obtaining changes such as Kings College Hospital in London and other large hospitals operating as regular hospitals.

#### 4.5.1 REASONS FOR UNDERTAKING BPR

Case study 2's reengineering programme was one of two National Health Service executive pilots undertaken to evaluate the application of reengineering methodologies to improve the quality and efficiency of healthcare delivery. There were several reasons for undertaking BPR at case study 2 and they are described below.

The initial reason for BPR to be undertaken was that in 1992 the organisation was chosen to be a pilot site for whole hospital re-engineering and challenged to make 'outrageous improvements'. In less than two years, the results that were obtained were incredible. Administrative activities were reduced by forty percent in the initial target areas and diagnostic time that in some instances used to take twelve weeks and three or four visits, was limited to a single, five-hour visit. Observing such tremendous results encouraged the institution to undertake reengineering in 1994 and to continue on this difficult and long journey, which proceeds in some form or the other until the present day: "Although the formal reengineering project was for two years, the change in improvement has not stopped. However, what the hospital knew as reengineering, has now gone and the new forms of change are known as process redesign as opposed to reengineering and this is still going on" (Mr. B and D, 1999).

The second was related to the internal factors that lead to change. There was a realisation that the current climate the organisation was working in meant that if a change approach in some form or another was not undertaken, there then could be detrimental results for the quality and overall performance of the organisation. One of the organisation's neurologist consultants visited America during the periods of 1992-1994, and witnessed patients being flown into a hospital from different parts of America. However, what was unusual was that the patients were flown in just for a single day in order to have all their tests conducted. Once that task was accomplished, they were flown back to the place that they came from. This made the consultant get determined to obtain similar facilities for case study 2, the only difference being that the helicopter requirement was removed from his intentions. The suggestion put forward was that patients would come in to the hospital, have all the tests done in order for the consultant to

provide a diagnosis. This dream then turned into reality and a single visit clinic was formed. As a result of the success of the project, 1994 saw the hospital's single visit clinic winning the European Golden Helix award for the top healthcare quality initiative in Europe.

All the surveys carried out and compared against the peer groups indicated that the hospital was an efficient and well performing organisation. However, the Chairman, Chief Executive and Medical Director as well as other directors within the organisation realised that limited funds were going to be available from the National Health Service and therefore, different means of conducting work were required.

#### 4.5.2 PROCESS IDENTIFICATION AND THE UNDERTAKING OF BPR

Unlike the previous organisations where improvements were sought in some form or the other, case study 2's project was different in that the hospital sought to "redesign from scratch, all the key healthcare processes within the organisation" (Case study 2 report, 1995). As Bevan (1999) stated "the aim was to achieve dramatic improvements in measures of performance that are critical to healthcare." In contrast to many other change approaches that had been undertaken in the NHS, the hospital's focus was on the level of delivery of patient care, rather than on obtaining a "top-down" management structure redesign. This can also be observed in the key aims that the hospital produced:

- "To realign key healthcare, teaching and research processes so that different ways of working are delivered and the managerial and clinical focus is changed from managing inputs to managing outputs,
- To achieve hitherto unachieved levels of service quality for patients, purchasers, students and researchers,
- To achieve previously unachieved levels of efficiency,
- To provide a working environment in which staff can maximise the deployment of their skills and abilities in delivering excellent healthcare for patients" (Case study 2, 1997).



To identify the processes to be reengineered, an initial 'scoping' period was set. This period was utilised to identify the processes that were to be reengineered in the hospital. It also analysed and focused on the radical redesign of the core processes. Six core processes that represented the fundamental work of the hospital were identified as a result of the investigation. There were two patient entry processes, "planned" and "emergency" and two treatment processes "visit" (equivalent to outpatient/ambulatory care) and "stay" (equivalent to day and inpatient care). These core processes were underpinned by clinical support processes (including diagnostic testing, medication and operating theatres) and management processes. Since the care provided by the hospital was viewed to be a part of a wider continuum of care, all the processes began and ended in primary care (Bevan, 1999).

Since IT is viewed as crucial for the enabling of BPR, the research attempted to determine the organisation's views about this. "This hospital is quite an old hospital that has been built in divisions and some parts of the hospital are in keeping with the times in terms of technology, whilst others have not had that provision. To get it up to speed, we have had a massive investment in IT and that is still currently going on and needs to continue" (Mr. B, 1999). From these remarks it can be seen that the organisation does recognise that IT is important for its future and in some cases, the organisation is quite in keeping with the times, however, in other instances, it was not.

The same question was asked of another team member and confirming that view, also added the following. "*The role of IT is critical. You can obtain change without it. It's just as one can obtain BPR without team working, but it makes life difficult and I am not actually sure that you actually get through your journey, as you would like to. We always involve IT and included the people from the IT department in our teams since they can provide data and information about IT, or tell people how to get the required IT. That is, how to collect it, how to access it, what kind of equipment is required and these are issues that we certainly couldn't have considered in the past without the assistance of the IT department*" (Mr. D, 1999). Therefore, the change leader foresaw an important role for IT in their project.

An opportunity to speak to another team member regarding this issue was provided and it was found that IT did not have a large role in bringing about the desired change at the time, however, its role was currently being emphasised. The comment about the role that IT had in the programme was that “IT helped us in terms of data gathering, but we were primarily a process redesign programme with very little IT infrastructure development to support it or anything like that. “It has to be understood that our aim was to improve the services provided to our patients. At the same time we were conscious about the impact upon our workers, so we were careful about the repercussions of our work.” (Mr. B, 1999). It can be seen that both individuals considered IT to have an important role in bringing about the desired change, but their earlier reengineering programme did not have IT having such a critical role in the project. It was also emphasised that the organisation’s aim was to improve the offered services to its patients and *not* introducing IT. If IT was to have any impact, then that would be only if it offered a benefit to the patients, but that was still to be determined.

#### 4.5.3 SELECTING THE REENGINEERING TEAM

The criteria utilised by the organisation are best summarised in the following excerpt:

“Reengineering teams should comprise the hospital's “brightest and best”.

This creates operational difficulties by removing staff upon whom the hospital depends, but reengineering team members must be credible and influential people within the hospital. They must display an unusually wide range of skills and aptitudes as they work in a highly ambitious, intense and stressful environment to develop creative process solutions.”

(Bevan, 1997)

When selecting the reengineering teams several different means were utilised. In some cases, the Directors were asked to provide their nominations for suitable candidates and thereafter, the chosen individuals were interviewed. In other instances, the method of advertising and then selecting on the basis of the replies was used. That is, posts were advertised

and individuals applied and recruitment took place this way. At this point, the human resources department's role became more evident. In many cases selection was a mixture of the two methods, nominations and placing advertisements. The respondent did emphasise that when selecting team members it was to be understood that the organisation used the knowledge, skills and attributes criteria as it ensured that the selection method was fair as possible and also provided individuals with the opportunity to work on a team.

“We actually use the knowledge, skills and attributes criteria since it ensures that different people can join the team. This method is also used because tests can get some people nervous and discount them from the team. Yet these individuals may be appropriate based upon the former technique” (Ms. A, 1999). Mr. D also confirmed this view adding, “tests are helpful later on in the project, but initially, we feel that it is best to use the knowledge, skills and attributes criteria.”

The criteria utilised for selection was viewed to be the same as the other organisations. That is, the knowledge, skills and attributes of individuals were examined and then matched to the criteria that the hospital had set for its teams. The knowledge of the organisation, their own expertise area, which in this instance was related to medicine in many cases, was some of the criteria that were examined. Amongst the attributes that were looked were, whether the individuals had visionary skills, would make a good team player and open to new ideas. Additionally, the team building skills those individuals possessed, were searched for in the criteria. Therefore, could individuals deal with situations when problems were likely to occur and not cause a disruption to their daily task. If the individuals fitted in with the prescribed descriptions, then chances of being part of the team were much greater than likely. “However, we had to be careful when choosing medical professionals to join the team. That is, surgeons had hectic schedules and we had to be careful not to have their daily schedules affected” (Mr. D, 1999).

Another issue that was emphasised was that the organisation has a lot of interest in personality types. By determining the type of individual beforehand, then the ways that the teams function could be improved upon and made easier. As observed by one respondent, “by

becoming aware of the qualities and attributes of a team, then a diagnosis such as “why do we start projects and not actually finish them” could be answered” (Ms. A, 1999). This is why the organisation is presently working with Belbin and Meyer-Briggs type of psychometric tests.

#### 4.5.4 THE REENGINEERING TEAM

A reengineering team comprised between 5 to 7 people. There were also instances when a team could consist of only 2 people, however, that was an exceptional case. If there were individuals of about six or more within a team that could be an instance where the directorate was large and larger amounts of individuals were required to deal with the section. “I worked as part of the surgical directorate’s processes, which was like the second largest directorate in the organisation and my role was focused around the training and development. Since it was a large process change that we were involved in, the size of our team was 6. There were teams that had fewer individuals and some with more. It all depended upon the occurring process change” (Mr.D, 1999). The reengineering teams were viewed to be no different to any other teams. There were 5 core teams and thereafter, there were teams scattered throughout the hospital. This depended upon the number of processes being changed.

During the research, it was found that case study 2 was accredited in the literature to having a team of consisting of mostly females. “The case study 2 reengineering programme is female” (Oram and Wellins, 1995) and Hammer and Stanton (1995) also support the view that “women are assuming an increasing number of reengineering leadership roles.” When asked whether the observation made by the researchers was correct, the answer received was “this just reflects the fact that most of the hospital staff are female and if the list of process directors is viewed, it will be found that most of them are female. It also reflects the changing times” (Mr. B, 1999).

The teams consisted of individuals allocating different times to the project. For instance, some teams consisted of people who were “seconded full-time from their normal jobs for six months to analyse existing processes and redesign and test their replacements. The seconded

staff represented a diagonal cross-section of those working as part of the process being redesigned. They included nurses, clerks, doctors, therapists and managers” (Oram and Wellins, 1995). Mr. D was asked whether this would be a true description and he agreed saying that this was not the only case: “On the other hand, we had for example in surgery, an implementation team that consisted of dedicated people who worked full-time on the project. As has been mentioned by my colleagues, we had to be careful not to disturb the schedule of those whose services were extremely important and that is why then, some individuals either worked on a part time basis or for a few hours.”

Initially when the teams were formed, there was not enough information for the project to begin. To acquaint the team with the methodology, and provide theoretical knowledge, external consultants were employed by the organisation. However, it was quickly realised that the organisation was familiar with many medical issues that the consultants were not aware of and that the classic reengineering approach being supported by the external consultants was not beneficial for a hospital, therefore, the organisation pursued the project on their own. To replace them, team coaches (a term used within case study 2 to refer to individuals with various skills who assisted in many ways including mediation) who were members from within the organisation were introduced.

#### **4.5.5 CONFLICT IN THE REENGINEERING TEAM**

Due to the presence of team coaches and the field that the project was undertaken, the teams usually interacted well with one another and this was also reflected in the outcome of the undertaken tasks as they were completed on time and within the allocated budgets.

Personal conflict was not evident, however, the respondents did express the feeling that “I think whenever there is change, there is bound to be conflict.” The conflicts that occurred were more to do with minor differences of opinion between individuals. Since the team comprised individuals from various backgrounds, differences in views were expected and for this, the organisation had undertaken further steps to ensure that these small ripples would also be dealt

with by introducing 'team coaches'. Thus, it was believed that conflict is inevitable, however, it was not an issue that was looked for at every step. It was an issue that was investigated by this research and the respondents provided replies, however, the organisation did not really record or observe the number of occurring conflicts while the project was taking place. Another member of the team stated, "Conflict is inevitable and normal in a change programme and healthy in some ways."

The conflicts were managed quite well, usually within the teams without the assistance of other individuals. However, there were instances when mediation in the form of facilitators or team coaches was sought. Normally when conflicts did occur, they were resolved quickly. There were no established days to deal with conflict. "We did not feel the need to establish days to deal with conflict, when we could solve them as we went along" (Mr. D, 1999). The issues were resolved there and then because they were not such that they could not be solved there and then. One of the respondents commented "the project was a huge learning curve for us because we hadn't been through this before. So we learnt very much on the job."

An example of conflict was provided by a team member, "If there was evidence of any occurring tension or conflict, it was evident when able individuals were moved from key roles in the day-to-day operations of the organisation to working in the team. Individuals were familiar to their everyday activities and the responsibility that came alongside with the job. In the reengineering team, since the teams were a new concept, it was not known what their actual role would be and therefore apprehension amongst the individuals increased. Additionally, since the team was composed of a mix of different professions, there were certain members who had skills that offered the opportunity for patients to survive (doctors). As a result of the formation of the team, the doctors had divided loyalties in that they had obligations both to the team and patients and there were times when the tasks were allocated to the individual, however, due to the pressures of their daily jobs, could not meet them. Consequently, the team fell behind in their final delivery and caused conflicts."

#### 4.5.6 EMPOWERMENT IN THE REENGINEERING TEAM

The term “empowerment” was mentioned to both the program manager and a member of the team, but before discussing the impact of it, they asked for a definition to be provided since they were aware that there were different contexts in which the term could be used. The research defined “empowerment” as an added responsibility that resulted as an occurrence of BPR. The two individuals considered it as “a different way of work where individuals become more responsible for their tasks than previously,” a view that was similar to that of the research. Empowerment within the reengineering teams in this case had to be a very carefully planned strategy as any changes involved also taking into consideration human lives. “We have to be cautious about the empowerment within the teams, specifically within a healthcare environment. You need a structured framework that you are going to allow individuals to be empowered within. One cannot feel empowered and for example, perform an operation. Thus, a structured framework in which a person can do only certain things and in this case, we need to consider ethical issues as well. When we do research, we have to get it approved by an ethical committee as the responsibility impacts spontaneously” (Mr. D and Mr. B, 1999).

Additionally, empowerment was viewed to be a gradual process as the process involved changing individual ways of thinking and working. Prior to BPR, the teams worked in an environment where hierarchy existed and there was an individual who is in charge of the ward or such a department and made decisions. As BPR was being introduced, then individuals had to become familiar with the thought that they would also be part of the decision making process. Therefore, part of case study 2's team based strategy is about developing the capability of the staff to make decisions, to identify where the problems exist and what are the problems. To introduce the development, the role of the ‘team coach’ has been formed and this person assists in this very crucial task.

An example of empowerment that was provided was the instance of the surgical theatres. “There was a problem with regards to the Endotracheal tubes. These tubes were special, expensive and disappearing fast. The anaesthetists and consultants kept on reporting the

shortage and this resulted in theatre lists being cancelled. The incident became serious such that a crisis meeting was held. The team coach then decided to speak to various individuals and determine the situation for himself. It was discovered that some individuals were holding on to the tubes since they were in short supply. The other problem was that the tubes are recyclable, but to utilise them again, they needed to be sterile.

When the sterile services department was contacted, it was found that there were numerous tubes waiting to be cleaned. However, it was also discovered that the sterile services department had not been informed of the situation or that the tubes needed to be cleaned on a regular basis. A meeting was called once again and this time the solution to the problem was discussed. For this a fish bone diagram, which is a team analysis tool used by the organisation for problem solving, was used. From the analysis it was discovered that there was not a problem of there not being enough tubes, but more that hoarding was taking place, the tubes were not being processed quick enough and finally, not everybody was aware of what the problems and issues were.”

In terms of empowerment, the team coach, team and business manager were able to work together to say, “if we order more, it will cost us this much money, however, we don't really need to. Therefore, whereas previously, each of these individuals was responsible only for their own departments and would have overlooked the activities of the other departments, this newly placed responsibility allowed them to scrutinise the whole organisation's operations and discover the *sources leading to the problems*. All the involved individuals declared that the sterile services department needed to process the tubes quicker and if the tubes were not hoarded, then there would be enough tubes in circulation and the problem would not arise. Thus, savings in terms of money were made due to the team working with the team coach and utilising an appropriate tool to identify what the problems were, and the team solved the problem. Consequently, the business manager was very happy.”

This example also demonstrated that the way the organisation is operated upon was causing conflicts between departments and were it not for BPR taking place, this would not have been discovered. In this instance, the individuals who were holding on to the tubes were



taking it upon themselves to decide whether they should be having more or less tubes and this had resulted in others being restricted and having a feeling that their authority being undermined since other individuals could have been assigned their responsibility. As a result conflicts between departments and the individuals belonging to them were occurring and not allowing work to be undertaken.

However, empowerment took place on such minor decisions. When it came to major decisions that affected the restructuring of the organisation, the decisions still lay with the senior management of the organisation. This is also a contradiction that has been witnessed in the reengineering literature. Wilmott (1995), and Grey and Mitev (1995) all support the view that reengineering recommends empowerment and yet it is an attribute that is limited in its applications and is a transfer of power. Therefore, rather than placing the additional power upon individuals as soon as they join the reengineering teams, the new responsibility is decided beforehand and gradually placed upon the individuals.

#### **4.5.7 COMMUNICATION IN CASE STUDY 2**

Case study 2 believed in having frequent meetings and workshops and this is something that was done from the very outset. Weekly team meetings of the reengineering leaders were held in order to discuss issues in general. There was also a reengineering management group that used to meet to discuss the progress of the project and the management of the organisation was kept informed by holding meetings on a monthly to two monthly basis. The meetings were held in specially designated rooms.

There were reengineering laboratories that were initially set up for the teams and introductions to the various tools and techniques that would be utilised when the redesigning occurs were provided then. The labs were located away from the usual workplaces and were considered essential in order to prevent the teams from getting distracted. A video produced of the BPR project by the organisation that illustrated the location, and results of the project was referred to and illustrated what a typical laboratory looked like. Usual office furniture such as

tables and chairs, flip charts, blackboards and slide projectors for presentations were what the labs consisted of. Reengineering labs were employed when the programme was centrally focused. When the project encompassed the whole organisation, then the teams returned to their usual work places. This action was taken as it was felt that the individuals who are to be affected by the changes should also be included within the project, thereby increasing a sense of ownership amongst all the individuals working for the organisation.

To ensure that the organisation would be prepared for the new changes, newsletters were published, but it was quickly realised that they were not being emphasised enough, and an alternative approach was employed. Notices were attached to the wage slips that individuals received and this way it was ensured that the message was being sent and received.

#### **4.6 RESULTS OF THE EMPIRICAL EVIDENCE: CASE STUDY 3**

Case study 3 is a different case to the previously described cases since, first, it was a public sector organisation (unlike case 2 which is semi-public) and fully funded by the Government (which is not the case with the other cases) and thus, it was accountable to different people (members of the public and the Government) than the previous cases and second, whereas, the previous cases investigated BPR projects that had been undertaken some several previous years, this was one that was continuing presently. As such it is an example of a 'living' BPR project. Case study 3 concerned the business process change that a large local authority in the England and Wales area was currently undertaking. The authority is comparable in size and is referred to in the similar contexts such as the larger authorities of Brent or Barnet. Case study 3 is a traditional organisation with several hierarchies in its structure such as first line managers, senior officers and steering committees. The council serves the members of public under its vicinity by providing various services including highway maintenance, strategic planning, traffic, social services, housing and education. Presently, the organisation employs thousands of people within its region and beyond to provide the required services and products and the trend is viewed to continue.

#### 4.6.1 REASONS FOR UNDERTAKING BPR AT CASE STUDY 3

The project that this research examined began towards the latter end of 1997 and expectations are that it will be completed towards the end of 2001. As with the previously mentioned cases, there were several reasons for BPR to be undertaken and they are described as follows. "There are several factors that have caused case study 3 to consider undertaking BPR including changes in legislation, technology and public demand and the prospect of continued reductions in Central Government funding" (Mr. H, 1999).

The government feels that "while many of England's councils are actively tackling the need to review structures and methods, many have become out of touch and irrelevant to the lives of local people" (Management report, 1999). With IT becoming readily available, within reach of many organisations and members of the public and being flexible enough to deal with many different situations, this was held to be particularly important. The present government is also very interested to develop the potential of IT and the benefits offered by it. Also the Government's new initiative on 'best value' and other recent reports that conveyed similar messages made almost all the existing local authorities to consider change.

"Central Government funding is being reduced and this situation has made local authorities consider how to acquire additional funding and to make savings from the current amounts that they have. A review of the organisation was undertaken, and it was found that savings of at least £27 million were to be achieved in order to maintain their current position and to survive in the future. The results of the review revealed that additional funding could be obtained by utilising the property that case study already has in a better and efficient manner (by having flexible working practices) and also by selling certain identified properties within the county" (Ms. C and Management report, 1999).

Case study 3 conducted research and found that the residents of the county were not happy with the services being provided. For instance, if an individual required information about schools in the county, various individuals had to be contacted and there was still no assurance that the required information would be obtained. With technology being widely

available and being able to provide various different services to individuals, the organisation then considered a change that could be obtainable with the assistance of IT. For this the ideal was viewed to be a call centre which would be a central system allowing calls to be handled by a multi-functional group of people, rather than the present situation where questions were being unanswered since knowledge in the area is limited.

#### 4.6.2 SELECTING THE REENGINEERING TEAM

The original reengineering team that was responsible for the planning, designing and analysing the change consisted of approximately ten individuals, all retaining positions of high authority within the hierarchy of the organisation and belonging to various departments within the organisation. The team members were individuals whose decisions were carried out rather than waiting for approval from senior managers. The only approval sought was that of the Board. They were also responsible for providing reports of their discovery to a steering committee that consisted of members of the Board, who were elected members of the council. This team was unlike the implementation teams as this was a self-directed one that was formed for the purposes of determining whether BPR was actually the management change approach that was desirable for the local authority.

A corporate director within the local authority devised the plans for BPR and thereafter, sought approval from members of the Board. After a deliberation period, approval towards the project was given. Once the decision to undertake BPR was made, the next step was to form the implementation teams to undertake the project. The number of implementation teams that were formed varied between 8 to 10. In some instances, the teams were disbanded as soon as a task was completed. The process of forming these teams was a long one, as many individuals had to be selected since it was felt that this was not a job for one individual.

The implementation teams usually consisted of between 10 to 12 individuals. The individuals ranged from graduates, accountants, and holders of national vocational qualifications, certification received as a result of attending courses set up to improve the

knowledge and experiences of the individuals in the organisation. Rather than having a random selection process, and not providing anyone with the opportunity to express an interest in the occurrences of the organisation, advertisements describing the roles and responsibilities of the newly formed vacancies were placed within the departments. "Individuals interested in the jobs were asked to volunteer themselves and approach their managers" (Mr. G, Ms. D and Mr. K). "Once the volunteers made that step, the manager approached the Board. To complete the process, the Board was also presented with recent curriculum vitae of the candidates by the Human Resources department and asked for their opinions" (Ms. D, 1999). Once again, based upon the knowledge, skills and attributes of the individuals, selection was made. When examining the knowledge area, emphasis was placed more upon how familiar to the organisation and to their own departments were the individuals. This was the main criterion utilised. The skills that were looked for were team development, writing and presentation ones and the attributes were flexibility, diplomacy and dedication.

From there then, the managers were informed of the decision and appropriate measures to assist the individual were take. For instance, a majority of the team members were middle managers holding responsible jobs that required their full attention. To assist them with their daily tasks, they were provided with assistants or in other instances, secondments were provided. In other instances, special arrangements between the team and individual were made as in the case of the following team member. "I was asked by someone from the Personnel department whether I would be interested in being part of a team that was going to bring about changes within the organisation; however, I did not reply immediately. This was because I had to consider my other commitments. I am married and have children. So I had to ask what it would mean for me if I joined the team. After obtaining all the information, I had to negotiate about the hours and also what it would mean for my career" (Mrs. M, 1999).

This was an unusual organisation in that earlier training to undertake the project was not really provided, instead teams were formed and from the experiences that each individual had and the existing knowledge and skills were expected to undertake the project. When working for the local authority, individuals are expected to undertake training courses related to their daily

jobs. "I have achieved experience in the project management area by attending courses arranged by the organisation. There are local training centres and if the need for the knowledge about a particular specialised area is foreseen, then with the approval of the senior members of the organisation, an individual is sent for it. That is how I have also learnt about BPR and its impacts" (Mr. G, 1999).

Thus, if individuals felt the need to obtain more knowledge about the topics required to handle the project management side, they could have requested to go on a course that involved some of the issues related to project management or other areas that could have an impact upon the project. It was assumed that the members would have many of the team building skills since they were viewed to be experienced in their fields. As a result of this and the team devoting all their attention to project deadlines, an understanding of issues such as conflicts and not having a suitable balance in the team development occurred and this will be demonstrated in the proceeding sections.

The teams usually worked within their daily functional areas as it was felt that the individuals should be close to their daily tasks and attend to the duties from the project. "I am working on my usual position and am also working on the project. I would say about four to five hours within the week are spent on the project" (Mrs. M, 1999). "I am working in my usual job and attending to the project. I would not say a lot of time is spent on it. Probably only 2 hours per week" (Mr. K, 1999).

During the earlier analysis periods, external consultants were employed to assist the planning, analysis and design team, however, once that task was completed, they were also left out. Once again it was felt that the "members of the organisation have a better perspective about the desired changes than anyone else" (Mr. H, 1998).

#### **4.6.3 THE PROCESS CHANGES**

A number of core processes were identified at the early stages of the project (sometime in 1997). The initial planning, analysis and design team conducted this task with the assistance of

external consultancy firms. During the interviews it was mentioned that the organisation is utilising process mapping for the purposes of identification and further analysis and an immense amount of documentation regarding this has been produced. “We are using process mapping to identify the processes as that is the method that we are most familiar with” (Mr. H, 1999). The initial results of the analysis conducted in 1997 included an estimate of the costs involved in transforming the processes from their annual budget. Additionally, some support processes such as the people, money and Information Technology underpinning the core processes were identified, but providing an in-depth analysis about them was not an issue considered by the team. A report was compiled that included a description of the analysis as well as the impact of the expected change and presented to the steering committee. The core processes that were identified are described below:

- “Engaging and managing the democratic process,
- Generating information and intelligence about case study 3,
- Developing a statement of intent (of vision, direction and priorities across the County),
- Determining what to deliver and method of delivery,
- Monitoring and evaluating delivery.”

(Case study 3, Draft Report 1997)

#### 4.6.4 CONFLICT IN THE TEAMS

Conflict was an issue that was apparent within the implementation teams then any of the other teams formed during the project and was dealt with in the earlier stages of the project: “Towards the end, our attention was upon completing the project on time and all the conflicts that erupted were put on the side. In fact, we made sure that attention was not doted upon conflict” (Mr. H, 1999). Ms. C also agreed with this view. Mr. H attributed the ignorance to conflict due to less time being available and explained, “During the earlier periods, we could afford to deal with the issues. Deadlines were matters of concern, but not to such an extent.”

The interviews then attempted to determine the types of conflict in existence and it was found that they were task related more than personal ones and dealt with at the time they became apparent, rather than setting a day for the issues to be dealt with.

An example of conflict being dealt with at the moment was that between the Information Technology 'technicians' (providing the information base) not understanding the 'librarians' (the people looking after the contents base). The original intention was to have the two sides working together to form a suitable database that could be utilised easily by the individuals within the council. However, what occurred was that the two sides remained separate. Several attempts at mediation by the project manager were made and attempts to make the two sides work together as a team rather than two separate entities were made, but the target was not completely obtained. "Our intention was that the librarians and IT people should work together as a team. In other words, the IT people should have an understanding of the librarians' needs and how people would use it and so on. Similarly, the information people should have an understanding of the technology and how it works. We have not had that. We've had a sort of traditional "this is my speciality. This is what you told me to do, this is what I have done, and not "this is what we should have done" (Mr. H, 1999). Several attempts were made to overcome this problem and at the end it came down to getting on with the job and meeting the set deadlines. Therefore, conflict was not really well handled at this organisation.

Mrs. N, another member of the team was also asked whether there was conflict within the teams and she agreed that *conflict was evident within the teams and went on to describe the way that conflict was resolved*: "Normally, the conflict might be discussed within the meeting where senior officers of the organisation are also in attendance and the project manager chairs the meeting. After the conflict is discussed, the solution will be determined outside of the meeting. However, it has to be understood that we did not have any set days to resolve the conflict. We are not such a formal organisation."



#### 4.6.5 EMPOWERING THE TEAMS

The original planning, analysis and design team formed in 1997 was provided with a lot of power. The power designated to them was to scrutinise departments and their operations, and analysing documents held within the departments. This was a new phenomenon since previously, access was usually restricted to the individuals working within the departments. Therefore, prior to BPR, department heads usually interacted with members of their department and if interaction with individuals from other departments was required, prior permission had to be sought. As a result of the occurring changes, the ability to move around freely within organisations was allowed. This also meant that the individuals after deliberations amongst themselves, proposed changes that affected not only their departments, but the others as well. However, not all the proposed changes were accepted and this also proved to be a source of conflict between the Steering Committee and the team.

The newly found power and responsibilities were meant to allow the team to progress with the work at a much faster rate than if approval from the steering committee at every major point was required. As a result, targets were met and the team members were happy with the newly assigned responsibility. These members were individuals holding responsible positions within the organisation and were particularly selected for this particular trait. They were the ones who assisted in amending and forming some of the original vision of the whole BPR project. Empowerment was not a gradual process in this instance, instead as soon as the teams were formed, the individuals were informed of the new powers and expected to proceed with their newly placed responsibility and was undertaken rather well. This was determined by the results that were formed later on by the implementation teams.

With the implementation teams that were formed later, empowerment was a gradual process, compared to the earlier planning and analysis team. When the teams formed, they were informed of their newly assigned responsibilities and expected to undertake their work with this new form of power, there was a lesser role for the project manager. A particular example described to demonstrate the point was that of the training group. The manager who was

responsible for the training to be provided to the users was introduced to the implementation teams at a later stage. To assist the instructor in ensuring that the information being relayed was being received in the correct sense, extra powers such as a different form of thinking that was beneficial for the organisation and not to be constrained in any way were afforded. Initially, enforcement of the new forms of thinking at the time that the team was formed was avoided. Gradually it became apparent that the power was required and began to be employed. The new responsibility was particularly helpful when thinking of ways to relay the information from the training manager to the teams or expecting certain tasks to be completed. "Due to the nature of the project, I was afforded a lot of freedom when attempting to provide training to the individuals. The individuals I was training were novices and as such, I had to make sure that the message being passed was understood. To do this, I was allowed extra resources, in the form of software or hardware and whereas, previously, due to the budgets of the department, I was constrained. So now, I was doing something for the benefit of the organisation and so, a larger budget which allowed me more freedom in my way of thinking was achieved" (Mr.H, 1999).

#### 4.6.6 COMMUNICATION IN CASE STUDY 3

In order to determine the progress of the team, plan new strategies and review the existing ones, progress and strategy meetings were arranged. Fortnightly meetings to provide updates to the whole of the team were held. It was necessary for all the team members to attend. If it was not possible to do so, then prior notice was provided and updates of the work were sent to the team and in exchange, the team leader sent e-mails with the decisions and updates made in the meeting. "There were and currently are occasions when it is not possible to attend a meeting. In that case, I e-mail my results or updates of the undertaken tasks and when I return, I get e-mail updates or speak informally to the other project managers and senior members of the team" (Mr. G, 1999). Mrs. M also affirmed this and to emphasise her point, narrated an example "Recently, I have been inundated by reports to the department, and as a result, it has not been possible for me to attend the meetings. Instead, I have been in regular contact via the e-mail system within

the organisation.” The meetings are held for approximately an hour and within the project manager’s offices. The offices are located within the authority’s premises and are usually used for the purposes of holding meetings. As such, they are equipped with flip boards, that were used for purposes such as writing brief points, drawing diagrams, conference tables and chairs. Other meetings were also held to provide the steering committee with an update and obtain their feedback on their undertaken work. When a thorough analysis of the work was required, a day away from the organisation was organised. This was to prevent distractions from their daily jobs and to have a ‘change of scenery’.

It can be noted that this organisation’s methods of communication was different to the other 2 cases as the role of electronic forms of communication was emphasised and used, unlike the other two.

This discussion promptly ends the investigation regarding the findings of the various case studies that were undertaken for this research. The descriptions attempted to provide a complete and ‘rich’ picture of the findings and in the next section, a summary of the findings is provided. This also assists in fulfilling the criteria of the multiple case comparison strategy supported by Yin (1984) and cross-case patterns (Miles and Huberman, 1994). It can also be noted that by using the empirical results, the case studies were beneficial in providing the whole picture of the research, that is, theory and practice. This was also something that the research methodology aimed to do and completed by the results produced in this chapter.

#### **4.7 SUMMARISING THE FINDINGS OF THE CASES**

The results that have been discussed earlier can be summarised and illustrated in a tabular manner as shown in Table 4.1. This makes matters simpler and easier when looking for comprehensive results without going through each section.

Table 4.1 Analysing the issues regarding Reengineering Teams

	Case Study 1	Case Study 2	Case study 3
<i>Number of individuals belonging to the teams?</i>	8.	5 to 7.	10 to 12
<i>Mix of the team.</i>	Mostly male dominated, senior managers. The age ranges were between the late thirties to the fifties.	The team included nurses, clerks, doctors, therapists and managers. There were more females. The age ranges were between the mid twenties to the mid fifties.	There was a fair mix of both males and females in the implementation teams; however, the original team that was formed was more male dominated. "The age ranges of the team were from the thirties to the fifties. The youngest one was thirty six" (Mr. H).
<i>Educational Background</i>	Graduates.	There was a mix of graduates, individuals with national vocational qualifications and generally people with the experience of their departments.	Graduates, National Vocational qualification holders and other experienced people.
<i>Why were teams used for BPR and not individuals?</i>	"The processes go across a large area of the business and one person doesn't always have the understanding and expertise in every particular area. Therefore, a team is suitable for this sort of a project" (Mr. F). Mr. L. provided similar remarks "BPR is such a large task, that a team is essential." Production, sales, IT, finance or supply chain.	"The project was such a large one that it was not suitable for only one person to undertake it." (Mr. D) "One individual cannot handle such a large project, therefore, a team is essential for BPR." (Mr. B)	"There is too much work in a BPR project for only one individual and so we need a team" (Mr. H). "Yes that's right, it would be too much for one person to handle" (Mr. G).
<i>Departments the team members belonged to?</i>		Surgeons, human resource, ear, nose and throat department, accident and emergency departments and other medical departments such as, pathology.	Social Services, Education, Environment, Libraries, Corporate Personnel, Information Systems, Corporate Communities.
<i>Method utilised to select the team members?</i>	"Selection was undertaken on the basis of the tasks to be undertaken and whether the team members could work together" (Mr. P). "Additionally, the interests, values and personalities of the candidates and familiarity to the organisation were also	"Initially, much effort was made to ensure that team members represented a cross section of people who worked on the process being redesigned. However, as we moved to pilot the redesigned processes, we found that team members who had been seconded from managerial or clinical leadership positions	"Selection was made upon the basis of the knowledge, skills and attributes of the individuals. When examining the knowledge area, emphasis was placed more upon how familiar to the organisation and to their own departments were the individuals. This was the main criterion utilised.

	analysed. Amongst the personality criterion, individuals were assessed upon how well known to the senior members of the organisation were the individuals" (Mr. L).	were better equipped to help implementation. The key factor was the ability to influence and the confidence to work with (and challenge) senior colleagues across the organisation. Other important aspects included: skills in analysis and synthesis; commitment and energy; able to plan and organise own workload and use initiative and being a team player" (Wellins, 1995).	The skills that were looked for were team development, writing and presentation ones and the attributes were flexibility, diplomacy and dedication" (Mr. H and Ms. D).
<i>Was there a vision stated to the team? Who formed it and did it remain the same after the project or was it amended?</i>	A vision was formed by the Board and relayed to the team. At the end of the project it was found that the amended vision was approximately 80% close to the original vision. "I think that there was too much emphasis placed upon reducing the end costs and not enough on improving the end to end processes. So the team redressed some of that in order to get a balance. That was a discussion that took place between the team and the Board"(Mr. P, 1999). "Training in the areas of BPR, coaching and mentoring was provided" (Mr. L).	"The senior members of the organisation formed a vision. However, "many clinical staff found abstract discussions during "visioning" difficult to relate to the practicalities of providing patient services." "We were provided with a vision at the start of the project and as we went along, it was amended." (Mr. D and Mr. B).	"Yes, a vision was formed, but it was not formed by the team. It was given to us and then amended accordingly" (Mr. K and Mrs. N).
<i>Was there training and/or induction provided?</i>	"Training in the areas of BPR, coaching and mentoring was provided" (Mr. L).	Training in the areas of facilitation for instance was provided. For example, when providing training about facilitation, then there would be individuals within the team who would be observers, watching the actions of the team. Thereafter, they would provide feedback and the team would then examine their own personal developments through that in time (Ms. A).	"The organisation encourages training and education and so it was assumed that if there was any training required, it would have been attended to prior to the beginning of the project" (Mr. H).
<i>Was external assistance provided? The role that they provided and basis for selection</i>	"Yes. 2 external consultants from a consultancy firm that had been used before for other projects and had developed a rapport with were employed to provide information about the methodology to be utilised for the project and Project Management" (Mr. P).	Yes. The consultants were used more in a supportive role where they assisted in providing information about other BPR experiences, project management methodology, or if an external influence was required to provide a different opinion to top management (Wellins, 1995). "We used consultants in the initial stages since we did not have the information or experience to undertake such a large venture on our own. Later on it was felt	"Yes, we did have consultants, but they were used only in the initial stages. Thereafter, they were not used since we felt we could handle the situation" (Ms. C and Mr. H).

		<p>that they were not required because they may have the information, but did not have the knowledge to deal with the medical field" (Ms. B).</p> <p>Yes.</p>	<p>Yes.</p>
<p><i>Was conflict evident?</i></p>	<p>Yes.</p> <p>Task related but with some personal element within it. This was due to the different perspectives that department members had regarding the change. There were managers from different departments who were worried about the impact of the change upon their own departments. Subsequently, this caused them to disagree with some of the decisions made and caused minor conflicts. Conflict was structured.</p>	<p>“Personal conflict arose when individuals were moved from their key day-to-day roles” (Mr. D). There were also task related conflicts where the conflict arose when the suggestions made about a change were regarded by the individual team member as correct for their department, however, when the team analysis results were obtained, they contradicted them. This then displayed task related conflict. The conflict was unstructured, since there were no established procedures to solve the problems.</p>	<p>An example of conflict that was more task-related than personal was described.                  “There’s been a considerable amount of conflict between the librarians, the people who are looking after the content side of the information base and the IT people, the people who are actually looking after the design phase of the database and how it is going to operate, how the interfaces are going to look and so on. That is probably I have to say, an area where things went least well on the project as a whole, because the two sides have remained two sides” (Mr. H, 1999).</p>
<p><i>Were there any mediators within the team? Were they trained for this role?</i></p> <p><i>Conflict Resolution</i></p>	<p>No.</p> <p>Usually Friday afternoons were set to deal with the conflicts.</p>	<p>Yes. Mediators were present in the form of team coaches. These individuals were either experienced or trained to deal with situations causing concern, including conflict.</p> <p>The issues were dealt with by discussing within the team at the time of the incident.</p>	<p>No.</p> <p>“Normally, the conflict might be discussed within the meeting where senior officers of the organisation are also in attendance and the project manager chairs the meeting. After the conflict is discussed, the solution will be determined outside of the meeting. However, it has to be understood that we did not have any set days to resolve the conflict. We are not such a formal organisation.” (Mr. H)</p>
<p><i>Was motivation evident</i></p>	<p>Yes.                  “The team demonstrated motivation by continually driving to achieve their required outputs from week to week” (Mr. L).                  “I was motivated by the fact that whatever</p>	<p>Yes.                  “We were part of a project that was to be the first of its kind and the excitement and thrill of being part of that experience was motivation enough” (Ms. A, 1999).</p>	<p>Yes.                  “We have been completing the project on the set dates and that, I feel is a sign of motivation. For instance, if the project was delayed, then the team members would not be motivated enough since they would be continually working towards achieving</p>

	the consequences of the job, I was still going to have a job at the end of the project" (Mr. F, 1999).		the date that has passed and not feel a sign of achievement" (Mr. G, 1999).
<i>Types of motivation</i>	Intrinsic. The motivation was that the obtained results could lead to either a promotion or at least a return to their held jobs, which is something other individuals within the organisation, did not have.	Intrinsic. The project being undertaken was amongst the first of its kind. Being part of such an experience was viewed to be a major factor for promoting motivation within the team.	Intrinsic. With the project being completed on the set dates, a sense of achievement as well as recognition was obtained.
<i>How was motivation promoted within the team</i>	"Upon the successful completion of major milestones, the team was congratulated at the meetings by the senior executives" (Mr. P, 1999).	"Motivation was injected initially by giving the people the opportunity of looking at a situation in a completely different way. I think that enthuses people. I think that you don't get the difficulty of being motivated, but sustaining it is very difficult" (Mr. D).	"Being part of the BPR experience was my initial factor of motivation" (Mrs. N). "There was no motivation, it was a job that had to be done and I was part of the team" (Mr. K). "I would learn some new things from the project that I would not do in my daily job" (Mr. G). "Towards the latter part of the project, there was no question of motivation. We just had to make sure that the project was completed on time" (Mr.H).
<i>Was there trust within the team?</i>	"To be honest, I don't think that we ever mentioned trust. The team was interdependent and relied on each other to get the project completed. I mean some people trusted others more or less, that's human nature. It was never an issue" (Mr.F, 1999).  To ascertain that there was trust, Mr. P was also asked the same question and the reply given was, "Personally, I did not feel that I could not trust anyone. There was no reason for me to think that. So to answer your question, speaking for myself, I don't think there was any mistrust."  "The Chief Executive and Board had faith	"There had to be trust within the organisation for it take on board something like this. Acting as a pilot site meant that we could not be in any other situation" (Mr. D and Mr. B).	"The structure of the team was such that there was no reason for anyone to mistrust the other. We were all learning things and doing it together" (Mrs. N). "To my knowledge, there was no reason to think otherwise" (Mr. K).

	<p>and trust that the team would deliver. The individuals had been selected on that basis as well" (Mr. L).</p> <p>"Yes. Managers were provided with the opportunity to make central decisions at all the stages of the project. This is something that was not allowed to the members before the team" (Mr. M).</p> <p>"Empowerment was more evident in the results of the BPR project when sales managers were empowered with laptops that provided them with the information to allow them to make decisions almost instantaneously"(Mr. P).</p>	<p>Yes. The team members were provided with more insight into the operations of the organisation. By doing so, they were able to question whether the appropriate ways are being applied and if not, what should be done. This was a change to their previous roles as they did not have the authority to question anything, air their views and attempt to find solutions for the improvement of the organisation. Instead, they had to do as management or senior managers wanted.</p>	<p>"Yes. The original planning, analysis and design team formed in 1997 was provided with a lot of power. The power designated to them was to scrutinise departments and their operations, and analysing documents held within the departments. This was a new phenomenon since previously, access was usually restricted to the individuals working within the departments. Therefore, prior to BPR, department heads usually interacted with members of their department and if interaction with individuals from other departments was required, prior permission had to be sought. As a result of the occurring changes, the ability to move around freely within organisations was allowed. This also meant that the individuals after deliberations amongst themselves, proposed changes that affected not only their departments, but the others as well" (Mr.H).</p> <p>Communication was used in the teams as a means to provide updates on the project and as a means of resolving conflict. The means of communication were usually oral (face-to-face) and the usage of e-mail facilities.</p>
<p>Was empowerment evident? How?</p>	<p>Face to face meetings were held every 4 weeks when progress to the management was to be given. Otherwise, the team worked in one place; therefore, the role of e-mail and other forms of electronic communication was not evident. Instead, face-to-face communication was established. However, to ascertain that the team was receiving the intended message, there were open panel discussions held and questions posed.</p>	<p>With the establishment of reengineering laboratories, the team was located in one place. The room was equipped with boards, slide projectors and other forms of visual aided displays. Presentations were made and questions were asked of the audience and vice versa. Thus the major form of communication was the face-to-face one. Once again, the use of electronic forms of electronic communication was limited since there was one place where the team worked at.</p>	
<p>What was the role of communication and type of communication methods utilised within the team?</p>			



#### 4.7.1 DISCUSSING THE FINDINGS REGARDING THE REENGINEERING TEAMS

To demonstrate that all the areas of interest were investigated and to define the similarities and differences between the organisations, Table 4.1 was formed. In it the various areas that have been discussed in this chapter were presented. The difference between those results and the ones included within this table are that the chains of evidence—the quotes provided by the respondents have been used to describe the findings from the cases. Also illustrated within the table were the various types of conflict and motivation existent amongst such teams as investigating and determining the human aspects were part of the objectives of the research and as such had to be included within the interview questions. The different respondents used for the research's views are also demonstrated and clearly illustrates the employed investigator triangulation.

Additionally, it can be seen that the team demography results are presented and illustrated in a clearer manner. When defining the term 'demographics', researchers usually refer to the definition of group demographics and the same is done in this instance. "Group demography is the degree to which members of a group share a common demographic attribute, such as age, gender, educational level, or length of service in the organisation and the impact of this attribute on turnover" (Robbins, 1996).

The teams in cases 1 and 2 had more of a single gender. For instance, case one had more males, whilst, case two had females. Case study 3, however, had a fair mix of both males and females and this was particularly evident in the implementation team. The original team in case 3 had more males than females. The age ranges were between the twenties to the fifties and they were people who were experienced at their jobs. The impact of the teams on turnover was to increase productivity by reducing costs and increasing or improving services. For instance, in case study 1, Mr. F commented that costs had been drastically reduced and the other respondents, Mr. P, Mr. L and Mr. M shared this view. In all three cases, the method for selection was the knowledge, skills and attributes one. It can also be seen in Table 4.1 that the teams had a certain air of trust and from the interviews it was noted that the teams in all three

cases were of a co-operative nature, thus explaining the reasons for the success of the teams and the eventual project (in the instance of cases 1 and 2).

The cases also demonstrated that the individuals belonging to the teams were experienced individuals. The organisations also had an original vision developed by an individual in a high position within the organisation, who then put forward plans to the board and after receiving the appropriate approval, prepared to get them into reality. This also demonstrates that the projects were a top-down rather than bottom-up approach. Unlike the previous organisations that seemed to be organised in dealing with issues such as conflict and empowerment, case study 3 lacked that discipline.

#### 4.8 SUMMARY

The chapter began by describing the process followed by the research in undertaking the pilot study. Thereafter, details of the research process followed for the case studies were provided. From the discussions, it will become clearer that a couple of pilot studies as well as case studies were used in the research. The pilots assisted in refining the interview techniques as well as the questions, consequently their results, due to some prior reasoning, were not used in the data analysis. The 3 cases that were used in the investigations were 3 large organisations, each different in nature and 2 of the 3 cases were historic, whilst the third was a project currently being undertaken.

The data that was collated was in qualitative terms and when 'raw' was not of particular assistance to the research. Consequently, categories or themes were formed and it was then sorted accordingly and the results of the findings are provided in the chapter. The following chapter will draw on the case study findings and analyse and discuss in detail how the obtained results will be helpful in obtaining and extending the existing theory. This should also allow the research to reflect upon the results and determine areas of further improvement in the future.

## 5 DATA ANALYSIS



# 5

### 5.1 INTRODUCTION

This chapter draws on the findings of the case studies described in the previous chapter. Data on its own does not provide any purpose except to demonstrate what has been found in practice. Data analysis is the opportunity to reflect upon the *theoretical and empirical issues* that have been found in the research. To provide some meaning, and purpose to the collated data and to contribute to the research area, a theory needs to be developed. This will be beneficial in the long run since there will be some basis upon which future research can be undertaken upon.

Chapter 4 described how the case study method is undertaken and provided descriptions and discussions of the three case studies that are utilised for this research. This chapter presents an analysis of the results obtained from chapter 4 using the methods mainly proposed by Yin (1984) and Miles and Huberman (1994).

The chapter begins the analysis using the themes formed from chapter 2 and so the first section following this investigates the reasons for undertaking BPR. The analysis is not complete by discussing only the empirical results from each case study, rather following that is a theoretical analysis and comparisons between theory and practice are drawn. To conclude the chapter, summaries of the analysis are presented in tabular form in Tables 5.1 and 5.2.

## 5.2 ANALYSING THE CASE STUDIES

To analyse the qualitative data, the method of within case analysis (Yin, 1984) coupled with cross-case patterns (Miles and Huberman, 1994) was employed. The reasoning for these methods are presented at this point, however, the results are illustrated later within the chapter. In within case analysis, detailed case study write-ups are stated and from the descriptions, a familiarity with each of the settings is provided. This has already been achieved in chapter 4 where it can be seen that descriptions of the settings and the processes that have been undergone for the formation of the reengineering team were provided. By doing so, unique patterns of each case are allowed to emerge before generalisations of patterns across cases are stated. Therefore, questions pertaining to the *how* and *what* of issues are brought to the attention of the researchers (Denzin and Lincoln, 1998). Additionally, researchers are provided with a rich familiarity with each case, resulting in an accelerated cross-case comparison (Eisenhardt, 1989) and these results are presented in this and the following chapter.

It was seen that these write-ups are purely descriptive, but they are central to the generation of insight. For instance, the description about the preparation and selection of teams was presented. In this chapter, by conducting a within case analysis, (in the following later subsections) an acquaintance with each of the settings is made and rather than providing just a generalisation, particular aspects unique to each case are found.

The next step when following the within case analysis is to search for cross-case patterns. For this, a couple of options also exist. One option is to select categories or dimensions and then to find within group similarities and differences. The second is to select pairs of cases and to

determine the similarities and differences between the pair. Third, divide the data by source of data. For this research, categories that were common to all the case studies were formed and used to analyse the data. To some extent this has already been achieved in chapter 4 (in Table 4.1), however, an in-depth analysis is provided in Table 5.2. The purpose behind this strategy is to make the researcher aware of the results that can arise as a result of utilising different types of data. The ultimate purpose of this strategy is to force the researcher to look beyond the data that is just described and look for more information. This way the possibility of more reliable and accurate theory is increased and a theory that has a better match with the data can occur (Eisenhardt, 1989).

To confirm that Yin (1984) and Miles and Huberman's (1994) strategies are compatible to the work of other researchers who have investigated case studies, particularly in the information systems area, a comparison was undertaken and the following views were obtained. Benbasat *et al* (1987) suggests that when employing case studies as a research method, both the contextual and data richness of the study should be provided. When analysing the data, Benbasat *et al* (1987) state that the data analysis should consist of "clear chains of evidence" to support the interpretations and that the interpretations should be defensible. Chains of evidence are shown by the remarks placed in quotations and obtained during the interviews (as shown in chapter 4). By including the responses in quotes, the research demonstrated the exact nature of the results of the data collection techniques and illustrated that the responses were actually received and are not the researcher's interpretations and demonstrated the data richness of the research. To assert that the correct interpretations from the interviews had been obtained, the method of triangulation was used. The contextual richness has been provided with the in depth descriptions regarding the formation of the teams, the development of the teams, the constructs and the information regarding them that has been developed.

### 5.3 AN INTRODUCTION TO DATA ANALYSIS

As stated earlier, categories assist in analysis and that was a major purpose of this chapter. Additionally, chapter 3 described how an interpretative approach amongst the other approaches underpins the qualitative analysis in this research. When employing this approach during the data analysis stage, it becomes clearer that data analysis results are the outcomes of the researcher's interpretations of the other individual's interpretations of the actual phenomenon studied. Walsham (1995) asserts that "interpretative researchers are not saying to the reader that they are reporting facts; instead they are reporting their interpretations of other people's interpretations." Walsham (1995) also states that data analysis should detail "how the field interviews and other data were recorded, how they were analysed, and how the iterative process between field data and theory took place and evolved over time." In the following sub-sections, different issues are examined. The means of obtaining the information for each of the different categories or issues is provided. This was done to allow the reader to obtain an individual feel of the iterative process involved in obtaining the data.

Therefore, from the results of the interviews, the following interpretations according to the understanding obtained from the research are provided.

#### 5.3.1 THE REASONS FOR UNDERTAKING BPR

As stated in chapter 2, organisational change has been categorised in several themes, one of them being the context within which organisational change occurs. To determine this question, the initial questionnaire attempted to ask respondents about the reasons for adopting the BPR approach, however, this was undertaken in a brief manner.

Since initially, the focus of the research was only on understanding the human and organisational aspects within reengineering teams undertaking BPR, there was not a lot of emphasis upon this question. However, it slowly became the focus as the research became more intense and it was revealed that it was also imperative to understand the context within which the approach was undertaken, consequently, the question was added. This was an important

factor of consideration that also became apparent particularly when questioning some of the organisations.

Case study 1 was the initial organisation to emphasise this point when the research began. When the initial interview was begun, questions regarding the respondent's position and the type of BPR that was undertaken were posed. However, Mr. A immediately put a suggestion forward. "To understand the BPR that was undertaken, the reasons for undertaking BPR is necessary, otherwise there will be no understanding provided."

Mr. A recommended that an overall impression about the reasons leading to BPR would provide a better and more suitable answer rather than any of the previously asked questions. This recommendation was heeded to and the strategy was applied when interviewing individuals in case studies 2 and 3. It was found that an accurate and complete view of the way that BPR was undertaken was obtained.

It has to be noted that as stated in Chapter 4, the pilot studies were used to refine the interviewing technique and form of questions, thus, the previously mentioned point of obtaining BPR was not particularly emphasised. This also shows how Yin's (1984) reasoning of not allowing the pilot to assist in analysis is upheld. From the findings of the MIT 90s program (Scott-Morton, 1991) it was known that both internal and external factors were reasons for the implementation of BPR, however, the results of case study 1 initially displayed these views.

The issue that external factors lead to the consideration of BPR was further strengthened when the other two case studies also came up with similar results. However, in the cases of case study 2 and case study 3, organisations that are semi-publicly owned and fully publicly owned, the reason for the implementation of BPR was also an external factor, but, of a different nature. In this case, the funding provided to the organisations had made the organisations to examine themselves carefully and consider ways of stretching the funds or think of some radical alternative. Also, the service being provided to the patients (in the instance of case study 2) and members of the public (case study 3) was not up to its potential, therefore, better solutions were being searched for.

From the provided explanations, it can be observed that external factors were the main reasons for organisations to undertake BPR. These in turn made the organisations examine their internal operations. On its own, the data that was recorded and transcribed was not of a substantial value. To determine the relevance of the empirical evidence to theory, reference to the theoretical foundations provided in chapter 2 was constantly made. This also allowed the opportunity for the development of some theoretical concepts and categories to occur. Further explanations of the analysis techniques are provided in Appendix H.

### 5.3.2 PROJECT MANAGEMENT IN THE CASE STUDIES

Project Management skills and knowledge of the area have been viewed to be central in any project and determining this issue was vital to the understanding of the research. Having good estimation and planning skills are usually emphasised for a project. Initial responses from the respondents placed more emphasis upon the projects being completed within the stated time periods and that was the end of the project management issue. Due to this then, it became difficult to ascertain the exact constituents of the project management area that could be found within the business process change. The questioning then used an alternative and asked what project management skills and subjects could be established in their projects. The form of questioning used was as follows. “What would you say are the project management techniques that assisted the project?” to “Was there a lot of planning and estimating used in the project? Were all the estimated time scales obtained at the stated time, or were extensions sought?” Thus by changing the wording of the questions from a wide spectrum to a narrower one was viewed to be more appropriate when obtaining such answers.

All 3 organisations attributed this to good management of the project as a result of excellent planning and estimating skills. Also the organisations referred to their team members having project management skills and viewed that as a critical factor for tasks required in the project. The respondents also noted that due to the nature of the project, project management skills such as planning, and estimating ensured that adherence to strict deadlines was achieved



and this resulted in the team members being congratulated on a face-to-face basis by the management.

The organisations were particularly conscious of deadlines and adherence to it. This was due to the nature of the business that they were in and the time limits established by the amount of spend available. Rapidly changing markets and customer demands changed at a fast pace (in the instance of case study 1) therefore, deadlines were of the utmost importance. In the instance of case study 3, the funding available was limited to certain durations, thus it had to make sure that the work was completed within the required time limits.

Case study 2 on the other hand used project management skills, but due to the nature of the organisation did not place great emphasis upon achieving deadlines. "Of course, we paid attention to plans and estimates, but they were not the ultimate objective of the project. Our aim was to provide a better and good service to the patients. We were aware of the deadlines and attempted to reach them at the stated times, however, that was not our greatest concern. Our concern was to ensure that no human lives were lost" (Mr. D, 1999).

When asked about the implementation and duration of the projects, the respondents replied that the projects were on time and deadlines were not sought. "...Generally speaking, we never really got out of control on the plan. However, I do think that a project such as this one requires strong project management disciplines"(Mr. P). "We are right on schedule, but it has been hectic getting to this stage. In fact we had to ignore issues such as conflict while obtaining this. There was no time to sit down and go over any problems. All we had to remember were the dates stated for completion" (Mr. H, 1999).

The emphasis upon deadlines could also be attributable to the fact that the original reasons for change were caused indirectly as a result of competitors being viewed as obtaining a stronger position in the market. Therefore, if delays were evident within the projects, then competition could gain the upper hand and have a larger market share. Consequently, the position an organisation had occupied once in the market would be more difficult to obtain than even before. This was particularly true in the instance of case study 1. Alternatively, it could be that the deadlines were adhered to due to ensure that some other development could not occur.

This was important in order to avoid any reduction in the client bases. Case study 1 explained “if competitor X comes out with something better than ours and the benefits are shown to the customers, than our customers will try it and in the end, because our project is not on time, we loose out” (Mr. P, 1999). Thus, any delay produced a gap that could be filled by the competitors rather than the organisation itself.

In the instance of case study 2, speed to introduce the change is of the essence due to the nature of the work that it is involved in. Since the organisation is a large and reputable hospital, patients and their health are the questions to be dealt with, so delivering a project on time was critical to the task at hand. Additionally, limited funding was provided for the project and therefore, the implementers had to be sure that the project was completed within the specified periods and within the stated amounts.

Case study 3 stated that speed and observing deadlines were critical due to the funding that was available. An observation also made by the researcher is that whereas, case study 1 was answerable to only its shareholders, who were private individuals, case study 3 was responsible to two sets of bodies. First, the government that provided funding and second, the members of public that it serves. Thus, having two important bodies that are quick to question every move and action made by the organisation could be a major factor for the organisation’s adherence to deadlines. Thus, the stakeholders of the project could also be a contributing factor to this reason.

As Morris (1996) found in his research, positive attitudes were particularly essential for the completion of the project. In the 3 case studies, the project managers also displayed signs of positive attitudes towards the project. This was evident from the replies received in the interviews. Additionally, when other members of the team were spoken to about the project, they replied that they were quite enthusiastic about the project at the time and were pleased with the obtained results.

Morris (1996) also cited other factors that require consideration when implementing a project and they were also evident. When the respondents were asked questions regarding the project, issues such as the project being on time and adhering strictly to deadlines, being within the allocated budget, and being well planned were the answers that were received. It is also well

known in the project management area that a well-managed and planned project obtains a successful outcome (Yeates and Cadle, 1996). The respondents emphasised during the interviews that the undertaken projects were successful.

The data revealed that project management was a critical area to consider in the organisations and issues such as ensuring that the projects were on time and within the allocated budget were considered important. That is, if the planning and estimating techniques obtained time scales that were unrealistic, then the teams would have displayed poor results in terms of motivation and conflicts and that was not particularly evident within three of the case studies.

Additionally, the issue regarding the vision is another topic of the project management area and considered to be an important factor to consider within a project. The formation of a broad vision into which the redesign activity fit and clearly stated objectives are essential for BPR (Davenport and Short, 1990). The respondents stated that a vision was formed in the initial stages of the project by the senior members of the Board and was undertaken prior to the formation of the team. This activity was viewed important for two purposes. First, it relayed the thoughts of the senior members to the team, thus being viewed as a communication medium between the team and Board, and second, it was a means of finding out about the changes required by the organisation. The original vision was viewed to be unrealistic since it focused upon the external factors without consideration to the internal workings of the organisation. For instance, in case study 1 it was noted, "The Board, who were the developers of the original vision considered it to be realistic and rational. However, I think that the team thought that there was too much emphasis placed upon reducing costs and not enough upon improving the end-to-end process. So we redressed some of that to balance. For this, there was a discussion between the team and the Board" (Mr. P, 1999). The other members of the organisation expressed similar views.

In the other cases as well, the vision was relayed and the team expected to undertake work accordingly, but again they were amended to become closer to realism. However, from this analysis it can be deduced that a vision has to be initially formed, but, it is not necessary

that it will remain as originally intended and the vision has to be realistic and flexible. This is an observation also made by Davenport (1993) and this research affirms that observation.

When issues such as quality were mentioned, the respondents replied that the success of the project should have relayed that. The documents that were also referred to, such as the reports published after completion of the projects displayed similar results. Additionally, attempts to determine what software or manual applications were used for project management or to demonstrate the results of adhering to deadlines and the other issues were undertaken. This relates to determining the appropriate planning and estimating methods. The replies received in cases 1 and 2 were that planning packages such as MS Project were used. The reasons for the selection were not provided apart from stating, "this package is on our systems and that is why we make use of it." When visiting case study 3 it was observed in the allocated office space that there were posters regarding PRINCE (**P**rojects **i**n a **C**ontrolled **E**nvironment). This is a package that is commonly used within the project management area and it was found that case study 3 had made the maximum use of it. This also verified once again the emphasis upon project management by this case. An issue not found within the other organisations.

### 5.3.3 ORGANISATIONAL CHANGE IN THE EMPIRICAL RESULTS

Early theorists in the BPR area supported the view that the roots of BPR lie in organisational change amongst the other fields. The researcher aimed to determine this issue utilising some of the models described and discussed in chapter 2. The transcribed notes produced, validated that organisational change had occurred. Although the research had to determine whether organisational change had arisen, the ultimate aim was to describe which particular model of organisational change could be found in practice. That is, the difficulty lay in attempting to determine which one of the models is applicable to a particular organisation. When the respondents were asked whether organisational change had occurred, all replied affirmatively to the question. When further questioned about the type of change, the respondents indicated that a radical change had been undertaken.

However, the interpretation of radical change according to the theorists and that of the practitioners differed. For instance, Sadler (1995) established that a radical change also obtains large numbers of job losses within the organisation. After the interviews the impression obtained was that significant job losses did not occur. In fact as Mr. P of case study 1 noted, “the job losses that occurred during the period that BPR was undertaken are no more than usual.” Case study 3’s Mr. H also observed, “for the amount of change likely to occur, the numbers of job losses are minimal in comparison.” Ms. D stressed “our organisation’s main aim in addition to change is to obtain as little damage to the people working for it. Thus, we attempt to make sure that there will be as few job losses as possible.” Therefore, a contradiction to theory is already evident. However, these findings should also serve a dual purpose in that when an organisation proposes the undertaking of BPR, the initial fears that the workers have is that there will be job losses and this results in fear and resistance amongst them. With the views expressed by the respondents, such a reaction will not likely occur and therefore, feelings of fear and resistance should be reduced.

To determine which of the change models are applicable to an instance, the respondents were described the three steps of Lewin’s model and asked if that would suit the change undertaken in their organisation. Mr. H from case study 3 readily agreed that the steps described by Lewin’s model were applicable to the changes occurring within their organisation. With the other cases the research had to determine from the replies whether the model was applicable or not. This was because many of the respondents replied to say that they were not familiar to the model, but from the provided descriptions, felt that the incurred change was indeed that described by the model. These case studies once again illustrated to the research that the questions should not be too tightly construed to theory as people have different backgrounds and it could be that they may have not come across some of the theoretical concepts and categories suggested by the research.

To determine the role of the teams, at what point were they required and the type of change, the questions were posed in the following way. “Did the organisation feel that a change was required?” “What changes were required?” “How did the organisation prepare for the

change?” It was at this point that the role of the reengineering team emerged. Thereafter, the questions asked about the changes that the organisation underwent for the team. What preparations did the team and the organisation have to undergo in order to form the required team.

From the replies, it was also concluded that some of the steps described by Galpin (1996) and Kotter (1995) were applicable to the changes encountered by the organisations. To determine which one is applicable then, different ways of inquiries were utilised. Questions regarding the way that change was introduced, what particular aspects were emphasised, were employed. From the obtained replies, the following observations were made.

A point regarding Lewin's model is that the original three steps are applicable to a particular situation, however, particularly, the third step is not upheld for a long time. Change is viewed to take place on such a fast and continuous pace that an organisation also has to consider implementing change at the same sort of a rate. Consequently, the last step of refreezing is undertaken for a short time period before, the action of unfreezing occurs again. Lewin's model only indicates the processes that an organisation undertakes. To obtain an overall impression, it was observed that Pettigrew and Whipp's model would be more suitable as it allowed the research to ask questions such as “what led to BPR being undertaken, in what context, and how?”

#### **5.3.4 THE ROLE OF INFORMATION TECHNOLOGY IN BPR AND THE REENGINEERING TEAMS**

In chapter 1, it was seen that the supporters of BPR, Davenport and Short (1990) and Hammer (1990) both foresaw a critical role for IT in obtaining BPR. This question was also asked of the respondents. In case study 1, only when implementation of the teams' results occurred, did IT make an impact. However, in the initial stages of design and analysis, there was a minimal role for IT. Mr. P however did emphasise that IT does have an enabling role in BPR. “IT as IT's main role was to enable the change. That is, by provisional of informational functionality of systems. I mean for example, we would not have been able to do e-business if

it wasn't for significant changes and developments in IT. However, there was no main role within the workings of the team for IT. As I have just said, it was later on as an enabler of change, that its role became evident." This then showed that within the regular tasks of the team in analysis, design and planning, there was little use of IT. When Mr. L of case study 1 was asked the same question, he was quick to agree that within the regular jobs of the team, there was minimal use of IT. Case study 2 also displayed similar results, but it can also be noted that Mr. D said "IT has a critical role for BPR. We would not be able to get on with work." At the same time he said that there was "little use for IT in the team." When Mr. B was asked the same question, he replied to say "there was no use of IT because our change was a complete process change with little emphasis being paid to IT."

These observations then contradict the views held by both Davenport and Hammer's with regards to the fact that IT is essential for BPR. This is because the reengineering team does not require the assistance of IT. Instead the replies illustrated that when investigating the exact role of IT in BPR, clarification regarding the role of IT was required. For instance, it was found by the research that although IT has an enabling role within BPR, it does not have an enabling role within the tasks conducted by the reengineering team. Nonetheless, this does not mean that the established researcher's views are incorrect. When Davenport and Short (1990) examined the role of IT they described in their article the various roles that IT has to play and from the obtained results, some of them appeared to be confirmed.

Case study 3 in comparison to the other two made more use of IT and affirmed that IT had a role in BPR. "We have used e-mail facilities to keep in touch with one another, the methodology of PRINCE for project management and have found IT beneficial for our work" (Mr. H, 1999). However, on the basis of the research results, it was found that Leavitt and Whistler's (1965) model or the MIT 90s framework was not particularly applicable to the BPR approaches undertaken by these cases, as technology did not have an enabling or critical role in the BPR projects. On the other hand, it was found that the other factors such as task, processes and people had a larger role to play when obtaining the change.

### 5.3.5 TEAM SELECTION

As already mentioned, a team cannot be formed on its own, rather there is a process involved in its formation, the most important one being the selection of the team. When this question was posed, the respondents replied to say that selection was nothing very difficult as individuals were selected based on their knowledge, skills and attributes. "Well, selection was based upon the knowledge, skills and attributes criteria" (Mr. P, 1999). "Selection was based upon the knowledge, skills and attributes criteria" (Mr. H, 1999). When queried further about the knowledge, skills and attributes that would be best for the reengineering team, there were no definite replies received. Instead, the least information regarding the question was provided. In general, the 3 cases respondents stated that with regards to the knowledge aspect, the chosen respondents had to have knowledge about the organisation and their own departments. The respondents also stated that psychometric testing was not utilised during the selection process. This was because the organisation felt that it was not correct to categorise individuals and make a selection based upon that. It was also evident from the results that the selection of the team was considered to be a major decision that could not be undertaken on a light basis. That is, an officer or senior member of a department could not decide upon a suitable candidate. Instead, the approval of the Board as with other major decisions was sought.

As a matter of interest, case study 2 was the only organisation that was informative about the issue regarding psychometric tests and has made use of the tests after the selection process was made. Psychometric tests were employed once the teams formed and there were dual purposes to the tests. The first was to relay to the team members the message that each of the individuals has certain traits that they already have acquired and if applied in the appropriate manner they could be made stronger. The tests also identified traits that individuals required to have developed and built upon.

Case study 1 employs psychometric tests at the time individuals initially join the organisation, and thereafter, there is no more use of it.



During the interview, the respondents were not very comfortable with this question and asked for clarifications to be provided. It was also pointed out, "The selection process is not an issue that warrants attention and causes concern to the organisation. It is just done" (Mr. P, 1999). This is also where the role of Hermeneutics became evident, particularly, Heidegger's notion of being-in-the world (Introna, 1997). However, as this was for research purposes, the respondents reflected upon the applied strategies at the time and gave their replies. In some instances, the answers were supplied without any hesitation. On the other hand, some were cautious and worried about the provided replies.

The management made the decisions regarding appropriate and suitable team members but with the cooperation of the human resources department. Team selection began as soon as it was discovered that a business process change was to be undertaken. As a process change was a large task, it was felt that a lone person would not be able to handle the task; therefore, the decision to form a team was taken.

None of the organisations stated that a stakeholder analysis had been conducted, contradicting Davenport's suggestion. The organisations were aware of the term stakeholders and did not elaborate how they were identified, but stated that they knew who the stakeholders were. There was no process involved in that. The stakeholders in their views were mainly, management and to an extent, the clients, but it was stressed, only, to a certain extent.

However, similarities to Davenport (1993) results were found in that the team was a cross-functional one and represented the different functions that were going to be affected by the change. The team also consisted of individuals who were familiar to the operations of the business and held senior positions within the organisation, therefore also supporting the view that candidates with sound business judgement and openness and the ability to synthesise information from multiple sources was found. That is, by holding senior positions, the individuals were familiar to the operations of the organisation and knew where to go and whom to contact for further information.

### 5.3.6 EMPOWERMENT IN THE REENGINEERING TEAMS

Wellins *et al* (1991) described empowerment as an instance where power goes to the employees who then experience a sense of responsibility and ownership and is a condition often associated with teams. That empowerment is associated with teams was certainly observable in the case studies. It also has to be understood that this occurred as an incremental procedure that was not very easily taken upon by the team members. An example of this is a view expressed by a respondent in case study 3, "Empowerment was certainly there, but it was not something that was discussed in detail. We were used to the tasks involved with our daily jobs and in the instance, of say, my job, there is more supervision of the department, so there is some decision making that I have to do on my own. However, there were some who did not have such roles in the organisation and were more used to dealing with the task and not questioning anything. In that case, when they had to make more important decisions, they had to be guided about this and for some, it was rather difficult a job." Therefore, in this example it was shown that empowerment is certainly evident in such teams, but it is not such an easy responsibility to impose upon or receive.

From the transcribed notes it was revealed that the team members had to be familiarised to the new way of thinking and also that there were boundaries drawn that allowed team members to be certain of the amount of powers that they had. It was also made clear that empowerment was not just placed upon the team members. It was a well thought process where individuals who were viewed to be capable of taking on the new responsibilities were allocated the new power. As mentioned by both Mr. L and Mr. P in case study 1, "the individuals who had the empowerment were able to take it on because they were all senior managers who had the experience and responsibility to carry out the newly allocated roles and responsibilities." This supports the view supported by Wellins *et al* in that the power allocated to people in lower positions cannot be indeterminate and confirms the issues that Randolph (1995) clarified regarding empowerment. An added point from the case studies is that all the individuals did not

readily accept the newly allocated roles and this was especially found in case study 1: “If they could not handle the newly added responsibility, they left” (Mr. P).

Once empowerment occurs, there is a change in the role of the project leader. Prior to empowerment, the role of the leader is viewed to be a traditional one where orders are placed upon the team members and roles and responsibilities were allocated according to the leader's commands. As empowerment appeared, the role of the leader changed slowly to becoming advisor, facilitator, guide, and team player. The leader's role then became prominent only when conflicts in issues arose or there was an air of uncertainty about certain issues and the guidance of an experienced individual was required. Even then there was not a dominant or authoritarian role-played, instead more of a negotiating or consolatory role was evident. The transformation that occurs as a result of empowerment was observed by in all three cases.

When discussing this issue, attempts were also made to determine the overall organisational structure of the organisation. This was in order to ascertain how easily or problematic was the introduction of empowerment. An interesting point was discovered then.

Case study 1 is in the process of transforming from a hierarchical organisation to a leaner organisation that could operate more efficiently and effectively in the present times. If the web site is investigated, a description of the hierarchy that exists can be obtained. However, it can be seen that the organisation also promotes a culture where training and education are at the forefront and this can also be inferred from their web pages.

Case study 2 is a traditional organisation with many layers of hierarchy. This was attributed to the fact that the organisation has been in existence for many years and many roles and responsibilities are required to fulfil all the tasks within the organisation. Despite this, the organisation does encourage education and training within its workforce and does spend a lot upon this issue. It also makes attempts to provide its workers with the utmost when working upon projects. This was inferred from the establishing of “reengineering laboratories” and from a visit made to the organisation. One of the respondents who had worked in a totally different area of the organisation was informative about the issue of psychometric test and also told the

researcher about current research being undertaken with Belbin to establish the role of these tests within teams.

Case study 3 on the other hand, is a traditionally hierarchic organisation that is attempting to obtain change with the least amount of distress to the workers. That is, it is fearful of getting any situations of job losses as a result of the new change. The organisation also encourages training and education, however, in the case of this project, it was assumed that since the selected candidates were experienced they would have the knowledge and skills to handle the project. "A lesson learnt from this experience is that I should have attempted to find out what individuals from the team require project management and should have got them trained or provided with some experience in it" (Mr. H, 1999).

What these details about the organisation also showed is that the organisations that spend on training and education and are attentive to the needs of their workers are more likely to have an understanding of the problems that could be encountered when introducing change. Consequently, they take measures to eliminate them.

Due to empowerment there was a change in the tasks, roles and responsibilities of the team members. Whereas, previously, the tasks of the team members could have been related to accountancy, auditing, customer service or management. The tasks were transformed to deal with analysing the operations of the organisation, gain an understanding and designing the new forms of the processes.

What the results also revealed is that organisations are aware that empowerment is required and is not easily obtainable. Instead, organisations do have to invest in the preparation of this newly bestowed power. Also found was that whilst there may be some individuals who may have experienced similar situations (of decision making), there are some who have not experienced anything similar and for such individuals, it is quite an intimidating situation.

### 5.3.7 COMMUNICATION BETWEEN THE REENGINEERING TEAMS AND THE ORGANISATION

Communication was viewed to be an important factor for both BPR and the operations of the reengineering team. All the respondents within the studied cases agreed that communication was a vital component from the initial stages that the organisation was prepared to begin accepting the impending change to the final stages of the project. Each of the organisations had many similar strategies in order to communicate. That is, leaflets, and weekly newspapers were published at the time and distributed within the organisations.

Communication also took place during organised workshops where the team members undertaking the BPR discussed and described the proposed changes and sought feedback from their colleagues. In case study 2, the organisation pursued an aggressive communication programme and made sure that every member within the organisation was made aware of the impending changes. This was achieved by ensuring that the envelopes that contained the wage slips included an update upon the project, thereby ensuring that every member of the organisation was receiving the maximum amount of information. Case studies 1 and 3 followed similar strategies in communicating the message of change as both of them used leaflets, newspapers, meetings and workshops to keep both their workers and clients informed of the impending and occurring changes. This was also confirmed by obtaining copies off the leaflets and distributed newspapers.

When asked about communication, the replies were provided without any hesitation. In some cases, answers were provided without questions about communication being posed. On the whole, the respondents viewed this as a very important issue that should not be ignored. The respondents were all very informative about the area and that was displayed in the enthusiasm displayed when the question was posed.

The data revealed that communication was an important element both to obtain the desired change and for the reengineering team's daily activities. By establishing communication channels such as e-mail, the team maintained a link with one another whenever it was difficult to attend all the meetings. It was also observed that meetings were not possible on a daily basis,

as the task at hand would fall behind the schedule. To update each other of the undertaken tasks and to affirm that the set objectives were met, communication was viewed to be particularly beneficial. This data analysis confirms Kanter *et al* (1992) position with regards to communication. The authors maintained that communication has a major part to play when obtaining change and the empirical evidence supported that claim.

### 5.3.8 CONFLICT IN THE REENGINEERING TEAMS

In the second questionnaire listed in Appendix F, question 3 refers to conflict. However, it can also be seen that further clarification regarding the types of conflict had not occurred and did cause concern amongst some of the respondents. Once the issue was stated in a clearer and simpler manner, the answers were provided with no hesitation.

When asked about conflict, most of the respondents provided answers without any hesitation, however, there was one respondent who wanted the interviewer to make clear what the question was asking. The respondents from case study 3 attempted to be as clear as possible about the conflict issue, but Mr. B of case study 2 did ask for the clarification and provided a short, but adequate answer. "Conflict was evident, but it was nothing to do with the personalities, it was more to do with the work, roles and responsibilities."

In general, it became evident that as the project was an intense and speedy one, personal conflicts were placed aside and focus was placed more upon task related conflict. The organisations made attempts to solve conflicts in an organised manner by setting a day or afternoon apart from the work schedules or have individuals who are experienced at resolving conflicts (mediators or facilitators) and deal with the conflict issues at hand. Such situations were possible to obtain when strict deadlines had been met or when there was less stress upon the team.

Conflict is viewed to be beneficial if it is task related conflict and not a personal one (Jehn, 1995). From the views expressed by the respondents, personal conflicts were not given priority as it was felt that they are disruptive and would not have allowed the completion of the

project. For this reason, task related conflict was given priority and as Robbins (1996) suggests, this kind of conflict is a positive outcome, rather than a negative one. The initial data analysis also revealed that conflict is an emotive issue that would be quite difficult to describe, however, it was also observed that task related conflict in the cases was described as conflict that related more to the deadlines that were set for the project. Thus, if one date was arranged, there were occasions when the tasks were not completed and the deadlines had to be extended and this caused slight conflicts within the teams. Another form of task related conflict was when one individual was allocated one task and the other was also assigned a similar one, but the emerging results were different and the individuals had conflicting views about the manner in which the task was handled.

Conflict was viewed to be an important factor when teams are developing because this could have allowed the formation or destruction of the teams. With few or no conflicts, the team is likely to continue with the task at hand and not have any problems with regards to performance. Therefore, when forming and storming, minimal amounts of conflict can be expected. This is so that the team can perform up to the expectations placed upon it. However, with the occurrence of conflict, it is likely that the team reverts back to the forming stage and this could ultimately cost the project, team and the organisation. The team could lose out by not having the project completed at the stated time. On the other hand, the organisation could lose out by incurring losses when the results are not obtained on the fixed date.

From the replies received, it seemed that conflict was handled quite well, however, it has to be remembered that conflict was not consciously looked for and is something that this research was interested in. If the projects were dealing with research regarding conflict and conflict resolution, then it is likely that more intensive steps could be taken and other ways of resolving issues could be searched for.

### 5.3.9 MOTIVATION AMONGST THE REENGINEERING TEAM MEMBERS

Motivation is an area of interest to most researchers as this explains the behaviour of different individuals. However, there are very many theories that can be utilised to explain the needs of individuals as already described in chapter two. To prevent any confusion, a variety of measures were adopted to ask the questions. Questions such as “What made the team work? Were any bonuses provided? What was the drive behind the team's productiveness?”

As expected, the respondents were more receptive when asked questions in a simpler manner than the researcher asking directly if motivation existed. The simpler form of questioning involved asking if there were any incentives being provided to the members of the team (as stated above). This course of action was utilised because as demonstrated in chapter 2, there are various definitions of motivation, and different perceptions of the theory surrounding the area, therefore, each individual has a different opinion of it. As a further clarification, the researcher asked whether, incentives were offered or whether there were other reasons that could be used to explain the general enthusiasm displayed by the team members. As expected, the respondents provided replies that would allow the researcher to ascertain whether, firstly, intrinsic or extrinsic motivation was being pursued and secondly, which one of the other theories could be employed to explain the behaviours of the team members.

Mr. B of case study 2 explained how the project that was undertaken in the organisation was amongst the first of its kind in the National Health Service and it was thought that should have provided enough motivation amongst the team members. That is, the team was motivated by being part of the project that would be amongst the first of its kind and not everyone within the organisation was chosen to become a team member. In case study 1, on the other hand, motivation was that the new experience could lead to either a promotion or at least a return to his or her own job after the implementation of the approach. This was an assurance that other members within the organisation did not have. The team members of case study 3 were motivated by the estimated deadlines. That is, the team was very attentive to completing the assigned tasks at the stated times. However, there were some who seemed to lack the motivation



or incentive to undertake the assigned task and instead seemed resigned to the fact that the project was just another part of their job that they had to complete. In that instance then, there was no motivation.

Chapter 2 showed that there are a number of theories that could be utilised to determine motivation. However, the most recent and commonly researched of the theories is intrinsic motivation (Arnold *et al*, 1998). It was also observed that intrinsic motivation rather than extrinsic motivation was more in usage (Crainer, 1995). The collated data revealed that intrinsic motivation, described as the form of reward based upon the task, was evident. In all 3 cases, the respondents stressed upon the organisation not paying any bonuses during the project to the team members. During the project, the senior members of the organisation offered their congratulations to the team upon the good results of the project. In case study 1 particularly, project updates were provided every four weeks and during the meetings, congratulatory remarks would be offered and this was confirmed by the team members who spoke of the nice feeling they obtained from the congratulatory remarks offered to them.

Chapter 2 also emphasised that **intrinsic motivation** can be related to part of Maslow's (1943) classes of need. This relationship also seemed to be evident in practice. However, only after asking the respondent to provide in depth descriptions of motivation was this opinion formed. From the interviews, the impressions formed about the classes of needs that were evident within the teams are as follows. The initial one was the class of self-actualisation, where the individuals had to realise for themselves that they could undertake the proposed project, then belongingness, where a feeling of belonging to a group and finally, esteem, that the job could be undertaken were the observable ones.

Additionally, the research concluded that McClelland's (1961) achievement of needs theory was also observable, particularly in case study 2. When the researcher asked the respondent what was the motivation for the project, the reply provided was that the team was amongst the first to undertake a project such as this one. It was then crucial to make sure that everything would go as planned. Therefore, the vision was borne in mind, and the set objectives and aims fulfilled.

These organisations however, did provide a token of appreciation in the form of congratulatory letters or monetary rewards at the end of the project. A point worth emphasising is that the bonuses paid to the teams later on were decided by the organisation and not announced prior to or during the time that the project was continuing. They were granted at the end of the project and not before then. The bonuses that were provided were supplied on a team basis rather than individual basis. This was a conscious course of action taken by the organisation, as it was aware that the team could be formed once again in the future and bad relationships could occur, therefore to prevent such a situation this step was initiated. In the instance of the case study 2, the respondents also remarked that the organisation is continuing on looking for better ways to allocate bonuses on a team basis, as this was the trend being foreseen for the future.

#### 5.3.10 TRUST IN THE TEAM

Trust is not easily definable, and not easily evident. However, all the respondents emphasised that the fact that ‘empowerment’ was allocated to the team was evidence enough to demonstrate that trust by the organisation into the individuals’ judgements and capabilities was occurring. When questioning the participants about trust, the researcher posed the question directly and did not ask the question in the various forms as suggested by the theorists in chapter 2. That is, is there **integrity, competency, loyalty or willingness** within the team.

Asking directly about ‘trust’, rather than any of the other forms was undertaken because it was felt that the respondents would not provide the required answers and the question could be misinterpreted. It has to be remembered that the topics connected to individual or organisational behaviour are highly emotional and any incorrect type of questioning could be misinterpreted and ties severed with the researcher. This was an issue always borne in mind during the research.

In order to undertake the set task within a team, motivation may not be enough. Along with motivation, better results maybe achievable if an element of trust is also in existence within

the individuals. Trust has to occur from within both the parties, that is management, in the form of the project leader and the team members. Trust occurs from the leader's end when providing the new forms of power (empowerment) to the team members.

The research concluded that of the four signs of trust mentioned above, the form of trust evident from the analysis is **competency**. That is, management views the team as being competent enough to bear the additional responsibility.

On the other hand, the team members could be embarking on the project and the new 'added' responsibilities on the understanding that they will for instance, have new experiences that could assist them with their careers sometime in the future. It was expected that there would be an element of trust as well as motivation, in the form of new experiences and ambition that would be making the team members work harder on the project. Coupled with these two other factors, was the characteristic of communication that promoted the progression and development of the teams.

*"Within the team that I worked in, there were very open relationships. All of us knew each other and because we were 'novices' we did our learning together. All of us recognised the fact that we hadn't got all the skills needed to do the job, but we had got enough to take us forward. We talked about any problems that we encountered and this was an essential component for the building of trust and for making our team work"* (Mr. D, 1999).

*"The Chief Executive and Board had faith and trust that the team was competent, experienced and skilled enough to undertake the set tasks"* (Mr. L, 1999).

Such replies confirmed the existence of the element of trust within the reengineering teams.

### 5.3.11 THE REENGINEERING TEAM DEVELOPMENT

The development of teams can materialise in several ways. That is some teams could be developing in a way that the process being followed is more commonly associated with Tuckman's (1965) model. Four steps, *forming, storming, norming and performing* are viewed to

occur when the arrangements that the teams comply to are compared to that of the model. What Vernelle (1994) also found was that the development process of these four steps could occur either cyclically or at the initial stages.

When the respondents were asked about their team development process, the descriptions provided were similar to the ones provided by Tuckman (1965). However, all of them emphasised that this model would be particularly applicable at the initial stages of development. During later conversations, it was revealed that when difficulties due to issues such as a break down in communication, or the team not understanding what has to be done occurs, then conflicts occurred and the teams then reverted to the storming and norming stages. This meant that parts of the whole development process had to be followed once again. Therefore, it would be wrong to conclude that the model is applicable only to the initial stages when the teams form (as suggested by Vernelle, 1994). It can be utilised to describe the situations when a break down in the team occurs and it has to revert back to its initial paths. Amongst the factors that made an impact upon the development of the teams were communication, conflict, empowerment, motivation and trust, essentially, all the issues being explored within the research.

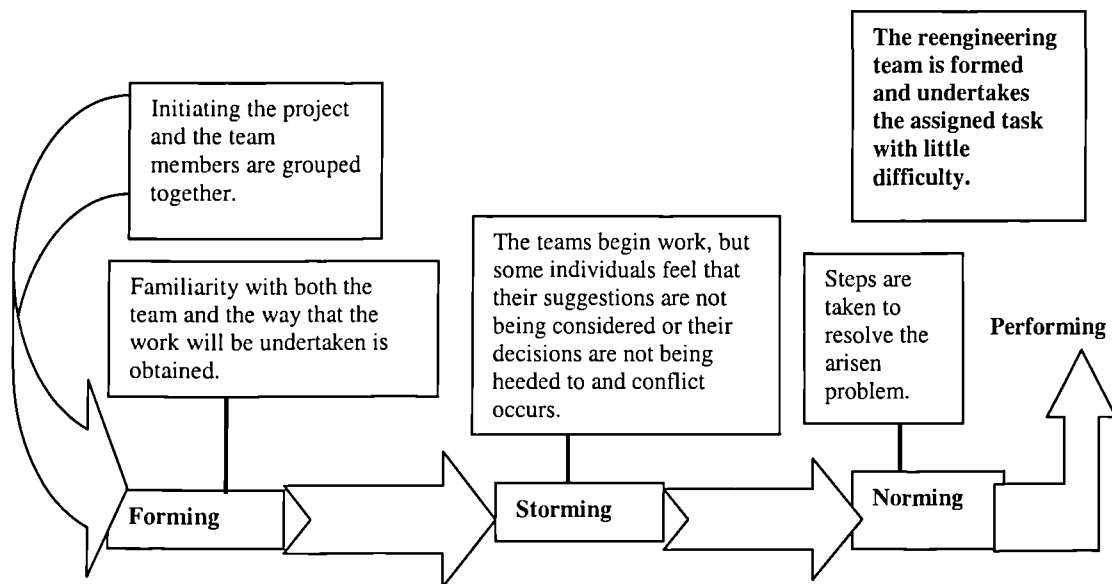
To undertake the required task, communication was the foremost issue and was established in the initial stages of the forming of the team. Team members were encouraged to express their opinions and views. In a majority of the organisations, days to deal with the situation were established and proved to be beneficial in solving the problems. Additionally, the methods to update and communicate with one another were established. During this period, the added responsibilities or 'empowerment' that either certain members or all the members of the team were about to undertake were disclosed. The motivation to provide a project result that would prove to be beneficial for the organisation was at the utmost of the team members' minds. Some team members could have thoughts that promotions or added incentives could result due to the success of the project, but it was never discussed during any of the meetings.

This was just something that some of the team members spoke of during the interviews. At the initial periods, there were fewer or no signs of conflict occurring. Conflict occurred when certain expressed opinions were not provided with the required support or members carried on

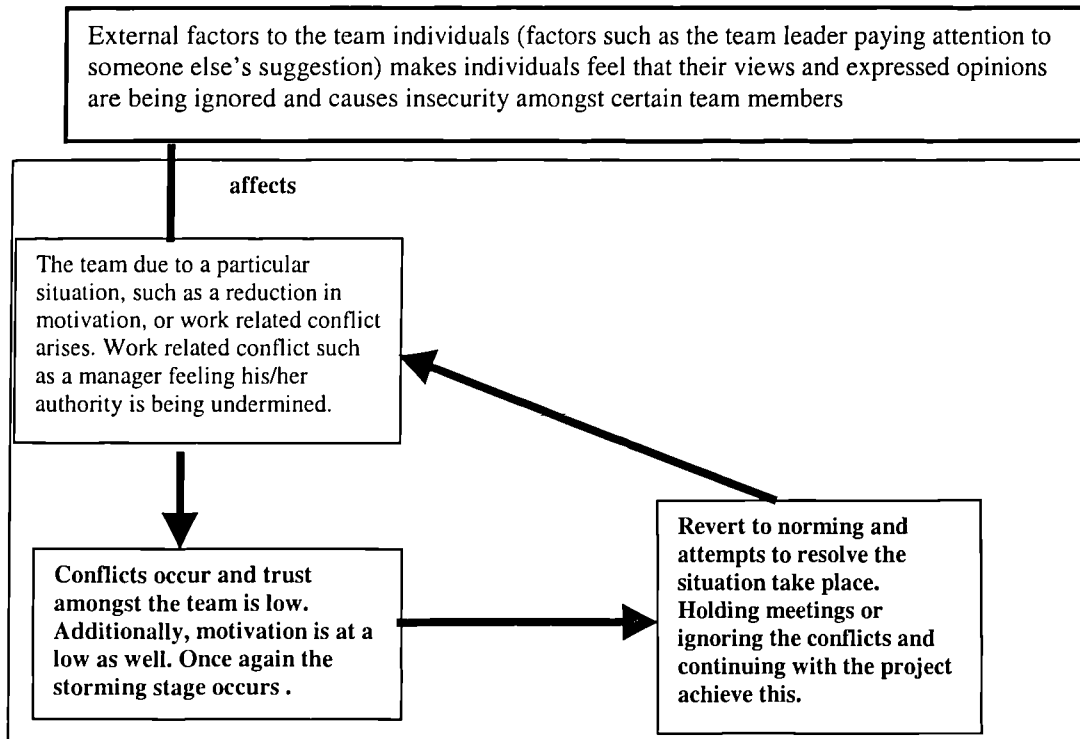
with their own intentions and did not work alongside with the team. It was also more likely to occur when the team members became familiar to one another. When conflicts were not evident, trust was also high amongst the team and the task at hand was dealt with in an efficient and smooth manner.

As work on the task began, motivation was still considered to be considerably high since the teams were excited about the prospect of completing the project, yet at the same time, apprehensive about the occurring results. There were instances when empowerment was not being employed in the appropriate manner and the project manager had to intervene. As a result, trust was not really affected since the project leader was acting as a guide rather than anything else, and the team was continuing on its original path. There were no conflicts that developed since the support of the leader was sought when things were not going as desired.

Different situations at which the development of the reengineering teams is affected have been narrated, however, the attention of this section will now change to developing and portraying the development cycle that reengineering teams can and should follow.



**Figure 5.1** The Development cycle of the reengineering team. This is a likely situation at the initial stages when the team is first established



**Figure 5.2 The Development of the reengineering teams after the impact of external factors**

What was deduced from these results was that the development pattern followed by the reengineering teams at the impact of external factors (Figure 5.2) was not cyclical. That is, the same path that was initially followed was not pursued once again. During the initiation stages, forming is followed and has a vital part to play. When external factors such as conflicts arise, then the pattern followed is that of storming and norming and then reverting to the task at hand. This was due to certain steps (particularly, the step forming) being omitted since the team members were familiar with one another at the point when the external factor has an impact. Therefore, it would be wrong to assume that a similar pattern is followed. Instead, it can be said that certain steps from the former model (Figure 5.1) are applied to bring the team back to its previous position of performing. This situation was particularly applicable to all three case studies.

This description concludes the discussion and analysis of the data. The objective of the proceeding sections is to form some sort of tabular analysis that can summarise and present this information in a more simple and systematic manner.

## 5.4 COMPARING THE THEORETICAL MODELS AND EMPIRICAL EVIDENCE

In addition to theory, chapter 2 also referred to several models that have been utilised to examine organisational change. The following sub-section will consider whether the theoretical model of Pettigrew and Whipp (1987) can be analysed employing the obtained results.

### 5.4.1 ORGANISATIONAL CHANGE MODELS

In the first instance, Sadler's (1992) model will be analysed and employing it, a description of the conclusions that were drawn will be provided. As previously stated, some organisations believed that they were pursuing a radical approach to change, whereas the provided results contradicted this belief. The case studies results indicated that a radical change combined with an incremental change was being followed and two alternatives existed to overcome this shortcoming.

First, a section would have to be included within the model that pays attention to both radical and incremental change being employed when BPR is undertaken. Alternatively, the definitions would have to be amended to include that a radical project when undertaken in the instance of BPR firstly follows a two-year path, however, thereafter, an incremental change path is adopted. Therefore, from the empirical evidence, a radical path is usually associated with change that is dramatic and is undertaken for usually two to three years, rather than the 3 to 7 years. *After implementation and the 3 year duration, incremental change is undertaken and organisations are continuously undertaking some form of change in order to remain in the current, fast changing and competitive environment.* Another flaw within the model is that the term 'dramatic' has not been defined for a user and this could lead to confusion. For instance, some researchers associate dramatic change with the increase in productivity or profits. On the other hand, the term could also imply large losses in jobs. This is a major weakness with the model and needs to be clarified in order to increase its usage.

This also has an impact upon the understanding provided by Lewin (1947). Lewin proposed that change could be undertaken in three steps, *unfreezing, change and refreezing.* As

stated previously, organisations are undertaking change continuously as factors within the current climate dictate that in order to survive, organisations have to continuously undertake change. This means that when organisations initially consider undertaking change and utilise an approach, at some point, the process of unfreezing begins. Thereafter, with the assistance of one of the approaches that is being applied at the time, change begins to take place. However, after that, refreezing occurs for a very short duration as the organisation is compelled to consider implementing change due to the existing changing environment. Thus from the data analysis it can be concluded that Lewin's model does hold true in the context of BPR, however, conditions exist such that an organisation has to consider repeating the whole cycle once again in a short while.

Chapter 2 also referred to Pettigrew and Whipp's (1987) model where content, context and process are the main points to be utilised to examine organisational change. In comparison to the other models this one proved to be more applicable. This was because initially it raised issues that would have been overlooked if the other models had been employed. For instance, when investigating context, the background or the reasons leading to organisations to consider implementing both BPR and reengineering teams could be analysed. On the other hand, determining the type of BPR that was followed could also be determined. Thereafter, the process involved in selecting or developing the reengineering teams, or in implementing BPR could be determined. This was something that any of the other models or frameworks lacked.

The MIT 90s framework (1991), was formed to describe the particular areas of an organisation that are affected by BPR and is helpful in emphasising what has been influenced by it. However, it is weak in that it does not assist in assessing the type of change and the processes involved in obtaining the change, something that Pettigrew and Whipp's (1987) model is beneficial for.



### 5.5 ANALYSING THE RESEARCH STRATEGIES

Chapter 3 mentioned that a triangulation of data collection methods is used to gather the data and this chapter has shown how questionnaires and interviews also assisted with this. Upon reflection the utilisation of these two methods in collaboration particularly assisted the research, as there were instances when the questions on their own were not enough and confusion about any specific concerns were cleared up by conducting the interviews.

An added point regarding this research was that the questionnaires had been designed as soon as the focus upon the topic which was quite early on in the research process had begun. They were initially formed to use at the pilot study. Consequently, they had to be amended to include more in depth information about particular issues. However, reflecting back, it would have been better if the questionnaires were not too closely linked to theory and defined in a simpler and clearer manner for the respondents. This was something that the pilot study assisted the researcher in clarifying. On the other hand such a flaw provided the researcher with the experience of finding out what different experienced individuals considered as being important questions, which was a situation that would not have been possible if the alternative method was applied.

An additional discovery made was that practitioners were not willing to express their opinions on many sensitive issues and an opportunity to ask one of the individuals from the organisations was provided. The view amongst practitioners is that academics, particularly doctorate students will not readily accept any suggestions put forward and that is why in some of the organisations there were more reservations and formalities and less willingness to participate in further research projects than others.

In the earlier sections and chapters, mention has been made that a triangulation of data collection methods was utilised for this research. As the human aspect issues are more of an emotional nature, it was felt necessary that the best route to obtain the required data would be employing interviews. In time, interviews became crucial and provided the opportunity to probe further into different issues, something that referring to the documents or observations methods

would not have allowed. During the observation phase, restricted access to the site was allowed, however, further benefits such, as asking questions to any pressing questions was not granted. An alternative step in such situations was to refer to archival documents, however, this was considered the worst of the methods, as the means to confirm any particular confusing or complicated issues did not exist. Additionally, the archival documents were not of much help at the time because they contained topics that were not considered essential for this research. The archival documents were beneficial and relevant when questions regarding BPR and its impacts were asked.

The analysis was conducted in 2 tables since 2 main research issues emerged from the main research question. The first one is what are the critical issues that are investigated when forming the reengineering teams and the second, the context of the teams, BPR. From these two issues, a new or further developed theory should be added to the area. The first table also confirmed whether Willcocks (1996) five-factor model (mentioned in chapter 2) could be analysed within different organisations, and this was one of the purposes of this research. The classifications offered by the analysis also assisted the researcher to place various issues in perspective and in turn provide a useful analysis of what were considered to be suitable 'ingredients' for a BPR approach that emphasises the human and organisational aspects.

Table 5.1 Summarising the empirical evidence relating to BPR

ISSUES INVESTIGATED		CASE STUDY 1	CASE STUDY 2	CASE STUDY 3
<b>Describing the BPR approach</b>	Radical change and the appointment of a new Chief Executive saw the support for BPR increased. This was not an organisation wide project, however, since its successful impacts the organisation has been considering BPR on an organisation wide scale.	There were several people holding top positions within the organisation providing support for BPR. This was an organisation wide process change with some of the project still being pursued, but not on such an intensive scale as when the project began. The BPR project was undertaken in various phases throughout the organisation.	This is a BPR project whose completion is anticipated to be within four years. A Senior member of the organisation was the one who provided utmost support for the approach. The first phase of the project is expected to affect the libraries section of the organisation. The change is expected to be beneficial for members of the public who pose enquiries to the local authority.	
<b>Supporters of the BPR initiative (Also termed as Locus of Support, Willcocks, 1996)</b>	Chief Executive.	Chairman, Chief Executive and Medical Director.	Corporate Director.	
<b>Change Levers</b>	There was no enabling role of IT while the planning and analysis within the team occurred. This project was more of a process change, but with IT also having an impact in some way and whose impacts are still being felt. Attempts to improve the undertaken changes are still continuing. There was no facilitation utilised in this project and minimal utilisation of consultants occurred.	This was one of the unique cases where the change tended to be more of a process one, rather than IT having any impact upon the project. In the earlier stages, consultants were utilised, however, removed eventually.	The organisation obtained a process change that was enabled with the assistance of IT and the reengineering teams. There were consultants used during the initial stages of the project, however, it was felt that they did not have a full understanding of the organisation and that is why they were removed from the team.	

<p><b>Reasons for undertaking BPR</b></p>	<p>Changing preferences of consumers and the discontinuation of a merger made the organisation consider BPR.</p>	<p>The organisation was selected to be one of the 2 pilot sites to undertake reengineering, funding was being reduced as the years progressed, a consultant in the organisation envisioned that services could be improved and improvements in quality and performance were necessary.</p>	<p>Members of the public had to wait for a long time for their queries to be answered. In some cases, the calls were not attended to and consequently, complaints to the authority were on the increase. However, the major reason was the funding that was being reduced to the organisation.</p>
<p><b>Themes</b></p>	<p>The costs incurred by the organisation were reduced as a result of BPR. According to Mr. B, there were substantial savings and services to the customer improved. Communication was viewed to be a major factor employed to obtain the desired change. Project management issues were not considered to be such major issues as deadlines were being met and this was attributed more to the individual behaviour. Motivation for the team was the drive to complete a successful project and no monetary or achievement rewards were promised.</p>	<p>Due to BPR, the organisation became more aware of project management issues such as planning for the project, having the 'right' set of team members and having realistic objectives and vision. Additionally, communication was a vital element in order in the introduction and process of BPR. Empowerment in this organisation was introduced in a careful and thoughtful manner. This was due to the nature of the organisation. Motivation was a rather high consideration, however, great emphasis was not placed upon how to increase or reduce it.</p>	<p>As a result of the BPR project, the calls were attended to and their clients were satisfied with the service being received. The project manager learnt that assumptions about individuals should not be made. Instead, in-depth investigations about the backgrounds of individuals should be made. This way then the weakness of the team members not having knowledge about project management or BPR could be overcome. Communication was a major factor in obtaining change and the organisation placed a lot of effort into that element. That is, leaflets, newspapers, were published; surveys prepared and meetings and workshops organised.</p>

### 5.5.1 DISCUSSING THE VARIOUS BPR APPROACHES UNDERTAKEN BY THE CASE STUDIES

All the organisations emphasised that they were pursuing a radical BPR project. However, when comparing the theoretical (Sadler's model) and the empirical evidence, the impressions obtained were that the BPR approach was more of a mix between incremental and radical change. At certain points, the results were more indicative of an incremental rather than radical change. The duration taken for the project indicated that it was more of a radical change, whilst the process of change was more indicative of an incremental change. The support for BPR in all the organisations was a top down one, which confirms a view supported by Hammer and Champy (1993).

The supporters of the BPR initiative were members of the organisation who held top positions within it. When initiating BPR, management should apply a top-down approach (Hammer and Champy, 1993). This was an expectation that the researcher had and was confirmed by the results obtained from the cases. Also management placed a lot of trust in the hands of the teams to permit such a large project in the hands of the reengineering teams.

It can be observed that particularly case study 3 emphasised the role of IT in obtaining change in comparison to the other cases. "IT has been particularly helpful in this project. We have been using special databases and call centre equipment in order to improve our services" (Mr. H, 1999). However, Mr. H also remarked, "the human factors are an essential part of the BPR process and without it being examined, BPR is not completely understood."

It can also be observed that there was minimal use made of consultants. "It was felt that consultants were not as familiar to the surroundings as we were and this resulted with the human aspect being ignored and the engineering part being provided with more attention" (Mr. D, 1999). Case study 2 was more aware of the human needs of individuals both within the organisation and the team. This resulted in the development and usage of facilitators and team coaches' roles and stressed upon.

The reasons for undertaking BPR were mostly external ones with the reason to prevent competitors from obtaining an upper hand being the most prominent. None of the organisations

were primarily interested in curtailing costs, which was one of the reasons cited by Hammer and Champy (1993) for an organisation to undertake BPR. Instead their focus was more upon the impact upon competition and clients. It can also be noted that unlike cases studies 2 and 3, organisations that were either fully or partly funded by the Government, case study 1 did not have funding problems. Instead, their focus was more upon the service being provided to customers and the client database.

### 5.5.2 A CROSS-CASE COMPARISON OF THE REENGINEERING TEAMS

Comparing the empirical results with the theoretical ones and presenting in a simpler manner utilising Table 5.2 further refined the analysis of the reengineering teams; thereafter, conclusions regarding the results were drawn accordingly. For this purpose, the method of cross-case patterns (mentioned in the earlier part of the chapter) was used. Themes or topics that were established earlier in chapter 2 were particularly useful for this strategy. Table 5.2 compares the empirical results with the theory regarding the reasons for undertaking BPR, presence of project management, organisational change, the role of IT in enabling BPR, team selection, *initiating change, team development, empowerment, conflict, motivation, trust and communication.*

Table 5.2 Comparing the Theoretical and Empirical Evidence

TOPIC	THEORETICAL FINDINGS	EMPIRICAL RESULTS	CONCLUSIONS
REASONS FOR UNDERTAKING BPR	Scott-Morton (1991) found that external as well as internal factors could lead to an organisation to undertake BPR.	External factors initially instigate the consideration towards BPR. Eventually, organisations then attempt to determine ways within the organisation that could lead to better results. This then accounts for the emergence of the likely reasons for the internal factors.	The results display that both internal and external factors compelled organisations to undertake BPR, thus concurring with the findings of Scott-Morton (1991). The pattern likely to be followed is that external factors initially compel an organisation to consider change and then the internal factors are considered.
PROJECT MANAGEMENT	Estimation, planning, having positive attitudes towards the project (Morris, 1996) and having a vision that is considered realistic (Lewis, 1997; Davenport, 1993) were the major topics from the project management area that were considered important for BPR.	All 3 cases demonstrated particularly that estimation, planning and having a vision that was realistic and acceptable to all the concerned parties are essential for BPR. As a matter of interest, the project manager in case study 3 viewed the subject of Project Management crucial for BPR and felt that it should be given more prominence than it was currently being given.	Project Management is an imperative factor when considering BPR was found in the literature survey and all three organisations also emphasised that their projects would not have been completed if good project management techniques and tools were not prevalent.
ORGANISATIONAL CHANGE	Chapter 1 demonstrated using some of the definitions found within the BPR literature (Dixon <i>et al.</i> , 1994; Smith and Willcocks, 1995; Earl <i>et al.</i> , 1996 and Loh, 1997) that the foundations of BPR lie in organisational change. Chapter two then described several various organisational change models, for example, Lewin's (1947) model, that are in existence.	The cases illustrated that the organisational change model by Lewin (1947) described the changes that they had undergone.	From the results of the case studies, it was found that organisational change <i>can indeed</i> describe the actions followed during a business process change project and particularly, Lewin's (1947) model could be utilised to best describe the organisational change that takes place within an organisation.

<p>THE ROLE OF IT IN UNDERTAKING BPR</p>	<p>It was found that particularly in the earlier years of BPR (Hammer, 1990; Davenport and Short), the role of IT in enabling BPR was considered vital.</p>	<p>In the empirical evidence, all 3 case studies demonstrated found that in the stages of planning and analysis, there was no role of IT. In the instance of case study 2, there was a complete process change, with no role of IT being shown. There was very little use for it. Case studies 1 and 3 still viewed the role of IT crucial, particularly at the implementation stages.</p>	<p>IT is essential for undertaking BPR (if required) at the design and implementation stages and not earlier than that. Instead, it was found that the organisations concentrated upon the teams undertaking BPR. That is, training and education was provided to the team members. The team members were also allocated to the task of BPR on a full time basis (for a certain period of time). This was to ensure that no distractions could occur.</p>
<p>TEAM SELECTION</p>	<p>There are various ways of selecting teams, these include, knowledge, attributes and skills (Stevens and Campion, 1994), or psychometric testing.</p>	<p>The three cases had used the knowledge, attributes and skills criteria. Psychometric tests were used where case study 3 also explained in simple terms the strengths and weaknesses within each of the team members.</p>	<p>The knowledge, skills and attributes criterion is the preferred method of team selection.</p>
<p>INITIATING CHANGE</p>	<p>Lupton (1986) supported the view that a change approach should be a top-down one. Hammer and Champy (1993) and Tinaikar <i>et al</i> (1995) were also of the same opinion.</p>	<p>The three cases showed that a senior individual within the organisation began considering the undertaking of BPR. Thereafter, the Board was convinced and after that, the team was formed and undertook the task at hand. Team selection was also considered to be a part of initiating change, whether the change was upon a part-time or full-time basis. For this change to occur as well, the ultimate decisions were made by the Board.</p>	<p>A top-down approach is evident during BPR and supports the views of the theorists.</p>
<p>TEAM DEVELOPMENT</p>	<p><i>Forming, Storming, Norming and Performing</i> are the stages that a team underpasses when developing (Tuckman, 1965).</p>	<p>All 3 cases displayed Tuckman's four steps. What also became clearer was that unlike Vernelle's (1994) view that the model is more likely applicable at the</p>	<p>Tuckman's development model can also be developed and investigated when examining reengineering teams. An added conclusion that can be formed is</p>



			initial stages, the obtained results indicated that parts of Tuckman's (1965) model were evident when conflict occurs.	that parts of the model are applicable when conflict occurs.
TEAM DEVELOPMENT PARADIGMS	Stewart (1995) analysed the development of teams in terms of behaviours evident within teams and examined the role of communication within each of the development stages.	As in Stewart's (1995) model, conflict occurs at the storming stage as the team members become familiar one another, are unclear about their roles and responsibilities and feel comfortable with airing their opinions then. Conflict is unlikely at the forming stage because the team members are still not certain about the situation, or one another. At the norming stage, the conflict resolution tactics are applied and this leads to the final stage of performing.	Stewart's model is applicable to the research regarding reengineering teams.	
TYPE OF CONFLICT	There are two dominant forms of conflict-Affective and Substantive (Guetzkow and Gyr, 1954). Affective is related to task related and is viewed to be beneficial (Amason, 1996), whilst, substantive is of a negative nature (Walls and Nolan, 1986).	In all three cases, task related conflict was more evident. In the instance of the third case, however, there was also the presence of personal or substantive conflict. Case study 2 was the only case that recognised that as long as the conflict was restricted to work related issues, it was of a positive nature.	Task related conflict is more commonly found within reengineering teams. Further analysis revealed that organisations had established days (case study 1), and set procedures, thus accounting for the presence of structured conflict. In one of the cases, conflict was viewed to be of benefit, rather than a hindrance.	
CONFLICT RESOLUTION	Handy (1993) described various forms of conflict resolution (Arbitration, open debates or separation and neglect).	Case study 1 had established days where a combination of arbitration and open debate was pursued. Case study 2 undertook an open discussion during their meetings and resolved the conflict there and then. Case study 3 employed a different route. In the earlier parts of the project, the conflict was resolved during the meetings; however, when it came to the implementation stage, conflict was not recognised. Instead, the focus was	The organisations were aware of conflict and also knew of ways to resolve it.	
CONFLICT RESOLUTION (CONTD)				

<p>EMPOWERMENT</p>	<p>'Empowerment' is the inference of more power or authority to people (Collins Paperback Dictionary, 1999). Prior preparation has to be provided to the individuals being provided the new powers (Sayer and Harvey, 1997).</p>	<p>upon obtaining the results upon the stated dates.</p>	<p>In all 3 cases, the teams were provided with the opportunity to obtain more information about the organisation and make decisions that would make a future impact as a result of empowerment. The data also revealed that although empowerment was evident in the teams, there were boundaries drawn and it did not have the authority to make major decisions that would have huge impacts upon the organisation itself. For major decisions, such as changes taking place within a department, the Board made the decisions. This was particularly observable in the planning, and analysis stages. To introduce empowerment as well, case studies 2 and 3 provided training and education beforehand and then the newly added responsibilities were provided.</p>	<p>For empowerment to occur, the role of prior preparation became clearer and was viewed as essential. Empowerment was mostly a gradual process that was introduced in some instances-mostly in the cases of the implementation teams. Whilst in others, it was a rather rapid process-the analysis, planning and design teams.</p>
<p>MOTIVATION</p>	<p>Jones (1955) described motivation as "how behaviour gets started, is energised, is sustained, is directed, is stopped and what kind of subjective reaction is present in the organism while all this is going on." Maslow (1943) formed five categories that explain the observed behaviours (1) <b>Physiological:</b> This is the most primitive and obvious need and is characterised as the need for food, drink and so forth. (2) <b>Safety:</b> The need in this instance is for a</p>	<p>Of the provided definitions, the three cases motivation behaviour could best be described by the definition provided by Jones (1955). Intrinsic rather than extrinsic motivation was evident and further supports Campbell and Kleiner's (1997) view that intrinsic rather than extrinsic is more commonly found within the teams undertaking BPR. Of Maslow's (1943) categories, belongingness, esteem and self-actualisation seemed more appropriate descriptions of the teams.</p>	<p>Intrinsic Motivation is more commonly applicable to reengineering teams and Maslow's (1943) last three categories are more applicable to the reengineering teams. This suggests that money is not the major driving force behind the motives of the team members.</p>	

<p>MOTIVATION (CONTD)</p>	<p>predictable and non-threatening environment. Needs describing this is the need for physical and psychological safety. (3)  <b>Belongingness:</b> A need to feel a sense of attachment to another person or group of persons. (4) <b>Esteem:</b> The need to feel valued and respected by self and significant other people. (5)  <b>Self-actualisation:</b> Need to fulfil one's potential - to develop one's capacities and express them" (Arnold <i>et al</i>, 1998). Further, two categories emerged from these results to explain the driving force of individuals. These were <b>intrinsic and extrinsic</b> motivation (Deci, 1975).</p>		
<p>TRUST</p>	<p>Schindler and Thomas (1993) developed five groups to determine the role of trust. <b>Integrity, Competence, Consistency, Loyalty and Openness.</b></p>	<p>Of the five categories, the classification of loyalty was viewed to be more appropriate to describe trust within the team. It has to be said though, the organisations were not particularly concerned with this particular attribute. From the responses, it was also found that trust was also something that management had placed into the team, thus, in that instance, trust was more related to the category of competency.</p>	<p>There are two forms of trust that can be found within the reengineering teams. There is loyalty, something that is within the team. That is, the team members place trust in the efforts of their fellow team members. On the other hand, there is competency, where management places trust into the team.</p>
<p>COMMUNICATION</p>	<p>Communication in organisations has been defined as the "process by which messages are transmitted from one person to another" (Williams, 1978). To further distinguish communication, two classifications have been developed. Interpersonal and organisational (Steers and Porter,</p>	<p>All three cases demonstrated that the oral form of communication (face-to-face communication) was the used most as "the process by which messages were transmitted from one person to another." Organisational communication was the commonly used option. It was also found that electronic forms of communication,</p>	<p>The definition of communication stated by Williams (1978) was applicable to all three cases. It was also found that face-to-face communication was the communication means used most. Second in line were the e-mail facilities.</p>

		1991).	
			particularly e-mail facilities were also utilised.

## 5.6 SUMMARY

The strategy of cross-case comparisons proposed by Miles and Huberman (1994) is undertaken by comparing the findings of the case studies. What has to be clarified at this time is that although the pilots were used initially to develop the questions, the findings that were formed there were not 'rich' enough to form an understanding and consequently, analysis. The pilot studies obtained the views of only one individual and that was not enough to form an overall impression of the projects. This also accounts for the analysis in cases 1, 2 and 3 being 'richer' in detail than the pilot studies.

Although the above data analysis has been detailed and has provided an insight into many of the issues that concern reengineering teams, it is not enough to provide either an understanding or provide a new theory to the area. For an understanding, all the networks and activities need to be demonstrated and explained (Winograd and Flores, 1987), which has not been done to a full extent. For a theory to be developed, data does not only suffice, the views of a researcher need to be explained (Keen, 1991). Thus, until now the findings and conclusions from the investigations have been provided. It is in the next chapter that the views and recommendations of the researcher will be made, which is also something that interpretivists are encouraged to do. Walsham (1995) noted that interpretivists present their interpretations of the discussions held with individuals.

It can also be inferred that the data is open-ended since there are no relationships that have been identified between the theories or variables. In other words, there is very little understanding that can be obtained as the data is presented. A similar approach in another area of the information systems area, a CASE tool was undertaken. Orlikowski (1993) attempted to determine the relation of CASE tools and organisational change by developing a theory utilising the grounded theory approach. In the theory the role of the organisation, environment and the individuals within the organisation were examined and a model was formed that demonstrated. In the following chapter, it is the intention of this research to demonstrate that a similar form of model can be developed using the theoretical conclusions formed from this analysis. This

approach was also considered because from the findings it was felt that the role of the reengineering teams is central to obtaining business process change and a similar thinking was applied to the application of CASE tools in obtaining organisational change.

## 6 BPR AND REENGINEERING TEAMS: TOWARDS THE DEVELOPMENT OF A THEORY



### 6.1 INTRODUCTION

In the previous chapters, the findings in each of the case studies were discussed and described. An initial analysis of the findings was conducted using Pettigrew and Whipp's (1992, 1987) framework and an abstract table that contained the essential issues regarding the reengineering teams identified from chapters 1 and 2 was constructed.

A theoretical contribution is an essential part of interpretivism (as discussed below) and this has not been formed until yet. This can also be determined from the analysis conducted so far. Although the four elements (described in the following paragraph) that Whetten (1989) described as criteria for a theoretical contribution may have been demonstrated in the analysis, there is no relationship that has been developed to demonstrate the applicability of the theory, something that this chapter's findings should overcome.

Although an in-depth knowledge of the issues being investigated and descriptions of how the data analysis was conducted, it does not warrant enough information to constitute a theoretical contribution. That is, there has been some 'added-value' from the information, however, not enough to construct a theory. According to Whetten (1989), a theoretical contribution is made when four elements are demonstrated in a piece of research. They are: *what, how, why*. The fourth element is composed of three issues: *who, when* and *where*.

As noted in chapter 5, data by itself does not generate theory (Keen, 1991). There have to be relationships between the variables and theories identified and explained in the analysis. The main intention is to produce ideas that can be of practical use to researchers and practitioners.

When applying the case study method, the steps that have already been taken in chapter 5 would be considered as the "theory generation" step towards theory building. Following that is the next crucial procedure of building a new theory to the area and frameworks or models that provide explanations to the theory could encompass this. To build some theory from the results, an essential feature is to compare the results from the empirical studies with the extant literature (Eisenhardt, 1989). This is an action followed in this chapter.

The main objective of this chapter is to draw away from the findings of the case studies and demonstrate that an understanding of the theory and the empirical results has been obtained. As Walsham (1995) noted, in the earlier stages of Interpretive studies, theory assists in creating a theoretical framework that takes account of previous knowledge. This then assists in creating a sensible theoretical basis to inform the topics and approach of the earlier undertaken work.

The work that has been presented until now has been aiming to achieve this objective. However, so far, a set of different descriptions with no concepts or statements of relationship have been formed. Although this is beneficial to a certain extent, there is a danger that this could result in the research viewing what only the theory (chapter 2, in this case) suggests and new issues or paths that can be explored are left being ignored or not noticed (Walsham, 1995). As a result, an iterative process of data collection and analysis with the initial theories being expanded, revised or rejected altogether, should take place. The final outcomes are considered to be concepts, conceptual frameworks, propositions or mid-range theory (Eisenhardt, 1989).



This is the view being followed in this research and the intention is to produce some theory that will assist in identifying the critical issues surrounding reengineering teams.

It has been shown in chapter 5, that the underlying theories to the main topics of this research are evident in real life situations, except that is the extent of the data analysis, there is no 'rich picture' of the discovery of theory from the data that is obtained. What has been learnt so far is that organisational change is the main basis of the empirical evidence. The processes or activities undertaken to obtain it have not been clearly identified. Also, there are some human and organisational aspects that were identified from the extant literature to be important and the aim is now to determine their exact position in the reengineering teams. Issues such as identification of the aspects and understanding their role in the team should be investigated.

Yin (1984) argued that case studies are not generalisations, however, at the same time it was found that "case studies are ... generalisable to theoretical propositions...". Walsham (1995) further extended the debate to describe categories of generalisations and they include "the development of concepts, the generation of theory, the drawing of specific implications and the contribution of rich insight." To support this view, previous articles written by well-known researchers were provided by Walsham (1995) and are described in Table 6.1.

Until this point, none of the generalisations have emerged in this research. However, it is the intention of the research at this point now, to concentrate upon the second form of generalisation-the generation of theory.

**Table 6.1 The Taxonomies of Generalisabilities**

Source: Walsham (1995)

<b>Type of Generalisation</b>	<b>Interpretive Case Study</b>
Development of Concepts	Automate-Zuboff (1988)
Generation of Theory	Theory of organisational consequences of IT-Orlikowski and Robey (1991); Jones and Nandhakumar (1993)
Drawing of Specific Implications	Relationship between design and development and business strategy-Walsham and Waema (1994)
Contribution of Rich insight	Limits of machine intelligence: differences between plans and practical actions; need for more thoughtful machine design-Suchman (1987)

## 6.2 FORMING THE CONSTITUENTS OF THE THEORY

The analysis results obtained in the previous chapter can be interpreted in broad terms. To make the process simpler and easier, a number of themes that are common to all three of the case studies have been identified and the analysis results discussed and evaluated in those contexts. It has to be stressed that these generalisations apply only to these case studies. As stated earlier, a number of theoretical propositions can be formed, however, a generalisation that the results obtained in these case studies are likely to occur in every subsequent case study is a far reaching conclusion and is a matter that future research in the area can address.

### 6.2.1 ORGANISATIONAL CHANGE

In this research, the investigation of reengineering teams in the context of business process change was undertaken. This was based upon the claims made by Hammer and Champy (1993) and Davenport (1993) that reengineering teams are used to bring about the business process change.

For this the process and context initially needed to be identified and the reasoning for this is as follows. When investigating organisational change, Walsham (1995) referred to Pettigrew and Whipp's (1992) work to explain why the process and context of organisational change is required for research purposes.

“It is important to see organisational change as linked to both inter organisational and broader contexts and not try to understand projects as episodes divorced from the historical, organisational or economical circumstances from which they emerge. The management of organisational change is not seen as a straightforward, rational process but as a jointly analytical, educational and political process” (Walsham, 1995).

This research supported the claim and used the argument to investigate the reengineering teams in the context of business process change. This also meant that to understand the teams, an analysis of the reasons for the requirement of teams and the actions that were required would have to be provided.

That is, it can be understood that in the instance of all three case studies, organisational change was investigated in terms of the broader context that included examining the external environment that could lead to the organisation having to consider BPR. Thus, BPR is undertaken due to the presence of external factors such as obtaining and maintaining the stronghold that an organisation has in the market place. Consequently, a context that contains the clients and competitors can be formed and used to understand the reasons leading to organisational change.

However, not only can a view of the contextual form of change be interpreted from the results of the case studies. The process of change involved in the reasons leading to the formation of the teams, forming the teams, impact upon the organisation and finally, the consequences of having the teams in the organisation can also be determined. For example, in case study 1, it can be seen that to maintain its stronghold within the market, the organisation had to contemplate change. For this purpose, BPR was viewed to be suitable, however, in order to undertake it, the reengineering team was required. To provide the team with the information about the desired change and the problems at present, management began to do some work as well. Therefore, a process is begun by management (considered to have the highest stake and authority within the company) in the organisation to form a description of the problems ready for the team when embarking upon their projects. From this description it can then be concluded that a long process is involved in forming the team.

As far as the process change model of Lewin (1947) is concerned, it can be seen from the obtained results that it is applicable to this research and the steps followed in this model are described by the processes elaborated above. For instance, in case study 1, according to the respondents, the performance of the organisation was such that the executive committee confirmed that the organisation needed to improve its position, particularly since the merger that was going ahead had been called off. This then prompted the organisation to think of change and it was decided that a radical change was going to be introduced. This is the action of *unfreezing*. To provide guidance and indicate what areas of the organisation required changes, the reengineering team was formed. To form the team, a well-thought and carefully planned

process was involved. This included the selection process as well as the preparations taken beforehand to get the team to work. Thus, introducing the team brings change.

Once the change is obtained, the members of the team returned to either better or similar positions to the ones that they had left. Since a gap had been formed from the time that the team members had left the department to work on the project and after completion of the project, they had to be familiarised to the working practices of the department, and that is the process of *refreezing*.

Although the business process changes had been investigated in the past in the organisation, they have not been investigated in such terms. Previous research has tended to focus upon the processes that are changed and their consequences, thus this research provided a different interpretation of the organisational change that a business process change obtains. What this also displays is that the established model of Lewin's process of organisational change is applicable to the business process change area.

It can also be noted from these discussions that the research does agree that organisational change is an underpinning of BPR and when forming a theory about this research, the organisational models of particularly, process change should be included. This is also a viewpoint shared by previous researchers such as Galliers (1995) and Galpin (1996). The problem with including the time and product models as suggested by Sadler (1995) is that a further development and clarification about what exactly a radical change constitutes is required.

What also emerged from this analysis is that reengineering teams are essential for business process change and in the following sections, this issue shall be emphasised.

### 6.2.2 THE HUMAN ASPECTS OF BPR AND THEIR IMPACT UPON THE REENGINEERING TEAMS

Corrigan (1997), Orams and Wellins (1995) and Tinaikar *et al* (1995) support the view that the issue regarding the human aspects of BPR needs to be addressed. By conducting this research, it is demonstrated that the area requires attention. However, it was found during the

research process that several problems existed when examining this topic. First, there was no clarification provided about what constitutes the human aspects and second, what is the context of the human aspects. It was also found that with the human aspects area being wide, such issues needed to be clarified. Bearing this in mind, the research attempted to describe the context that the human aspects were being examined in and second, to identify certain variables that constitute the human aspects area.

Therefore, while the research does agree that the human aspects of BPR need to be addressed when the approach is undertaken, it does not agree that is the end of the issue. Instead, there are clear explanations required in the area that will make it easier for practitioners and academics alike to understand the issues. This is an initial attempt by this research to identify certain issues and future research could venture into identifying how these areas can be recognised and brought into more prominence.

The research began by identifying variables (conflict, motivation, empowerment and trust) that are more recognised within the organisational behaviour and work psychology areas. It will also be found that researchers such as Hammer and Stanton (1995) and Davenport (1993) have mentioned the terms, but have not undertaken any analysis into the issues. In the case studies, the presence of the behavioural variables of trust, conflict, motivation and empowerment was evident. What also emerged from the questioning is that 'empowerment' is the variable that the organisations are more familiar with. When asked about empowerment, the respondents could provide replies without any brief hesitation in their replies. In the instance of the other three variables, a carefully thought reply was provided.

Also evident from the results is that the organisations did not specify the other three as vital issues that preparations had to be undertaken by the organisation for. That is, to introduce empowerment, certain individuals had to be selected and training programmes had to be established in order to prepare them for this new responsibility. In case study 1, the individuals were senior managers who held responsible jobs in the organisation and who were viewed to be capable to handle the added responsibility. In the instance of case study 3 again there were individuals who were experienced who formed the team, thus substantiating the argument.

The 3 other variables are viewed to be in existence in any individual and the steps taken by organisations to achieve and promote it are less compared to the factor of empowerment. For instance, in case study 2, bonus-working schemes are not an object of much concern compared to the requirements of establishing the boundaries within which the teams are bestowed their new powers. Conflict was the other variable that may have been given some prominence compared to motivation and trust.

What can be suggested from this is that the issues that required prior preparation and were more visible than the other variables were more easily determined and the organisation's efforts were more placed upon solving the problems with these issues. For instance, conflicts and conflict resolution are issues that are more easily distinguishable than trust. Trust is something that is inferred from the observations or descriptions and is more difficult to prepare individuals for. It is a factor that is built within the team members or between management and the team. Direct preparations cannot be taken to build trust. However, indirect steps such as establishing of empowerment to the team can display that trust is being placed into the team. The research does agree with Hammer and Stanton's (1995) view that trust is essential for a team and has made attempts using some of the research from the other areas to demonstrate the importance of trust and how can it be inferred that trust is existent within the team.

### **6.2.3 THEORY REGARDING THE REENGINEERING TEAMS**

With regards to reengineering teams being essential for business process change, there has been no reasoning provided for this until now. From the research it can be argued that the change undergone by the organisations is a large one where the requirement of reengineering teams is essential and this can be viewed to be a crucial element for the reasoning that reengineering teams are applied. This essentially supports the claims made by Hammer and Champy (1993) and Davenport (1993) that reengineering teams are important factors for the establishment of BPR. Using this line of reasoning then, the research agrees that reengineering teams are essential in order to undertake BPR.

Although the researchers have acknowledged that such teams are required, they have not provided the reasoning of how these teams are different in many respects such as, the knowledge and skills areas. Davenport (1993) claimed that reengineering teams differ from other teams on the basis that they are familiar with the processes being changed and the enablers of the change. The research agrees with the claim, but provides further details about how other factors such as the selection criteria used, the provided training and education makes the teams different, and therefore, it is not only that they are familiar to the process being changed factor, that makes them distinctive.

Chapter 2 described how teams are viewed to be change agents in the context of organisational change. This research supported that view and in the following sections, attempts will be made to demonstrate how reengineering teams as change agents obtain organisational change.

As described in chapter 2, change agents are viewed to be intermediaries between the management and the intervention strategy followed by the organisation (Robbins, 1987; Katz and Kahn, 1978). This research found that the reengineering teams were carrying out the vision, aims and objectives of the management by envisioning a new way of doing things, clearly state what must be changed, the form the new design will take and what resources will be needed to accomplish the change. Clearly, the teams were the intermediaries of management's wishes since they were receiving their orders from the management.

Keen (1995) notes using the Boddy and Buchanan (1992) framework that the change agent's skill becomes more prominent in two spheres of project management. "The content or substance of change and what it is attempting to achieve, and the maintenance of control through the effective definition of the activities required, monitoring progress and ensuring problems do not deviate the project away from its defined goals" (Boddy and Buchanan, 1992).

It was found that to obtain the desired results within the specified time periods, the application of project management techniques of planning and estimating were particularly crucial and this also supports the claim made by Keen (1995) that the change agent's role becomes more prominent in such areas.

Keen (1995) described project management as being based upon the concept of a project lifecycle and involves the clear statement and definition of objectives, responsibilities, deadlines and budgets involves the clear statement and definition of objectives, deadlines and budgets. From the analysis, the supposition that project management is based upon the project lifecycle could not be particularly determined since this was not an objective of this research. However, what was found was that in order to obtain the desired results, clearly defined objectives and aims and planning and estimating, two fundamental topics of project management were required.

#### **6.2.4 THE ORGANISATIONAL ASPECTS OF BPR AND THEIR IMPACT UPON THE REENGINEERING TEAM**

By forming a distinction between the human and organisational aspects allowed the research to provide a clearer view. That is, by recognising that the human aspects are related to the behavioural aspect of organisational change, whilst the organisational aspects refer to the changes obtained by the organisation, the research obtained a better focus.

This prevented confusion about whether changes occurring as results of behaviours in individuals are related to the broad area of human aspects or as narrowly defined in this research. By identifying fewer variables, the research is able to obtain a better overall view rather than just surfacing the issues.

Hammer and Champy (1993) described the changes in work, tasks, roles and responsibilities, however, no specific label was assigned to it. This research classified such changes to the organisational aspect and formed a better view of the changes. The earlier made claims by Hammer and Champy (1993) were supported by the findings of this research as it was found that there were changes in the roles and responsibilities of the individuals.

Prior to the formation of the team, the individuals in case study 1 were involved in primarily decision-making roles since they occupied managerial roles. However, after the team



was formed, the role was widened to include an analytic, planning and decision making role. Whereas, responsibility prior to the formation to the team only lay in the hands of the manager and management was provided with a report of the department's progress to management-due to the existing hierarchical structure.

With the formation of the team, the team member was responsible not only for the task at hand, but was responsible for conducting him/her self in a team. Previously, there was no teamwork and no conditions or boundaries to abide by. Whereas, with the formation of the team, the member became part of a structure where different rules and practices had to be accepted and complied with.

#### **6.2.5 EXPLAINING THE CONSTITUENTS OF THE NEWLY FORMED THEORY**

By identifying the prevailing themes that the research can be classified into assists into forming a better interpretation and provides a different outlook to the results obtained so far. By forming the themes, the constituents of the newly formed theory have been identified. Thus, the new theory should have knowledge about the organisational change and the human and organisational aspects used to obtain the desired change encompassed within it.

In the above discussions, the constituents of a newly developed theory have been identified. By forming the themes and interpreting the data according to the respondents' replies, the research found evidence to support the claim that reengineering teams are central for the implementation of BPR.

To form the teams, a series of actions by management had to be undertaken. By forming the team, the work for BPR could be undertaken. That is, the team was a medium for management where again, a series of human actions produced the desired result. It must be remembered that interpretivists provide their meaning to the data and this is the interpretation that the research obtained from the findings. Based upon the findings, the contents of the newly developed theory are viewed to be as follows:

The newly developed theory should encompass a description of the steps leading to the organisational change, particularly a processual form of change that an organisation follows. It is within this context that a better grasp of the understanding for reengineering teams is formed. For instance, the purpose of a reengineering team becomes evident only if the context of BPR is given. Thus the theory has allowed the occurrence of a context-specific theory to evolve.

An organisation undertaking BPR requires a reengineering team in order to proceed with the task at hand. Since a process change is a large venture, one individual is not enough and consequently, the formation of a team is required. However, to form the team, decisions are not made just by the human resource management department. For this, the final decisions about whom to include within the team are made at management level.

To form the team, changes in the environment also have to take place such that the team can be formed. This means that different levels of the organisation have to be examined when considering the issue. For instance, when considering the formation of the team, factors such as where the team is going to work, or, who will replace the team member in the department while the project is continuing have to be considered. What this also suggests is that reengineering teams are formed as a result of human actions taking place and not otherwise.

The new theory should also contain information regarding the selection criteria used to form the team by an organisation. By considering the selection process, an appropriate team can be formed, which then ensures that the results of the change approach will be in line with the expectations of the management and eventually a successful project should emerge.

Additionally the new theory should encompass information regarding some human aspects in the form of the behaviour of the workers of the organisation. However, the research found that it was difficult to directly observe and discuss some of the variables, such as trust and motivation, since they are more inferred behaviours rather than directly observable. Therefore, future research in the area should examine better ways of directly observing these variables. By considering these variables, theory could also make a contribution to the team development area. The team development area in turn could ensure a better result for the team than before.

What can also be found from these themes is that the reengineering teams occur as a result of human action (management's actions) and are a medium for human action (obtaining the new knowledge to undertake the project, or carrying out a new set of roles and responsibilities).

However, as the themes stand there is no explanation provided to some of the actions that take place between them, therefore not providing a full understanding of the topic. For example, the organisational change that occurs has an impact upon the actions of management when forming the team. Adversely, the actions of management could be influenced by other factors such as the external ones. Such a relationship has been explored in the IS area by Orlikowski and Robey (1991) who support the view that information technology is a product of human action and it can also be used as a medium for human action based upon a structuration theory.

While these explanations are meant to provide the foundations to the new theory, the relationship between the various themes and practicality of the theory needs to be explored in order to obtain a full understanding. To demonstrate the application of the developed theoretical findings in practice, a model is developed.

To further explain that the reengineering teams are vital for BPR, which has its foundations in organisational change as explained earlier, the use of a model by Orlikowski (1993) which displayed the impact of CASE tools in obtaining organisational change, has been made. By using some of the ideas in that model, it is shown how the teams have a pivotal role in bringing the desired change.

The model is displayed in Figure 6.1, but before then, the term understanding has been used frequently and is a core part of this research. In the following sections, a discussion about the term 'understanding' and how it is being applied in this theory is given. Thereafter, the practical usefulness of the developed theory is demonstrated.

### 6.3 THE BACKGROUND OF THE TERM 'UNDERSTANDING'

The objective of this research is initially to understand reengineering teams in the context of BPR, and thereafter to develop a theory related to teams in a particular context, in this instance, BPR. There is a lack of specific theoretical framework to guide this sort of an analysis in the reengineering area. Although previous research in the general area of teams has conducted research into teams in context terms (Yeates and Hyten, 1998; Brannick *et al*, 1997), there has not been such research in the reengineering area and the intention of this research is to overcome this.

An implication of such a contribution is that whereas practitioners and academics in the reengineering area previously had to refer to literature from other areas to learn of the appropriate and required information regarding reengineering teams, they would not have to do so any longer. There would now be some theory encompassed of a framework or model in the reengineering area that emphasises areas requiring consideration. An initial attempt to describe the major components that such a theory will encompass has been made above.

An added implication of such a strategy is that since empirical evidence has also been collected and used to validate the theoretical evidence, there should be a basis of determining that the suggested areas are worth considering. As the area stands there is no basis of determining whether the obtained information from the other areas is applicable in the reengineering environment. From the knowledge obtained so far, the intention is now to propose a theoretical approach that can investigate the aforementioned areas. By doing so, a context specific approach that can be referred to and employed in the future can be developed.

In chapter 1, the term *understanding* has been also been utilised in the research objectives. In chapter 3 when referring to the research methodology, there was mention of the fact that an Interpretivist view that has a founding in hermeneutics is being employed within this research. Interpretivism occurs when data that research refers to as its own constructs are actually other peoples constructions of what they and their compatriots are up to (Geertz, 1973). Winograd and Flores (1987) utilised hermeneutics based upon the philosophies of Heidegger

and Gaddamer to understand the development of computers and cognition and this research intends to utilise similar thinking to form an understanding of the research results obtained so far. However, it has to be understood from the outset that whereas Winograd and Flores (1987) analysis concentrated upon computers, there was minimal involvement of computers in this research. However, our objective is still to understand the reengineering teams in the context of business process change and the common factor between this and the aforementioned research is the term *understanding*. Therefore, the thoughts and analysis utilised by Winograd and Flores (1986) will assist with the objectives of this research.

The term 'understanding' is increasingly utilised in this research and yet there is no clear explanation of what is implied by it. **Understanding** is defined as "1. The ability to learn, judge, or make decisions, 2. Personal opinion or interpretation of a subject,"(Collins Paperback English Dictionary, 1999). From this it can be seen that several definitions that exist for the term and both rather similar. Winograd and Flores (1987) concluded at the end of their research:

**"It is clear that (and has been widely recognised) one cannot understand a technology without having a functional understanding of how it is used. Furthermore, that understanding must incorporate a holistic view of the network of technologies and activities into which it fits, rather than treating the technological devices in isolation."**

(Winograd and Flores, 1987)

It must be emphasised that the ideas being expressed by these authors are being used, not the relationships between people and technology. The relationship that they examined was in terms of people and technology, whereas, this research is understanding the reengineering teams and their role in organisational change, two different contexts.

Utilising this view to this research, it can then be concluded that in order to understand the reengineering teams, there must be an understanding of the topic by considering the whole picture, rather than just considering parts of it. Therefore, to form a holistic and complete picture, the reasons for employing teams, what particular areas would have to be considered for forming the teams, the development and networks and activities impacting the teams would

have to be acknowledged. The nature of teams by itself cannot provide an understanding. A thorough study of issues such as how are the teams selected, by whom, their interaction, their purpose, benefits and disadvantages would progress towards forming an understanding. In other words, the actions and purposes of the team, of the organisation in forming the team, the reasons for its being have to be understood. This also implies that any means of thinking that is developed must include such issues within it.

#### 6.4. UNDERSTANDING THE PURPOSE OF THEORY GENERATION FOR THIS RESEARCH

Until this point, there has been a detailed analysis of the theoretical foundations of the area (Chapters 1 and 2) and investigations utilising the obtained information (Chapter 5). However, this way, the two remain separate areas without any particular meaning or purpose. The data collected from the case studies can serve the purpose of verifying the theoretical foundations and demonstrate that theory is also applicable in practice, however, that would be the end of the purposes of the research. As Keen (1991) noted, data by itself does not generate theories, instead theories are generated by the researchers (Nissen *et al*, 1991).

The objective of this research is to have a detailed understanding and to develop a means of better thinking regarding the reengineering teams. Most researchers utilising positivism tend to develop a theoretical framework or approach based upon the *apriori* constructs, thus providing some purpose and meaning to the research. Although an understanding has been discussed in the earlier section, relations between the various themes would have to be formed in order to provide a better and practical understanding. As it is, the areas that could be used to form a theory regarding reengineering teams have been identified. However, the discussion would not be complete unless a description of its practical use is provided. This way value is also added to the formed theory.

The reasons for choosing theory in the research as opposed to some other means such as developing a concept (this is in the context of Walsham's (1995) suggestions portrayed in Table 6.1) is that theory provides explanations and understanding in generic terms. The generation of

theory would also be compatible with the research methodology and objectives stated in chapter 1 of this research. It also has to be understood that theory is not a set of generalisations (Weick, 1989). Instead, a theory is described as follows: **“as generalisations become more hierarchically ordered, behaviours and structures that are the focus of the generalisations become more generic, and as the range of specific instances that are explained becomes broader, the resulting ideas are theory”** (Weick, 1989). Theory is also viewed to use **concepts** and the concepts are related by means of **statements of relationships** (Strauss and Corbin, 1990).

Until now, **theory** has also been **guiding the design and data collection** and was also involved in the **iterative process of data collection and analysis** of the research. There are three uses of theory in organisational research (Eisenhardt, 1989) and the aforementioned uses just described are two of the three stated by Eisenhardt (1989). It follows then from the three distinct uses that Eisenhardt (1989) foresaw for theory that it is employed as a final product of the research. Since theory in interpretivism is subjective and based upon the researcher's views, Walsham (1995) refers to theory in this context as **“intersubjective theory.”**

This implies that theories in interpretivism are not viewed as correct or incorrect, rather they are observed to be interesting or less interesting means of viewing the world. This is something that ground theorists also believe in. **“Theory in grounded theory is not being verified as in verification studies and thus never right or wrong. As I said... New data never needs a disproof, just an analytic challenge”** (Glaser, 1998). Theories are viewed to be interesting in the first instance to the researcher and in the second, to others (such as other researchers) (Walsham, 1995).

As stated in chapter 3, qualitative data has its foundations in interpretative research. As noted earlier in chapter 5 and several other places, Walsham (1995) observed that **“interpretative researchers are not saying to the reader that they are reporting facts; instead they are reporting their interpretations of other people's interpretations.”** A measure that can be applied to determine whether an interpretative interpretation is good is to determine whether it is logically consistent, subjective and adequate (Cavaye, 1996). Cavaye (1996) explains that logical

consistency implies that the explanation of behaviour must be compatible with the principles of logic. The subjectivity in this instance “refers to the fact that the study must reflect meaning and understanding according to the actors in the research setting” (Boland, 1985). So far, there might have been some logical consistency because some meaning to the earlier interpreted data has been provided. However, a full understanding has not been made, particularly if the earlier stated assertion by Winograd and Flores (1986) is adhered to.

For an interpretivist study to be adequate means, “that the researcher must show evidence of grasping and explaining the rationale behind actions/processes, however irrational they might appear” (Lee, 1989). Walsham (1995) observed that to determine the worth or ‘test’ of an interpretivist theory, the theory could be subjected to verbal and written discourse, a view also shared by Orlikowski (1993). The process of testing could include comparing, evaluating and improving the proposed theory, which could then lead to broader judgements of the theory's value to be made. “Intersubjective theory approaches” are then developed and they may be of more value to a broader group of people than just the researcher. This research has demonstrated that a grasp of the actions/processes behind the reasoning has been obtained. What can also be established is that this is more of an interest to the researcher as a proof that an understanding and relevance is being achieved. However, to illustrate the relationship which would make it easier for everyone to understand has been difficult since there is no fundamental basis upon which the data could be related. For instance, Orlikowski (1993) used structuration theory to explain the relation between the undertaken activities and processes.

In the earlier sections, an understanding from an interpretivist viewpoint has been undertaken. The research attempted to identify the reasoning behind the formed interpretations. As Patel (1997) and Orlikowski (1993) observed, an interpretivist theory could be subjected to a verbal or written discourse and that was the route applied in this research. Although it is not the main objective of the research, the explanations and reasoning that has been formed should be applicable to practice in order to demonstrate its relevance. For this, a model that has been used in a different context altogether is developed and shown in Figure 6.1.



### 6.5 FORMING A MODEL THAT EXPLAINS THE THEORY

From the previous chapter it can be seen that data collection focused upon a number of topics including identifying the members of the team (key players), the role of management, and the process of forming the team. Information was also sought upon the corporate strategies that the organisation pursued in the face of the reasons that made the organisation undertake BPR, the selection process utilised in forming the team, and the preparations that the organisation underwent in order to introduce the team.

As also observed, the data analysis in the previous chapter was only in the initial stage where the analysis was conducted to provide an understanding of the theoretical constructs used in the literature survey (Chapter 2). The data analysis conducted also verified that theory (used in the context of Chapter 2) is applicable in practice.

To relate the obtained information in a useful manner and subsequently making a more substantial theoretical contribution was the next aim of the research. The above explanations regarding the emergent themes in this research assisted in establishing a theory, however, the next objective was to validate the theory and demonstrate its use in practice. For this, a model developed by Orlikowski (1993) to explain CASE tools as a form of organisational change was used. That model was formed using mostly grounded theory's coding and constant comparison method and some of that theory was also applied in this research.

When examined closer, it became evident that many of the theories and variables found in the study were applicable to the data findings of this research. Confirmation was further obtained by scrutinising the obtained information and comparing to Orlikowski's (1993) model. For instance, the changes in the organisational structure as a result of the forming of the team were obtained by referring to the interpretations obtained by the researcher. Once again, a triangulation of both the data sources and data collection methods was used to confirm that the conclusions (categories and concepts) were a realistic explanation of the case. That is, when determining the changes that incurred as a result of the forming of teams, confirmation was obtained by referring to the documentation that was obtained from the organisation (analysis

and management reports) and the results of the interviews, which is the emergence of triangulation. It has to be understood that although Interpretivism was the main foundation, hermenutics was also being used and so to obtain a 'full' picture, triangulation turned out to be helpful. After assessing that the whole picture, a decision was made to apply and understand how the data from this research can be used in the model and result in a more interesting theory and understanding for this area.

To determine whether the model would be suitable for this research, several prior steps had to be taken and they are described as follows. The steps taken in forming the model resembled some of the grounded theory methods of constant comparison and the forming of categories and concepts as followed by Orlikowski (1993).

The constant comparison method particularly proved to be beneficial as it allowed the research to trace its steps and examine how the variables and theories that have been formed relate to one another in a sensible way. However, on the other hand, the development of categories and concepts allowed the data to be arranged in a systematic manner, rather than just fitting the data without any forethought. Therefore, although not a completely grounded theory technique is being used, some of the techniques used in it are being applied and therefore, the research had to consider some of the guidelines used in that area.

Besides determining whether the proposed way of analysis can occur, the grounded theory method of constant comparison offered was viewed to be appropriate due to the following reasons.

The results of the theory provided a **fit** to the data. That is, the developed theory fitted the pattern followed in the data (for this, the results obtained in Chapters 4 and 5 were particularly useful). Second, the concepts and categories that were developed were viewed to realistically portray the activities and interaction amongst the participants and was viewed to be **workable** (this can be verified by the descriptions provided to Figure 6.2). Third, the theory was viewed to be **relevant**. Since there is no theory that has been developed as yet to describe and discuss the impact of reengineering teams when introducing BPR. It was then felt that the developed theory should highlight aspects such as what individuals or external factors lead to the formation of the

team. Fourth, the new forms of data (collated from this research) **modify** the theory (formed by Orlikowski, 1993).

It has to be clearly understood that this research is not verifying the earlier developed theory of Orlikowski (1993). Rather the purpose here is to understand and apply the model to the accumulated data and earlier suggested developed theory. This is why it being repeatedly mentioned that this research has not used the 'pure' form of grounded theory. Rather, certain techniques are being employed. The criteria of **fit, workability, relevance and modifiability** are used by Glaser (1998) for judging and doing grounded theory and an attempt is now made to describe how particular features of the grounded theory method are applicable to this research.

To confirm that part of grounded theory is also compatible to interpretivism, Orlikowski's (1993) reasoning is used. Orlikowski (1993) showed how three criteria, **induction, processual and contextual**, evident in interpretivism are also found within the grounded theory area and a similar approach is also taken in this research.

Grounded theory "is an **inductive** theory discovery methodology that allows the researcher to develop a theoretical account of the general features of a topic while simultaneously grounding the account in empirical observations or data" (Martin and Turner, 1986). Since there has been no theory that has been developed to investigate the role of reengineering teams in obtaining business process change in the business process change or teams areas, then such a theory seemed most appropriate. Chapter 2 described how theorists such as Galpin (1996) have developed models that display the human side of change, however, they are not considered to be accurate accounts of the issues involved in adopting and using reengineering teams.

Second, the conditional matrix, another part of grounded theory, asserts that in order to understand an event, all the variables affecting the event have to be examined. Subsequently, actions at an individual level, international, organisational, or national levels all have to be considered. The methodologies regarding organisational change (Scott-Morton, 1991; Leavitt, 1965) emphasise the role of the **organisational context** in obtaining BPR, thereby supporting the view that in order to understand the reengineering teams, the organisational and other

contexts would have to be understood. Additionally, hermeneutics research as conducted by Winograd and Flores (1987) also supports the view that an emphasis upon the whole environment to understand an issue must occur, a view also supported by grounded theory.

Third, the data findings from the case studies display that a processual change occurs and yet an emphasis such as this has not been applied in the BPR or teams area. By undertaking grounded theory facilitates “the generation of theories of process, sequence and change pertaining to organisations, positions, and social interaction” (Glaser and Strauss, 1967).

Fourth, from the analysis, it can be confirmed that reengineering teams are pivotal for a business process change (Hammer and Champy, 1993; Davenport, 1993) and that they are not formed naturally as part of a change action. Rather they occur as a result of a series of human actions. Thereafter, the teams are a medium for the human actions (management) since they are provided with the knowledge, skills and attributes and ‘additional power’ to carry out the work. Thus supporting the claim that a structuration theory developed by Giddens (1984) and utilised by Orlikowski and Robey (1993) is applicable to this research.

Establishing whether the grounded theory method is applicable to this research was amongst the first steps leading to the data analysis. The next was to relate the developed theory using the framework, a task accomplished in the next section.

## **6.6 GENERATING THEORY USING A PREVIOUSLY DEVELOPED MODEL AND THEORY**

Before proceeding to the data analysis results that will be used to form a new theory to the business process change and teams area, the theory established by Orlikowski (1993) in the form of a model will be described. This is to identify some of the areas being investigated and how similar or different to the original model is the one created by this research.

Grounded theory is one that is “discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon” (Strauss and Corbin, 1990). The method involves employing a systematic set of procedures to develop an inductively derived-grounded theory about a phenomenon. Since there was no prior theory to

verify or validate and the above explanation provided details of what elements should be contained in a theory regarding reengineering teams, this method's reasoning seemed most suitable for this research.

This research used the constant comparison method of grounded theory to understand the applicability of the theories and the methodological framework of Orlikowski (1993). Therefore, it may seem that there are some similarities in some of the concepts and categories.

It has to be understood that the theory developed in Orlikowski's (1993) case was for adopting and using case tools as organisational change, whereas this one is investigating the issues with regards to reengineering teams in obtaining BPR. This research is providing an understanding of how the reengineering teams that are viewed as an essential component for the implementation of BPR are used to obtain the business process change. It also describes the changes that occur within the organisation and environment in order to operate and obtain the required results.

One of the initial steps to be undertaken for the method is to form a research question. Although there are some research objectives stated in Chapter 1, they are quite broad and to narrow it for the purposes of the development of theory, a research question is required. In the face of this method being used, the research question is, *what are the critical issues that shape the organisational changes associated with the adoption and use of reengineering teams in the context of business process change?*

Thereafter, the iterative process of data collection, analysis, and coding (an essential part of the grounded theory process) as suggested by Glaser and Strauss (1967) continued. Orlikowski (1993) used the process of open coding where the data is categorised, assigned properties and dimensional locations. An example of this is provided using the data obtained from the cases. For instance, the data displayed competitors and changes in the environment as being reasons for organisations to undertake BPR. This was initially noted on paper and other factors were searched for in the interviews.

Axial coding then puts this new form of data together by making connections between a category and sub-category (Strauss and Corbin, 1990). Continuing with the earlier explanation,

the research then formed the category of environmental context and it was there that the data regarding competitors was placed. There were some areas identified from the data analysis that required the forming of new categories and sub-categories and their relationships and the coding procedures just described were used in forming them. Subsequently, Figure 6.1 was developed.

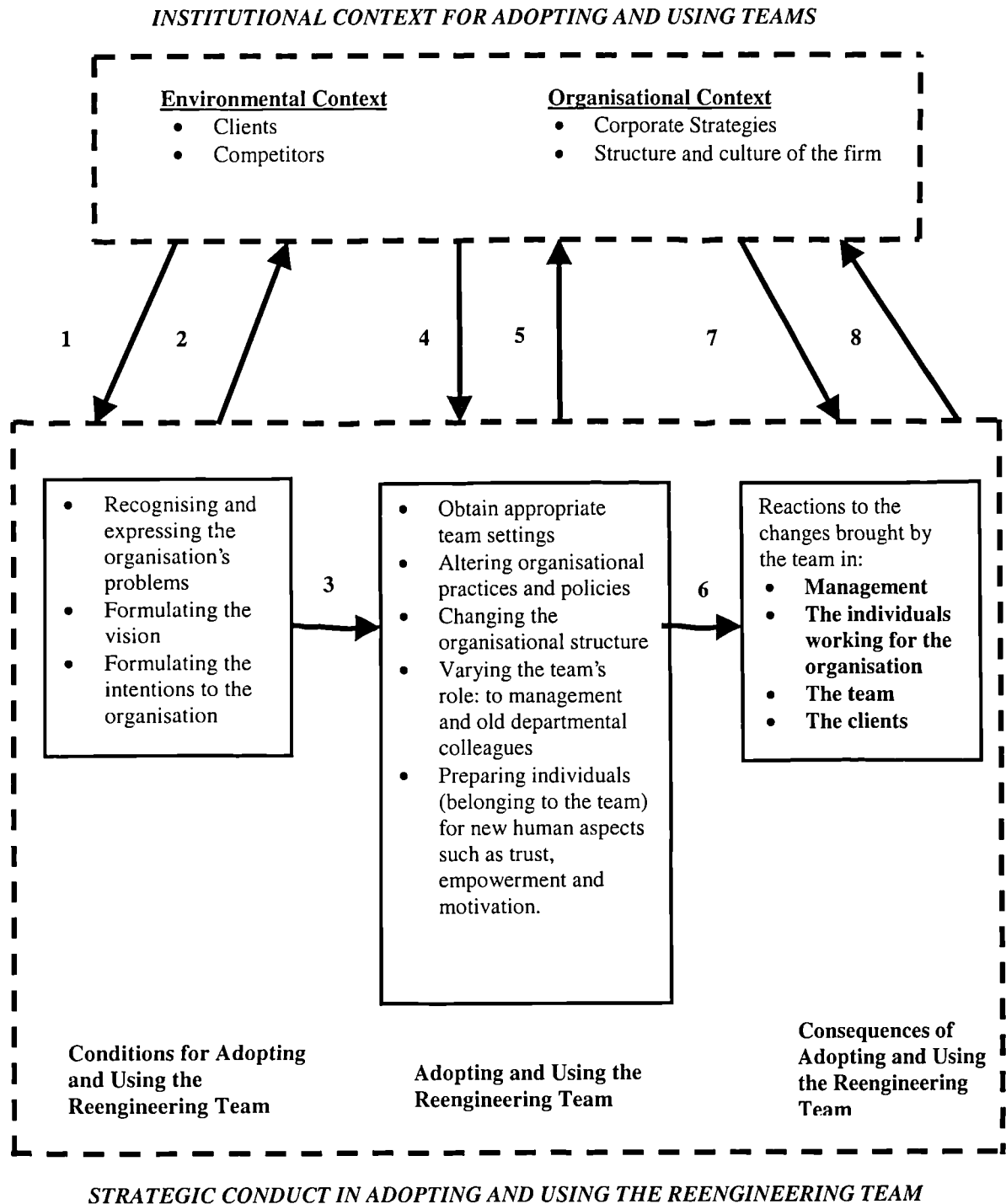


Figure 6.1 A Model describing the Developed Theory about Reengineering Teams used in the Planning and Analysis stages

### 6.6.1 EXPLAINING THE MODEL REGARDING REENGINEERING TEAMS

To provide the reader with an understanding of the model, the following 'walk through' is provided. However, before that an assumption about the organisational process is provided. The organisational process followed is influenced by the structural theory of Giddens (1984) and eventually used by Orlikowski and Robey (1991). The theory is based upon the premise that interaction between the human actions and institutional contexts take place over time. Therefore, the two areas, human actions and institutional contexts are no longer two separate areas of investigation having no impact upon one another. Instead they do have a relationship with one another, but over a length of time. Thus making the assumption that human actions and institutional contexts have a relationship over time, the research then determined how the institutional context could be influenced by the actions of competitors or clients. By clearing this matter, the 'walk through' can now proceed.

Initially management is influenced by the institutional context that contains the environmental and organisational context to conclude that there is a problem that requires its attention (arrow 1). In response to this, management foresees a change in process is required. Since the task for obtaining the change is large, management finds it more appropriate to form a reengineering team. To inform the team of management and the overall organisation's intentions, the intent of the organisation is presented in the form of a vision and the problems that the organisation is facing are developed (in the box labelled conditions for adopting and using the reengineering team). The information for these actions is also derived from the institutional context (arrow 2).

After formulating the vision that describes the intentions of the organisation and describing the problems, management's next action is to begin preparations to form the team (arrow 3). To form the team, certain preparations are required (in the box labelled adopting and using reengineering teams) for which not only are management's actions required, but the institutional context. Of the institutional context, the presence of the organisational context is more prominent (arrow 4).

Due to the formation of the team, an impact upon the institutional context also takes place as different organisational structures and cultures arise (arrow 5). For instance, to form the team, members from different departments would be required, therefore causing a change in the organisational structure. This would also imply a change in the culture of the organisation since team members would have to be acquainted with different skills in order to undertake the task. The external environment is also slightly affected since some of the team members could have been in direct contact with the clients and competitors, but since they are going to be working upon the project, that contact will be slightly weaker, thereby causing a change for the institutional context.

The actions undertaken for the adoption and use of the teams, in turn result in various experiences and outcomes for the key players- the management and the team (labelled consequences of adopting and using reengineering teams) (arrow 6). These actions are not undertaken in a vacuum, but are influenced by the institutional context in which they occur (arrow 7). Similarly, action taken at this stage by the managers and team will influence the institutional context (arrow 8), either reinforcing or changing it.

### **6.6.2 ILLUSTRATING THE RELEVANCE OF THE MODEL TO THE OBTAINED EMPIRICAL EVIDENCE**

The explanation to the model has been presented, but the theory has not been interpreted in the research's terms and in this section that process will be undertaken. This is achieved by using the data collected from the cases, and it was decided that case study 1 should be used. There was no particular reasoning behind this, apart from that being the first case used in the research and a decision was made to follow the same pattern. Further, explanations of the model in terms of all the cases are not required because the descriptions are the same in all elements except for when examining the institutional and organisational contexts. The organisational and institutional contexts are different in every case, since every organisation has a different policy, or organisational structure, but otherwise the approaches adopted to form the teams are the same



and that is why then providing descriptions in terms of the other cases would have been a replication.

The explanations to Figure 6.1 are explained using the data collated from case study 1 and classified in the same way as the earlier explanation and as illustrated in the figure. Thus, just as in Figure 6.1 and the provided explanations, the institutional context is the foremost point, and that is where this research's explanations also begin.

### **Institutional Context**

#### **Clients**

The organisation is a global one that is renowned in the international hospitality and leisure sector. The division of the organisation that this research investigated was the manufacturing and retailing of branded drinks (alcoholic and non-alcoholic) and hospitality sections. Amongst the clients that it caters to are public houses, supermarkets and off-license agencies. Thus, the list of clients could include retailers such as Sainsburys, Tesco or Threshers. Due to the products that it sells, the list of clients that it has varies from between large to small and medium enterprises. However, ultimately, their clients are members of the public and to ensure that direct contact is maintained with them, the organisation has purchased multiple chains of restaurant and public houses. This also accounts for the organisation's presence in the hospitality sector.

Due to the nature of the business, the organisation continually investigates its clients' preferences and tastes. In the 1990s, it was noticed that customers had begun to prefer drinking at home and as such, the sales of drinks reduced. Additionally, a merger that was blocked by the Government had made the organisation examine its internal operations and consider reducing its cost base. As a result, it was decided that the organisation had to undergo a radical change and as such, BPR was viewed to the ideal solution.

### **Competitors**

As the organisation offers diverse products and services, the competition it faces is also of a wide variety. From large, international hotel chains, such as the Forte and Hilton groups, to organisations that specialise in the retailing of drinks such as Whitbread plc and Scottish and Newcastle plc. However, the research was concerned about the drinks section and as such competitors of the aforementioned only specialising in the drinks sector would be of concern. Facing stiff competition from a variety of competitors has made the organisation to become sensitive to the demands of the consumer to the utmost. Thus, the organisation is always undertaking wide variety promotions such as distributing their products within public houses or supermarkets and offering huge discounts to the retailers in return.

Not to be outdone by competition and to determine its clients' views, the organisation undertakes lots of surveys, in the form of questionnaires, workshops and meetings that are analysed to determine the best measures to attract and retain the existing clientele. Other means of maintaining its stronghold in the market are achieved by visiting competitors premises that are open to members of public and determine improvements from there. Additionally, a close eye upon media interest news or stories is maintained.

### **Corporate Strategies**

As in the case of any organisation, the aim of this organisation is to increase profits, however, ensuring that the customers and workers are satisfied to the utmost does this. For instance, customers are regularly surveyed to identify potential areas of weaknesses and seeking measures to overcome them. Workers are also kept happy and referring to any of the information regarding the organisation reflects this. Worker's priorities are utmost and the organisation works hard at making all the parties happy.

The strategy that the organisation applied when undertaking BPR was to make certain that some costs that were viewed to be on the increase should be cut while seeking an increase in profits. At the same time, a priority was to ensure that there would not be exceptionally huge

amounts of job losses. If large job losses occurred, there was a surety that panic within the sector, which could also be reflected within their sales, could result. Amongst the other strategies were to select suitable means of selecting the teams. This included having a close collaboration with the Human Resources department who had information about the personnel of the organisation.

### **Structure and Culture**

Control of the whole organisation is exercised through an executive committee located in the headquarters. The strategic business units located in different parts of the country have senior members who report directly to the committee, and are empowered to undertake many major decisions. Presently, the organisation is in the form of a UK enterprise hierarchical structure, with almost 4 layers of hierarchy in almost every department of the organisation. There is no definite organisational chart at present, and this impression regarding the organisational structure has been formed as a consequence of the familiarity to and descriptions provided of the organisation. There are steps being taken at present to move the existing strategic units that have a unique identity to one being under a central establishment.

The culture of the organisation has been emphasising the quality of working life and career development and this can be confirmed by visiting the organisation's web site and from the conversations with personnel belonging to the organisation. The organisation promotes intensive training and education programs for newly recruited and long serving employees and recognises their hard work. The organisation has established different means of ensuring the well-being of its personnel and some of them include, bonus schemes that are given to individuals to recognise their efforts, or flexible working hours.

There is no rigid career path structure to progress to senior management, however, for such positions the individuals are expected to have a wide skill and knowledge base of the organisation. There are 'local' career paths that can also be followed. For instance, in sales, one

could show 3 levels of seniority that could be pursued, but again job sales vary considerably given the variety of offered products.

Given that the organisation is a promoter of training and education, it can then be seen how the reengineering team must have had prior training (in the form of induction) for a week. Also how the team members were equipped with the required skills and knowledge to tackle a project of this size.

From these discussions and the earlier stated 'walkthrough' of the model it can be seen how the actions within the institutional context influence the conditions required by management for adopting and using the reengineering teams (arrow 1). The information that is given in the conditions required by management for adopting and using reengineering teams in turn, influences the institutional context (arrow 2), and illustrated in the following description.

#### **Conditions required by Management for Adopting and Using the teams**

The 3 actions by management assisted the team with the task at hand in this category. They were crucial for the project as they relayed the expectations of management to the team. If they were not there, the team would not be able to form impressions and views about the problems facing the organisation at present and what was required of it.

#### **Recognising and expressing the problems faced by the organisation**

In the 1990s, the merger with another organisation was the initial reason for the organisation to take an in-depth examination of its current position in the market place. Added to that were results from the consumer end displaying that sales were on the decline as a result of a change in consumer taste and preferences. This caused concern amongst the senior executives of the organisation. Ultimately, one of the chief executives concluded that change was the solution to the approach and for this purpose suggested that a business process change was the best alternative to utilise.

### **Formulating a vision**

A vision that listed that the customers' expectations regarding service were not being met, and were below the organisation's 'ideal' was initially formed. Encompassed within the vision was also the note about how the organisation would meet the challenge with confidence and obtain business benefits both for the organisation and its customers. However, there were other expectations that were listed during the initial stage that the team was introduced to as a result of the vision. As the project was dealt with and more knowledge regarding the organisation was obtained, the team formed realistic expectations, which were relayed to the Board and after several concessions and compromises, amendments to the original vision, were made.

### **Formulating the intentions of the organisation to the team**

Formal presentations and seminars were used to inform the organisation and team of the intentions of management. The presentations described the affected department's operations at present, and the dissatisfaction of the customers, obtained through interviews and surveys that are organised on a regular basis and the proposed changes. It was reasoned that in order to overcome the problems, a radical change needed to be undertaken. For this, a team that would be multi-functional and skilled was required. The team would consist of individuals belonging to the organisation since they were familiar to the organisation. This also meant that there would be a change in the organisational structure since the jobs would be vacant and either secondments would have to be arranged or temporary positions would be established. Teams are becoming a common occurrence within the organisation and becoming part of the culture since teams are also being used for other projects in various departments of the organisation. Thus, issues such as the bonus schemes to be established and when they should be implemented are not exceptional issues to be dealt with for the organisation

The above-described meetings did not contain a lot of detail about the activities required to obtain the change. This was done during the training periods where the team was provided with a detailed picture of management's intentions.

It can be interpreted that the actions undertaken at this stage are affected by the institutional context, particularly, the organisational context one, since the information for the tasks undertaken at this step is obtained from that particular area. Once these 3 actions are undergone, management's next task is to form the team (arrow 3) and for that certain changes have to occur that are described as follows.

### **Adopting and Using the Reengineering teams**

The team was formed as a result of well thought processes and activities and they are described as follows:

### **Obtaining the appropriate team settings**

For this step, the initial activity was to decide about the selection method to be used for the formation of the team. Thus, instead of randomly selecting team members, collaborations between the Human Resource Department and management were formed and appropriate individuals were chosen. The criteria used to decide upon suitable candidates was the knowledge of the organisation and departments, or skills such as analytic and presentation ones.

Facilities where the team would work and train were established. Arrangements with the departments where the individuals worked were also made. Therefore, managers of departments were consulted and thereafter, the individuals were informed of their new roles. Secondments or temporary positions were arranged for the individuals replacing the team members.

### **Altering the Organisational working practices and policies**

After forming the team, management had to allow a change in the working practices and policies within the organisation. Prior to working in the team, the individuals had knowledge only about their own departments, thus it was considered to be a rather closed system.

Information about other departments including the workings or operations of other departments were not known. Being part of the team allowed the members to form a broader perspective of the organisation.

To demonstrate that there was trust in the team and to expedite the decision-making techniques within the organisation, the members were 'empowered' with more decision-making authority. In this instance, the team members were empowered to deliver designs that would fundamentally change the operations of the services offered to customers.

Rewards and recognition systems were established for the team. However, this was effective after the project was completed and was allotted in the form of a bonus in addition to the usual pay packet. Training is something that is deeply entrenched in the culture of the organisation, but in this case it was different. Training was undertaken at locations away from the usual work places. This step was taken in order to prevent the team members from having any direct or indirect influence from their usual working groups.

Providing information about the required project management techniques, BPR, mediation and team building skills were some of the activities undertaken during the training period. There were eight members within the team with no other assistance in the form of mediators or external consultants. After the training, the team began their task. For this, they visited the departments of the organisation and obtained as much detail about the operations and applications as possible. This was something contradictory to the usual working practices since prior to BPR the members were more engulfed in a vacuum where knowledge usually consisted about the occurrences of their departments.

### **Changing the Organisational Structure and Culture**

For the team to work together, departments also had to endure change in practical terms. In some instances, temporary promotions were assigned and if this involved a shift from an ordinary, daily chore to a decision making one, changes in responsibility also occurred. In

diagrammatic, hierarchical terms, the change was not evident. The change was assumed to be a temporary one; therefore, the modifications in the organisational chart did not have to be shown.

For the team itself, project milestones were established using the developed project management techniques and used to check that the work was completed according to the expectations. This was not a constant task, but at the completion of a task, this activity was undertaken. Usually the team was on schedule, but when the deadlines were extended, the management was informed of this decision and a new date of completion would be stated.

### **Varying the role of the team with regards to management and old departmental colleagues**

Contact with old colleagues during the work hours was reduced. As mentioned, it was meant to keep the team concentrated upon the task at hand and preventing the influence of external factors (such as queries from the departments).

The relationship with management changed as a result of an individual being part of the reengineering team. Prior to BPR, the individuals may have been recognised and known within the department, but with the organisation being a large one, they were not known to management. In this new role, the team members became known to management and not only that but they were in a capacity of decision making in their own right, which was an implausible situation before BPR.

### **Preparing individuals (belonging to the team) for new human aspects such as trust, empowerment and motivation**

When individuals who are selected to become part of the team begin the task at hand, they are prepared beforehand for some of the new powers to be placed upon them. For instance, the salesmen who were going to be equipped with laptop computers that allowed them to obtain and provide information there and then rather than travelling back to the office, as previously and then getting the required information, thereby causing delays, was avoided. However, for this new role, the individuals had to be prepared beforehand as this was a dramatic change and



this also provides the reasoning for the earlier explanation of 'Obtaining appropriate team settings'.

The other behaviour mentioned is motivation and although it is considered to be an inner feeling of an individual, it is also instigated by external factors such as pay or recognition, which then obtains feelings of esteem and belongingness (as explained by Maslow, 1943). In this case motivation was promoted by the fact that despite the outcomes of the project, there was a job to return to and this was a privilege that was not available to every member of the organisation. However, since this condition arose, once again preparations for this also had to occur since department heads and senior executives had to get together and think of suitable incentives. Thus, once again, preparations have to take place in order to achieve motivation. The team was placed with the trust of management when 'empowered' to their new responsibilities and for this as just mentioned, there were prior preparations and that is why this category is most suitable.

From this discussion it can be noted that the actions taken by management when forming the team were influenced by the institutional context (arrow 4), particularly, the organisational context. In turn, the actions taken at the box labelled 'adopting and using the reengineering team' have an impact upon the organisational context (arrow 5), for instance upon the organisational structure and practices.

The activities undertaken to adopt and use the reengineering team, consequently result in various outcomes on the different stakeholders of the team (arrow 6) and this issue is dealt with in the box labelled 'Consequences of adopting and using the reengineering teams'. The impact upon management, the team, clients and individuals of the organisation is dealt with at this point.

Since the ideas expressed in structuration theory are being used, it is shown that the actions taken when adopting the team have been influenced by the institutional context; therefore, when examining the consequences, the institutional context has to be placed in the picture (arrow 7). The consequences in turn affect the institutional context, both the external environment and the organisational one (arrow 8).

### **Consequences of Adopting and Using the Teams**

The consequences of the adoption and using of the teams was assessed in terms of the client's, Management, individuals working within the organisation and the team itself's reactions.

#### **Client reactions to the consequences of adopting and using the teams**

Although there was a relationship between the team participants and clients, the absence was not felt. This was due to the organisation either involving the clients in an indirect way with the tasks of the team (mainly via surveys) or having replacements that could cope with the tasks at hand and as such then there was no reason for any bad relations to develop.

#### **Management's reaction to the consequences of adopting and using the team**

Since management was the major supporter of the team, it was supportive of the decisions made by the team. This was particularly evident at progress meetings held between the organisation, the team and management, where support for the activities of the team was given in the form of encouragement.

#### **The organisation's reactions to adoption and using of the team**

The members of the organisation who had to replace the team members obtained a learning experience of a different job to their own. Otherwise, the organisation was aware that there were going to be changes within it that was going to have an impact upon them. Some people were apprehensive about the results, particularly with regard to their own jobs and the changes that were coming alongside.

### **The Team members' reactions to the Adoption and Using of the Team**

In general the team members were enthusiastic about the project and this was a major factor for the motivation to the project. Reflecting back to the period, it was noted that new forms of skills such as team development skills, the experience of working with a change management approach that brought a lot of attention were some of the benefits of working in the team. On the other hand, the disadvantage of being removed from the daily workings of the original department was acknowledged, but it was not a major issue of concern.

This concludes the discussion regarding the newly formed theory. In the next section, the conclusions regarding it will be formed.

### **6.6.3 CONCLUSIONS WITH REGARDS TO A THEORY FOR REENGINEERING TEAMS**

A theory has been formed using some of the principles of the grounded theory method. This theory encompassed many of the themes that have been formed from the data analysis and used them in a practical way, rather than just stating what the constituents of the theory should be.

To demonstrate that the theory is applicable in practice, the data collected from case study 1 was used to analyse and describe it. By using this theory, many of the themes viewed to be applicable to this research were found. For instance, the processes, and planning undertaken in forming a team and the consequences of such a team were all stated in the descriptions.

The theory is beneficial as it explains the steps that an organisation would have to undertake to form the team, something that has not been attempted before. Also details about the activities are more central in this theory to the understanding rather than focusing just upon the content of the human and organisational aspect. The model is particularly helpful since a diagrammatic explanation of the changes and activities, rather than just words are provided. Thus, the usage of the theory and model should go a long way in fulfilling the gap in the areas of teams, organisational change and BPR.

Having considered the theoretical contribution that this research made, the following sections will investigate the implications of the theory for the research and the BPR area.

#### 6.6.4 IMPLICATIONS OF THE FORMED THEORY FOR THIS RESEARCH

The main objectives of this research were stated as:

*Understanding the reengineering teams in the context of business process change. The outcome of this understanding should assist in forming a means of better thinking regarding reengineering teams. At this point, it is declared that this research is primarily concerned with reengineering teams rather than business process change.*

*Secondly, an understanding about the organisational change approach followed within the organisations undertaking BPR is obtained.*

Understanding in the context of this research is based on two main assumptions. First, there has to be a clear functional understanding of the issue and how it is used and second, to have a complete picture of understanding means that a holistic view of the networks and activities into which the issue fits into must be gained (Winograd and Flores, 1987).

Applying these assumptions to this research, it can be observed that using the grounded theory method at this stage allowed the research to demonstrate the pivotal role that supporters of BPR (Hammer and Champy, 1993) and Davenport (1993) have been claiming along. That is, the reengineering team is critical for the implementation of BPR. Second, by incorporating the institutional context with the other parts in the model, the role that the organisations and external factors upon reengineering teams and vice versa were clarified.

Also an impression of the role of the reengineering teams as change agents can also be obtained. That is, the team is shown to be undertaking tasks in order to fulfil the expectations of management on the basis of the vision, mission and formulated problems. However, to become change agents, the team is shown to require a series of activities, which include obtaining information about the techniques to be used in the project, the affected areas of the organisation and BPR.

Additionally, the theory was beneficial in explaining the organisational change approach that is followed when considering the formation of reengineering teams. This is another view that is missing from the BPR or teams area.

#### **6.6.5 IMPLICATIONS OF THE THEORY FOR THE BPR AREA**

This research was begun because it was found that researchers in the BPR area claimed that reengineering teams are critical for the implementation of BPR, however, there was very little information regarding the teams. Attempts to overcome the gap began by firstly identifying some issues that could be associated with such teams. Issues such as the size, interaction amongst the teams in terms of conflict, development of the teams were analysed to obtain a detailed overview of the area. However, the question that still remained to be understood is what is the role of the reengineering team in the context of business process change.

By using the ideas expressed by Giddens (1984) and Orlikowski and Robey's (1991) structuration theory it was shown that the aforementioned claim made by the BPR researchers is valid. Thus the theory shows teams as change agents who fulfil management's expectations, and the several activities and issues that need to be considered when forming the team. Thus, the claims made by the established researchers in the BPR area are also supported by empirical evidence. By undertaking this research, BPR researchers can now point to some theory that will demonstrate the process of organisational change that is assumed to be an underpinning of the area and other issues related the formation of the theory.

#### **6.7 SUMMARY**

The aim of this chapter was to examine the contribution that this research made to the areas of concern, namely, reengineering teams and business process change. The contribution was made in the form of a theory that is also applicable in practice. The chapter began by

examining the areas that would be applicable to the development of the theory by forming some themes. The themes that were developed were in terms of organisational change, the human and organisational aspects and the reengineering teams. These were viewed to be essential constituents for the newly developed theory. However, identifying the main factors of the theory was not considered enough.

It has been noted that a holistic picture should be presented in order to form an understanding. Based upon that assumption and also that there was not a 'fit' of the pattern to the data, an earlier developed model by Orlikowski (1993) was used to demonstrate the applicability of the theory. This model highlighted the change process that an organisation underwent when forming a reengineering team, and the consequences of using the team upon the key players-namely the team and management. This was viewed to be the main contribution of the research to the area. The implications of the theory for the research area and practice were also given in this chapter.

## 7 SUMMARY AND CONCLUSIONS



### 7.1 INTRODUCTION

This chapter provides a conclusion to the results and findings of the research presented in this dissertation. It begins by providing a summary of the endeavours pursued in this dissertation by reviewing the aims and objectives of each chapter. Thereafter, a discussion of the research contributions and achievements in terms of the underlying disciplines and subject areas is undertaken. Following this is a review of the future directions that the research findings. A discussion about the boundaries of the analyses and a critique of the findings concludes the chapter.

## 7.2 SUMMARY

The dissertation began by providing an introduction to the management change approach BPR, the role of human and organisational aspects in the approach and teams in Chapter 1. The chapter begins by explaining how change is a prospect that almost every present organisation faces. To cope with this, organisations have been considering various assorted change approaches through time including Just-In-Time manufacturing and Total Quality Management. However, the expectations that organisations had from the approaches were not fulfilled, therefore, organisations searched for more adequate approaches. In the early 1990s, researchers foresaw the potential for BPR and began supporting the application of it within organisations. An overview of the approach from a theoretical viewpoint was also provided in this chapter.

The emphasis of the literature published upon the approach was upon the fact that BPR could deal with the changing role of IT, processes and the various definitions regarding the approach that displayed the existence of various disciplines and its changing face. For instance, the definitions provided by various authors displayed the existence of relevant theory from the organisational behaviour or project management areas.

The chapter also identified how the application of BPR has led to high rates of failure and became a major issue to contend with. Since BPR is still being encouraged and pursued within organisations, the major flaw in the area has been identified as the failure rates and the chapter then began to consider *the reasons for the failure rates*. *The literature review for this question* displayed several reasons for this, a major one being the fact that the human and organisational aspects have been forgotten or ignored. Teams are made of people and they have many issues coupled with them and that is how the research related the human and organisational aspects with the teams undertaking BPR.

This research was conducted on the reasoning that there is a need for more in-depth investigation into the theory surrounding reengineering teams. Part of this emerges from the fact that there has been very little that has been published about reengineering teams and the other is



that practitioners in the BPR area are searching for theory regarding reengineering teams. A claim supported by recent publications published by organisations such as ProSci (1999).

The focus upon the role of IT and processes in the BPR area may overlook and fail to understand the reengineering teams, consequently the human and organisational aspects surrounding reengineering teams. This also implies that the chances of failure increase since the human and organisational aspects should also be understood. Additionally, the chapter identified how little research has been undertaken to understand the reengineering teams in the context of specifically BPR and the type of organisational change that BPR obtains and these two issues formed the main research questions surrounding the research. Rather than just identifying this issue in theory, the research began to consider how this can be demonstrated in practice and selected three different organisations for this purpose. The research methodology that would be utilised to pursue the objective was also briefly discussed within the chapter. An overview of the chapters contained within the dissertation then concluded the chapter.

Chapter 2 offered a detailed overview of the existing frameworks surrounding organisational change, the theory regarding teams selection, development and some of the major human aspects that exist within the general area of teams. The major frameworks that were considered important when considering organisational change was Lewins (1957) model that demonstrated the three stages of change that an organisation undergoes. This has proved to be beneficial in understanding organisational change, however, the way that change is implemented continuously within organisations has made researchers search for better ways to understand organisational change.

Kotter (1995) and Galpin (1996) extended Lewin's model and attempted to demonstrate how the model is applicable to present times. While that has been a process view, there is also a content and context view of change and for this purpose, Sadler's (1995) descriptions and Leavitt and Whistler's model, as well as the MIT-90s framework proved beneficial. Leavitt and Whistler's framework was encouraged because rather than focussing only upon the process of change, it emphasised the content of the change by considering the parts of the organisation that should be considered when implementing organisational change. These include the people,

processes, task and technology. This was particularly essential for this research as it demonstrated that teams, which include people, and the work that they undertake-tasks should be considered when examining organisational change.

Following that was a discussion about important issues in the general area of teams. These issues included how teams are selected and developed and what behavioural aspects are important when examining team development. These included motivation, conflict, empowerment, and trust. Communication and training and education are also emphasised in this chapter and are viewed to be organisational aspects that an organisation would consider when implementing teams. The descriptions and research conducted into these areas was also provided. The aim of this chapter was to emphasise the areas that have considered important in the general area of teams and yet there has not been any attention to these areas in the BPR area. Additionally, there are various descriptions of conflicts and motivation in existence and the research aimed to identify them and emphasise the earlier point that the general area of teams and reengineering teams do have common elements. This can also prove to be beneficial for practitioners in the long run, as they will be able to determine the types of conflict and motivation or communication and by doing so could consider what to do in similar situations to the researched organisations.

The research methodology that has been applied in this dissertation is described in Chapter 3. The chapter began by providing a description of qualitative research and provided some distinctions between qualitative and quantitative research. Particular emphasis was placed upon qualitative research, as this was the alternative that was selected for the research. Then the benefits of qualitative research were provided. Thereafter, the paradigms that surround the qualitative research being pursued in the research were discussed. It is interpretative research rather than positivism that lie at the heart of this research. The chapter also provided descriptions of these two paradigms and attempted to demonstrate their popularity. Additionally, the role of hermeneutics using Winograd and Flores (1987) interpretation of the concept was provided. Then the data collection methods used in the research were described and discussed. Emphasis was placed upon demonstrating the appropriateness of each of the methods

for this research. For instance, there are various types of interviews in existence; however, each is not particularly applicable to every situation. The benefits and disadvantages of the different types of interviews were stated at this point. Thereafter, the reasons for the particular types of interviews used in this research were stated. Additionally, the chapter described how the constructs in the research were initially formed using the theory in chapters 1 and 2 and after using them at the pilot site concluded that changes needed to be made. After changing the wording of the questions and refining them, they were used.

Chapter 4 then described and discussed the case studies that were utilised to establish that the theory presented in chapters 1 and 2 is validated and evident in practice as well. The chapter began by describing the first case study, which is a large organisation that is well established in the leisure and retail industry. The second case study then detailed a large teaching hospital, which is semi-public in nature and the third, a large, local authority. The validation process that was carried out by the research when establishing the facts of these organisations was to carry out triangulation. This is a process whereby establishing of facts are carried out in several ways including, interviewing several people, or referring to archival documents. The aforementioned ways were the main ways that the research employed to establish the collated data. The results that were obtained with regards to the identified themes in chapters 1 and 2 were described in as much the detail and as close to the original form as possible.

Having presented all the details obtained from the research strategy process, an analysis of the results needed to be undertaken and this was accomplished in Chapter 5. Initially, an interpretation of the results found within the case studies was provided. Thereafter, an analysis by comparing the empirical and theoretical evidence was undertaken. The work undertaken in this chapter was essentially important as it provided the foundations to the contribution that this research made.

Chapter 6 then extended the findings of the analysis and attempted to provide a theory consisting of the identified themes that were formed from the data analysis. Implications of this research and an understanding of the application of hermeneutics were also included within the chapter. Thereafter, a comparison of the empirical findings and the extant literature was

undertaken. By doing so, the position that this research took and an understanding of the theory in relation to practice (the empirical evidence) was provided. To emphasise that the newly developed theory is applicable in practice, a model developed earlier by Orlikowski (1993), but amended to include the themes that were earlier identified was developed. Thereafter, the findings from one of the cases were used in the newly formed theory to demonstrate the practical applicability of the suggested theory.

### 7.3 CONCLUSIONS

This research has investigated several issues related to teams undertaking BPR, including, the role that teams have in obtaining organisational change, the impact of several human and organisational aspects upon team development and the attributes of reengineering teams, in several various environments. Teams have been considered imperative for BPR (Hammer and Champy, 1993; Davenport, 1993) and yet there is limited information in this regard. From the time that research began into BPR, researchers (Maull *et al*, 1995; Earl, 1996) have been looking for results into the human aspects, and yet there is still little information in this regard. As such, the research emphasis was upon the 'soft' issues, where obtaining information regarding the people who worked within the teams undertaking BPR was more imperative. This resulted in the 'hard' aspects, which are the more commonly found topics within the BPR area, that is, modelling techniques, or, simulation, being beyond the boundaries of the research and not being emphasised.

The human and organisational aspects area is a large one; therefore, to ensure that the research could be conducted in a reasonable and simple manner, several particular areas were selected on the basis of research being conducted at present and relevance to the areas that they were chosen from. For instance, motivation is a topic of interest that has been investigated for a long time, is still of interest (as demonstrated in Chapter 2) and was something that the researcher was also familiar with, thus the reasoning behind the selection of particular areas. When discussing the attributes of the teams undertaking BPR, information such as the team

demography and what particular human and organisational aspects affect the teams undertaking BPR were considered.

The research was conducted with 2 pilot studies and 3 case studies using the research tools of mainly, interviews and referring to archaic documents. After the data was collated, constituents forming a theory were identified and a theory using some techniques used in grounded theory was formed. The theory that was formed, particularly emphasised the role of teams as change agents in obtaining organisational change; however, during the analysis of the research findings, the issue with regard to the impact of any particular human and organisational aspects upon team development, the criteria used for the team selection was dealt with.

The ultimate aim of any study, and this research is no exception, is to make a contribution to both the practising and academic worlds. Thus, the results from the findings and the newly developed theory can be considered as the main contribution of the research. Practitioners about to form reengineering teams would benefit, since there would be some information to refer to and a basis of comparison in existence, a situation that was not prevalent previously. Such a view is further strengthened by opinions such as that expressed in the following excerpt.

*“Those executives who impetuously push us employees into a teaming implementation without an understanding of the forces of change and resistance should expect the worst. If they don’t begin to legitimise and discuss our fears, we will never have the courage to let go of our control needs so that we can unleash our potential. Know this: when things are really clicking for us, we seldom get tired, and we can then accomplish many times the work we previously did.*

*Our fatigue is caused not by work but by worry, frustration, and resentment.”*

(Graham and LeBaron, 1994)

Thus, if practitioners had an understanding of the principles then better results in the performance of the team members could result (as suggested above). Academics would also benefit, since there would be some findings that could be used to form further future research into the area, something that the BPR area lacked earlier.

The research in this dissertation has led to the development of many findings within each of the main chapters and they are summarised and presented in the following points.

- i. From the background material it was found that the human and organisational aspects areas are important when considering BPR and also need to be investigated when examining the approach. This was also further confirmed by undertaking the empirical evidence.
- ii. What was also found was that these two areas are large in scope, therefore, not one piece of research (this dissertation) is enough to obtain all the required and necessary results. To begin and extend the research, some topics that are more prominent in the human and organisational aspects were selected. The research was useful in developing and providing information into topics such as team selection, demography, conflict, trust, motivation, empowerment and communication, *but* all within the context of BPR.
- iii. The undertaken theoretical survey revealed that BPR has its foundations in several areas including, project management, organisational change, and the teams areas. For this, a diagrammatical model was also formed and attempts to relate all these areas to BPR were undertaken.
- iv. With regards to the background literature regarding the human and organisational aspects, it was found that most publications provided a very generalised discussion about why the human and organisational aspects need to be considered, but criteria that can be used to determine any particular areas that require close scrutiny have not been provided.
- v. The research also described the research approaches being employed within the research in a hierarchical manner. In the initial stages, it was concluded that research of this kind would benefit more if a qualitative approach is applied. Further, it was found that an approach that has its foundations in Interpretivism is most apt for a research of this kind. Thereafter, it was also found that hermeneutics as well as semantics were also being used within the research and descriptions regarding them were provided.
- vi. With regards to the research methods it was concluded that pilots would be most suitable in the initial stages. This was because they assisted in preventing serious errors during the data collection stages. The pilots were used for refining the interview

- techniques and the questions and as such served the purpose of being risk avoidance strategies.
- vii. The ontology of the research was that subjective meanings could serve the purpose of forming a picture of reality and this was best described by the three case studies that described in brief the followed BPR approach and the reengineering teams.
- viii. At the analysis stage, the cases further allowed the development and illustration of the combination-within case analysis and cross-case patterns to be provided.
- ix. The empirical results regarding the human and organisational areas were similar to the theoretical findings obtained from the general areas of teams, organisational behaviour and organisational change, confirming that theory from other areas are also applicable in the BPR area.
- x. Also displayed in the research was the utilisation of the five-factor framework developed earlier by Willcocks (1995). The framework assisted in providing a detailed picture of some of the BPR approach followed by the organisation and was critical in understanding some of the work undertaken by the reengineering team.
- xi. A major conclusion with regards to the role of the reengineering teams was determined within the research and is something that has not been proven in research as yet. Theorists have been speculating for several years that the reengineering teams are vital for BPR, however, this research went further and showed using some grounded theory tools and techniques and the empirical results that teams are change agents who can bring about organisational change.
- xii. None of the literature regarding reengineering teams concentrate on providing any selection or development criteria, factors that could provide better performance within teams, further justifying the need for reasoning as provided in this research.
- xiii. Discussions with practitioners revealed that the human and organisational aspects areas were considered important for BPR, but despite this, there was still little information being released that pointed to any particular areas that should be attended to. In this

regard, the research conducted in this dissertation was welcomed since there was something that they could also hold on and refer to (when the situation occurred).

- xiv. When determining appropriate human and organisational aspects to consider, it was initially problematic since there was limited information to refer to and the information that was available was difficult to understand. This created limitations and problems, and as such, it showed that further improvements are required. On the other hand, it emphasised the point that neither BPR, nor the human and organisational aspects are areas that are on the verge of being outdated or obsolete.
- xv. Within the reengineering teams in the three cases, the motivation that seemed to be in existence was intrinsic motivation. Further, it was found that in these situations, money was not the major objective. Instead, achievement, and recognition were some of the feelings promoted within the teams of these cases.
- xvi. The conflict type that was more commonly found within the three cases was task related and in the instance of one of the cases, the respondents also made it clear that they viewed such a conflict as a benefit rather than a disadvantage.
- xvii. Empowerment was also found in existence within the three cases. It was further established that within the initial analysis, design and planning teams, it was almost an immediate process since the team members were considered experienced and trained enough to handle the newly imposed powers. Further, it was found that empowerment was only allowed to a certain extent. For instance, recommendations for the designing stage were provided to the Board and thereafter, decisions to implement the suggestions were made by the Board, rather than the team.
- xviii. Tuckman's (1965) model was also found to be in existence within the teams of the three cases. What was also established from the results was that the steps described in the model are more evident within the initial stages of the project, particularly, when the training or induction periods took place.
- xix. The theory that was developed using the empirical data was useful in demonstrating the pivotal role of reengineering teams; however, it has to be remembered that the theory is



applicable to the successful implementation of BPR and a factor for the applicability of the theory formed in this research. This means that this theory cannot be generalised to every situation. There could be instances when some part of the theory is not applicable to a particular situation and amendments will then have to occur. This is also related to the research principles employed in this research and was something mentioned at the beginning of Chapter 6.

xx. Also determined within the research was information regarding the demography of reengineering teams. This information was problematic to obtain since there was limited information regarding this topic, and in some instances, viewed to be too sensitive of a nature. However, enough information was obtained to conclude that in these cases a reengineering team usually consists of upto ten and between twelve individuals. A conclusion very similar to the findings of Hammer and Champy (1993).

xxi. Previously, it was more common to find a single gender being dominant in reengineering teams, but lately, the trend is changing and now a team of mixed genders is more commonly found.

xxii. It was also concluded that information technology was not pivotal in much of the earlier work undertaken by the teams. Its critical role was emphasised in two of the cases during the implementation stages of the BPR project, and not earlier than that.

xxiii. A final conclusion that can be drawn from this research is that further improvements and research into particular human and organisational aspects and the important role of reengineering teams are required. This would be advantageous since the time spent determining appropriate issues would be reduced and the usefulness and effectiveness of teams and the human and organisational area would be increased.

A final point worth emphasising with regards to the conclusions are that the main contributions to the knowledge of this research are the establishing of a theory that demonstrates the pivotal role of reengineering teams. This is combined with information about the human and organisational aspects surrounding reengineering teams and information regarding the nature of reengineering teams.

#### 7.4 CONTRIBUTIONS OF THE RESEARCH

Perhaps the single most important contribution of this research is the provision of a new form of theory and description regarding reengineering teams. This was something that was absent in the BPR area and yet teams are viewed important for the implementation of BPR. The need for any theory in this regard was confirmed by referring to both theory and practice. Reference to theory included theoretical reviews of recent literature, and reports. For instance, a recent report published by ProSci (1999) confirmed that the area *does indeed* lack any information regarding the reengineering teams and it is hoped that by providing the newly extended theory this gap will be reduced somewhat and improvements in the area can be sought.

In practical terms, the results of the case studies confirmed that the area does lack any theory. This was clearly evident particularly as questioning during the interviews took place. Respondents did provide the replies, but commented that these areas would have provided interesting results that could be utilised in the implementation and formation of future reengineering teams. Additionally, respondents were asked whether any framework or theory with regards to reengineering teams would prove to be beneficial and they supported the fact that any new framework or theory in this regard would be welcomed. However, it was emphasised that any newly developed theory or framework should be uncomplicated and easily understandable by practitioners and not only restricted to the academics. Additionally, some articles related to the topic were published and the comments received were that this is an area of interest and would be an exciting issue to conduct research upon.

The theory that has been provided by this research can be viewed as quite detailed and original as this sort of an approach has not been pursued before and it provides additional information such as the selection and development of teams. The development of teams is usually concerned with the generic framework of Tuckman's model. This research went further and attempted to determine the impact of certain identified, human aspects (chapter 5) and this is a novel approach in the reengineering area, although investigated earlier in generic terms by theorists such as Stewart (1995).

Another differentiating factor between this research and other BPR research articles and dissertations is that there is always a discussion regarding the sort of change that the approach obtains, however, very few have directly related practical and theoretical models. Apart from some of Willcocks (1995) and Galliers (1998) works, where mention of some of the frameworks is provided, and investigated in great depth (unlike this one) there has been very little as this research has done and this presents another original contribution to the area.

An original contribution that this research has made is to describe, discuss and attempt to demonstrate the qualitative research approach that has its foundations in the Interpretivist paradigm specific to the BPR area. There have been previous articles that have been written about the pursued research methodology, however, they have not attempted to be so thorough and direct about the manner that the methodology is utilised. The utmost that has been written about the research methodology in the BPR area is to describe the nature and contents of a case study.

The human and organisational aspects are areas that are viewed to improve the success rates of projects within the BPR area. Corrigan (1996) was amongst the first to support this view, and there have been articles and papers examining these areas, however, they have been more theoretical and have not examined the reengineering teams roles or anything similar. This research can be more beneficial and original as it provides practical as well as theoretical examples of the human and organisational aspects of BPR. This is particularly evident in chapters 5 and 6 whereby a framework and model detailing the organisational change processes that BPR undergoes (Chapter 6) and the role of particular human aspects is emphasised (Chapter 5).

With regards to the Information Systems area, the research has made a contribution by considering the human and organisational aspects within the teams area and this is something unique to the area. Avison and Fitzgerald (1995) emphasised the role of the human aspects within the development of systems and also stressed that the human aspects are important when considering information systems. Since information systems are a combination of technology and humans, this aspect is important and this research also emphasised this. Project

Management, another part of the IS area, also emphasise the role of teams and this research has assisted with this objective.

### 7.5 POTENTIAL AREAS OF FURTHER RESEARCH

Even though there are several lessons that can be learnt from this or any undertaken research, it is still not enough. There will always remain something else that emerges and further research would be the best alternative to apply in such a situation. If an individual refers to any piece of research, it can be seen that it is never complete, as questions still require to be answered. Learned academics and researchers such as Kuhn (1970) support the view that disciplines in which totally completed research seems to be possible, quickly refrain from providing any research problems at all and go down from the scientific fields to engineering tools. To prevent such an occurrence for this research, the following discussions about potential areas for the undertaken research are provided.

Although an understanding of the way that the reengineering team is selected is provided, further investigations into the way that the selection process affects or does not affect the teams performance would be beneficial. This is because team selection is becoming an area of increasing interest at present (Stevens and Campion, 1999) and team performance is also an area of increasing area, therefore, research in these areas would add to any existing knowledge regarding teams.

It was mentioned in Chapter 6, that although the newly formed grounded theory displayed the critical position of a reengineering teams, the activities undertaken to form it and their consequences, there is a limitation in that the details regarding the human (behavioural) aspects are not provided. This can prove to be a major limitation, particularly, if research is being undertaken to examine the human and organisational aspects. Future research could then attempt to develop a broadly based model that encompasses all these aspects.

With regards to team selection, there was reference made to psychometric tests and case study 2 is presently undertaking research to determine whether they do have any impact upon a

team. The same could be undertaken within the reengineering area and this could practitioners by providing with some information when making that initial decision regarding what would be the best to employ.

The research was also interested in determining whether BPR has its roots within organisational change and this research made attempts to demonstrate whether it was or not. It was shown that BPR does have its roots in the organisational change area. From the research it can also be seen that Lewin's processual model is more applicable to research of this kind. What would be interesting is to determine if any of the other models are applicable to BPR.

BPR is also an area that still holds the interests of academics and practitioners alike and the number of articles that are still being published about it and interviews held with respected individuals within the area can confirm this. The human and organisational aspects have been viewed as areas that could reduce the high rates of failure; therefore, if other potential areas could be identified and their impact upon the BPR area could be determined, then an improvement in the area could be established. By achieving favourable results, the view that BPR is dead could be removed as organisations could be employing more of the approach and the popularity of it could be increased.

This research also attempted to determine the impact of IT upon BPR, which is a question that is very popular, but still remains unanswered. What would be interesting will be to assess the impact of IT upon the reengineering teams. IT could assist in the development or performance of the reengineering teams; something that the software development teams area is currently researching into. Essentially, then the teams could be termed as virtual reengineering teams. However, what exactly would be the impact of IT on reengineering teams that are virtual would be something that is beyond the scope of this research.

Within the research, it was noted that Davenport (1993) suggested that when forming the reengineering team, the crucial players to be included in it should be identified using stakeholder analysis. "Stakeholders are any individual, group, organisation, institution that can affect as well as be affected by an individual's, group's, organisation's, or institution's policy or

policies” (Mitroff and Linstone, 1993). The importance of identifying such individuals allows the single goal of attempting a radical change in a multiple environment to occur.

As it is, although the various members in the team may have the interest of obtaining the same goal, the means and ends to obtain it may be different. Additionally, the different beliefs and values within the individuals could cause a divergence in obtaining the goal. These differences in turn could a rift or conflicts within the team and prevent the obtaining of the change. By identifying the various stakeholders, the diverging differences could be identified and attempts to solve them could occur. For instance, the team in case study 3 consisted of senior managers as well as individuals from the middle and lower rankings, each with a different view about how to obtain the desired change. Senior management could be looking at ways of attaining the change in terms of the overall profits, yet the middle managers are also concerned with that, but it is not at the forefront of their priorities. The job losses that could occur are more their priority. By undertaking a stakeholder analysis that identifies the values and interests of the stakeholders, a common ground can then be determined. Therefore, to attain the change, the interests of the various individuals have to be united rather than remain diversified.

Stakeholder analysis is not only important for this area, it has also drawn the attention of researchers in the IS area as well (Wood *et al*, 1995; Pouloudi, 1998).

## 7.6 LIMITATIONS OF THE RESEARCH

A limitation that this research method produced was that it was difficult to generalise from case studies, since each case was different from the other. However, the same can also be said of experiments conducted in a laboratory as the variables utilised for one experiment may not be the same for another, therefore, it would be difficult to generalise. Walsham (1995) also used three case studies and noted that it is difficult to generalise from such a small sample. However, the limitation that such situations form was overcome upon the reasoning that attempts to compensate for this problem are made by “drawing on other literature and case

material, ..." (Walsham, 1995). Similar reasoning was used in this research, however, since this is an initial attempt into the research area, the findings from other literature has been used to overcome this problem in this research.

A note about the case studies used in this research is that Yin (1984) warns that there should not be a slippage allowed from the pilot into the main case studies. The research was particularly mindful of this and ensured that the mistakes found in the interviewing and questioning techniques made at the pilot study were not repeated in the subsequent case studies. If the questionnaires in Appendix E are scrutinised, it can be seen how the earlier form of questioning was very tightly construed to the theory described in chapters 1 and 2. From the replies received at the pilot sites, the researcher's own personal experiences and feedback received from the higher authority individuals, the questions were amended, thereby, producing better and deeper information than previously.

Although generalisations are difficult to obtain with case studies, the method allows an in-depth understanding and that is something that experiments or the survey questionnaires lack. This was an issue that was emphasised when describing the reasons for undertaking case studies. The above limitations have also been observed in other undertaken research and are something that is considered in theory and also observable in practice. The following have been limitations that the researcher had personal experiences of when conducting the research and include amongst others, limited access to reference materials, and other individuals within the organisation.

Some of the case studies that have been discussed in the research were undertaken a couple of years prior to this research. For this reason some organisations did not have all the archival documents, or in some instances, refused to allow access to the material on the grounds that it is confidential or is still being referred to. Although such barriers were erected, alternatives were found in the form of the living case - case study 3, where it was possible to obtain the experience of a BPR project and the teams involved in it and within the historic cases, individuals who could provide some information, previously published publications or access to some material were employed. Initially, the lack of information to consider this

research was viewed to be a large hindrance, however, options did arise that allowed the research to overcome this limitation.

When the research was in the initial stages, contact with several different organisations was made. When asked whether the research was being funded by any funding organisation, the researcher replied negatively and it was then that prospective respondents would refuse to divulge any information. This was a large barrier to overcome and assisted in emphasising how essential the support from research agencies was. Alternatively, there were some individuals within organisations who agreed to be interviewed, however, on the condition that only telephone interviews would be allowed. A limitation at this point was that since time was limited, the questions to be used for the research had to be clear and concise. Alternatively, this was considered to be a benefit since there was no time to divert from the main topics of interest.

A point that can be noted from the practical experiences is that limitations such as these are bound to arise and do, due to the way the respondents view the researcher when initially approached. For instance, some of the organisations do have individuals who are genuinely interested to assist with any potential research. From the expressed views it became apparent that individuals wanted to be sure that the researcher is knowledgeable in the area of research and would not just waste the time of the working person. Once that assurance took place, assistance could be obtained and the required information can be obtained.



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# **APPENDICES**

## APPENDIX A: PROCESSES AND BPR

A core part of business process change is the 'process'. Although the research will not be considering the issue, it is still vital to understand what the concept is. Therefore, this discussion about the definition and description of processes is provided.

### A.1 DEFINING AND DESCRIBING A 'PROCESS'

Davenport (1990) was the first one to define a process "as a set of logically related tasks performed to achieve a business outcome." Thereafter, Davenport refined it again to demonstrate *how* work is done, rather than the *what*. "A process is simply a structured, measured set of activities designed to produce a specified output for a particular customer or output" (Davenport, 1993). Hammer (1993) also defined a process as a "collection of activities that takes one or more kinds of input and creates an output that is of value to the customer." There are other definitions and descriptions of term and they are described in Table A.1.

TABLE A-1: DEFINING A PROCESS

Author	Year	Definition
Armistead	1990	"Process" refers to the conversion of inputs (resources) into outputs (goods and services).
Johansson <i>et al</i>	1993	A "process" is a set of linked activities that take an input and transform it to create an output.
Talwar	1994	A process is a "sequence of activities performed on one or more inputs to deliver an output to the customer of the process."
Earl	1994	A process is "a lateral or horizontal organisational form that encapsulates the interdependence of tasks, roles, people, departments and functions required to provide a customer with a product or service."
Harrison	1995	A process is "the conversion of inputs (resources) into outputs (goods and services)."

What is evident from these definitions is that processes can be described in simpler terms as a way of converting inputs into outputs. In descriptive terms, a process is the dynamic ordering of work activities across time and place, with a beginning, an end and clearly identified

inputs and outputs. To obtain the process, the co-operation of different functions, divisions, business units or different organisations could be required.

There might also be various processes within an organisation, each having a different impact on the business and this was well summarised and described by Peppard and Edwards (1994), which is described and demonstrated in Figure A.1.

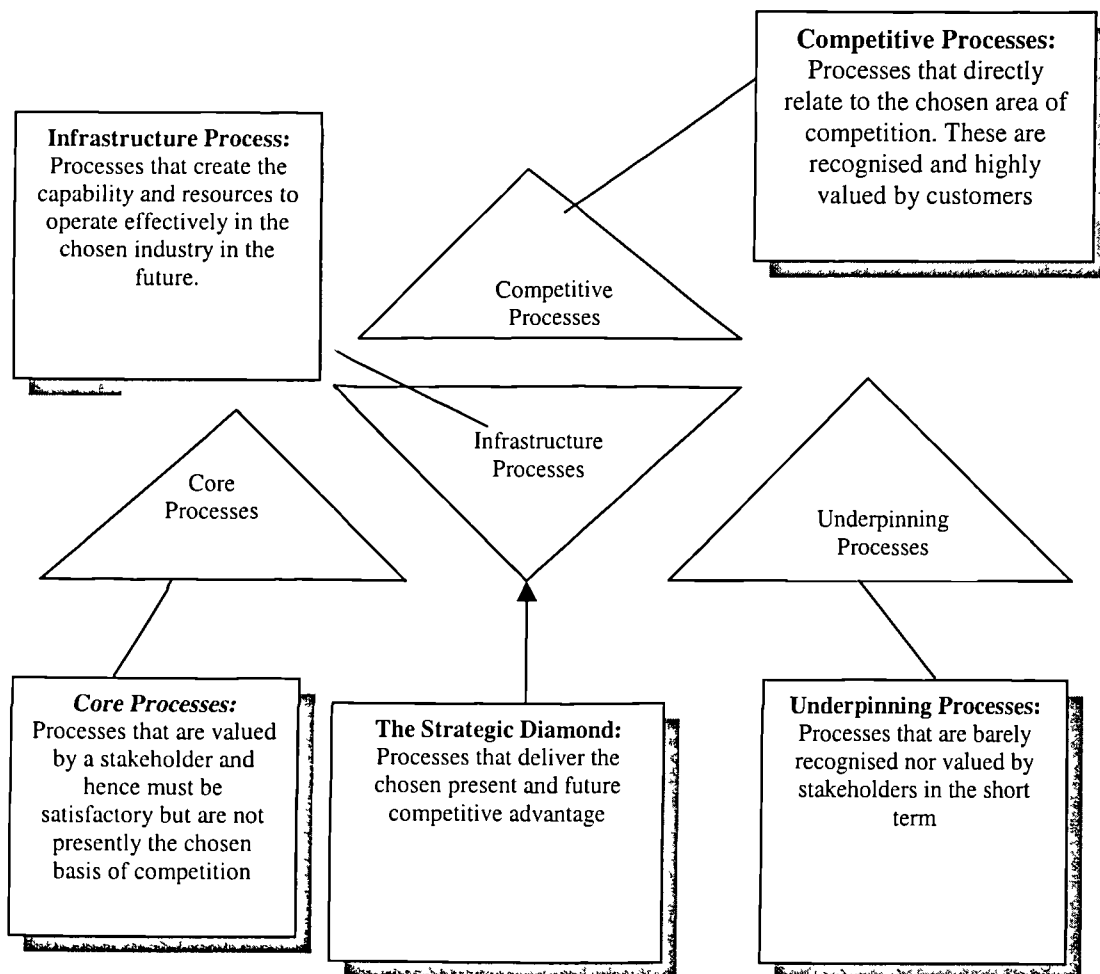


FIGURE A-1: CLASSIFYING THE VARIOUS PROCESSES WITHIN AN ORGANISATION AND THEIR IMPACT ON THE BUSINESS.

SOURCE: PEPPARD AND EDWARDS (1994)

## **APPENDIX B: ORGANISATIONAL CHANGE**

Chapters 1 and 2 have referred to organisational change. There was some additional information that was viewed to be of some assistance to this research, thus the reason for the compilation of the information contained in this section.

### **B.1 ORGANISATIONAL CHANGE**

There is no exact definition of the term 'change', however, a popular and practical definition is "that the environment variables which influence organisations are political, sociological and technological" (Jury, 1997). Present trigger factors in the economic, technological, political and social environment have made it an inevitable prospect that an organisation will undergo change (Scott-Morton, 1991; Sadler, 1995; Hsiao and Ormerod, 1998). These factors include the globalisation of markets, new sources of competition, development in the technology for processing and transmitting information, and new processes for manufacturing goods or delivering services (Sadler, 1995).

Organisational change is usually required when changes occur in the environment that an organisation operates in (Sandom, 1997). Alternatively, organisational change has been described as the encompassing of the entire revolutionary, intervening change initiatives that organisations employ to cope with the pressures of climatic change. The topic of change has been of interest to organisational theorists for over forty years (Leavitt and Whistler, 1958; Lewin, 1947). This is due to the concepts of and approaches to change impacting almost every aspect of organisational behaviour and analysis. However, even though change made an impact on organisational behaviour and analysis, there was little understanding of change or how to cope and create change. To overcome this problem, theorists from the management area began investigations and attempted to provide answers (Kanter, 1977; Peters, 1987; Peters and Waterman, 1982; Kanter, 1983). Soon thereafter, Information Technology emerged and caused changes in the organisation. To provide suitable and appropriate answers, theorists from the Information Systems area, an area that BPR belongs to, began to make a contribution to the theoretical debates (Benjamin and Levinson, 1993; Orlikowski, 1996).

Change has been classified according to types or rates of change and this is known as the substance of change (Dawson, 1994). When classifying change, theorists have expressed the view that change should be examined in the wider context of “meaning, theory and empirical evidence” (Kanter, 1992; Eccles and Noria, 1992; Wilson, 1992). Thus, rather than assuming that change is the opposite of some assumed stability, it is the degree of change taking place. For instance, an organisation could appear to be the same as the time it began (when observed by an external party) and yet the organisation could be constantly undergoing change. There are several interpretations of the classification of change that have been developed, for instance, Wilson (1992) has described it in terms of the process, implementation, planned and emergent forms of change and all forms of change have been well investigated. Greenberg and Baron (1995) provide a different classification. In this instance, change is classified in terms of change implemented in a planned or unplanned manner that could be brought about due to either internal or external factors as shown in Table B-1.

**TABLE B-1 THE DIFFERENT FORMS OF ORGANISATIONAL CHANGE**  
**SOURCE GREENBERG AND BARON (1995)**

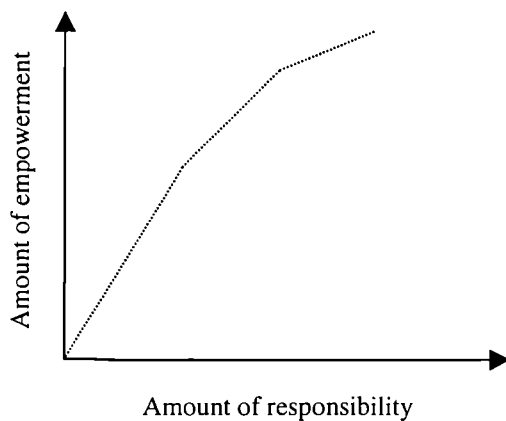
<b>TYPE OF CHANGE</b>	<b>REASONS FOR CHANGE</b>	<b>EXAMPLE OF CHANGE</b>
<b>Planned internal change</b>	Strategic decision to alter the way the business is conducted or the very nature of business itself	Changes in products or services, administrative systems, and in organisation size and structure
<b>Planned external change</b>	Variables originating outside the organisation make an organisation consider implementing change in a planned manner.	Introduction of new technology, and advances in information processing and communication.
<b>Unplanned Internal Change</b>	Organisations respond to changes that are unplanned-especially those derived from factors internal to the organisation	The Demographic composition of the workforce and performance gaps
<b>Unplanned external change</b>	Organisations respond to changes from the outside world that they have little or no control over	Governmental regulation and economic competition

## APPENDIX C: DESCRIBING EMPOWERMENT

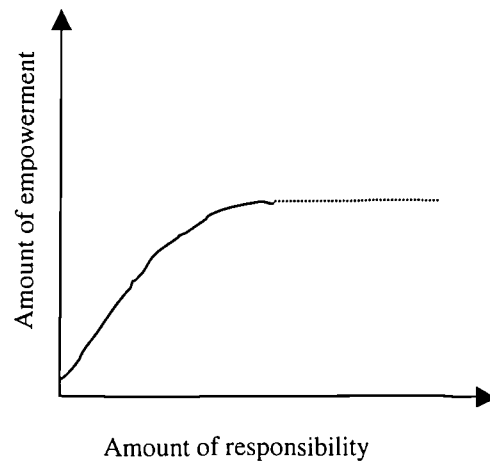
Chapter 2 referred to the term ‘empowerment’ and in the following section, a detailed discussion of the term is provided.

### C.1 EMPOWERMENT

When examining teams, it has been found that “empowerment occurs when power goes to employees who then experience a sense of ownership and control over their jobs” (Wellins *et al*, 1991). In some job positions, there is no limit to the amount of empowerment and it becomes difficult to define the roles and responsibilities of individuals (displayed in figure C1). However, the amount of empowerment at lower positions cannot be indeterminate, as there is a limit to what one can achieve (shown in figure C2). Therefore, empowerment has to be a well thought process when introduced in the organisation and greater empowerment can occur when the team (figure C3) makes decisions.

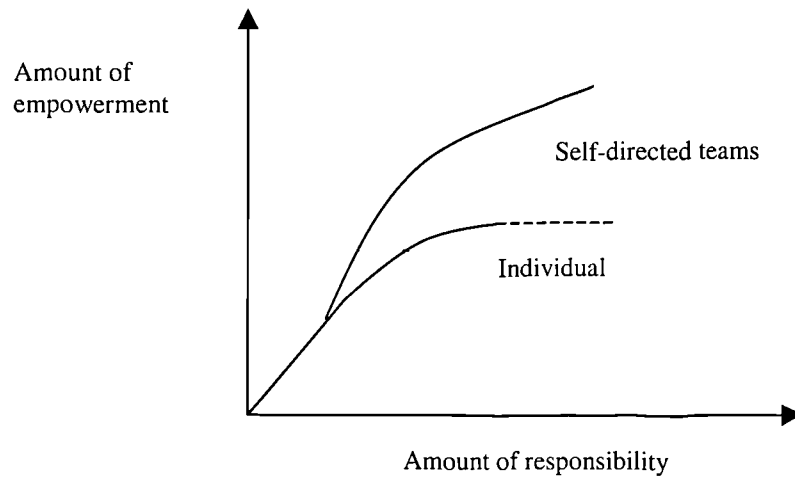


**Figure C1: The theoretical relationship between empowerment and responsibility**  
Source: Wellins *et al* (1991)



**Figure C2: The limits to empowerment**  
Source: Wellins *et al* (1991)





**Figure C3 The impact of empowerment upon self-directed teams**

**Source: Wellins *et al* (1991)**

Some researchers have found that a number of steps need to be taken in order to introduce empowerment (Randolph, 1995). The foremost action is to share the information amongst the team members. Thus senior members of the organisation should “share sensitive financial information” (Randolph, 1995). This allows the individuals to determine how their organisation and themselves are doing and if their actions are making a difference. To obtain empowerment the next suggested step is to have the manager impose more authority, rather than less. This is because the individuals are still familiar with the traditional role of the leader being authoritarian. Once familiarity with the old role reduces and individuals are comfortable with the new powers, empowerment is easily introduced. Thereafter, the parameters in which the individuals must operate must be clarified. This is due to the parameters having an impact upon the vision, set goals, decisions, appraising of performance and training of the people.

Aside from the nature of empowerment and steps taken to introduce it, research has also begun to focus upon the impact of empowerment, along with other factors such as the introduction of profit sharing schemes. This strategy was adopted, as it was felt that by rewarding the individuals for their efforts, the introduction of empowerment to be a much

smoother process, than without any incentives and also promote a hard working environment. This assertion was affirmed by the results obtained from their experiences (Frey, 1993). A problem that has been found with empowerment is that it ignores the extent to which leadership can be shared and the conditions favouring the success of shared leadership (Robbins, 1996). A solution proposed by Jenkins (1996) is that the nature of empowerment needs to be understood and the consequences of the 'new form of power' upon the organisational tasks and structures have to be known to solve this situation.

## **APPENDIX D: THE THEORIES IN MOTIVATION**

Chapter 2 referred to the theories underpinning the motivation area. This section provides a detailed discussion about them.

There are very many theories regarding motivation, particularly applicable to the workplace and are described in a more detailed manner. In the following sub-sections the theories will be described according to the category that they belong to.

### **D.1 NEED THEORIES**

This theory is based upon the view that individuals behave in ways that satisfy their needs. Therefore, if someone needs security in their job, they will work in a manner such that steps can be taken to achieve that result. The earliest theorist in this area Maslow (1943) proposed five classes of human need. “(1) **Physiological:** This is the most primitive and obvious need and is characterised as the need for food, drink and so forth. (2) **Safety:** The need in this instance is for a predictable and non-threatening environment. Needs describing this is the need for physical and psychological safety. (3) **Belongingness:** A need to feel a sense of attachment to another person or group of persons. (4) **Esteem:** The need to feel valued and respected by self and significant other people. (5) **Self-actualisation:** Need to fulfil one's potential - to develop one's capacities and express them” (Arnold *et al*, 1998). Although Maslow's theories were accepted in the field, there was little empirical evidence to support it and that was one of the main reasons it caused controversy in the psychology area.

Maslow's theories assisted researchers by giving them some idea about needs in the motivation area. However, most of them tended to concentrate upon smaller amounts of needs in comparison to Maslow's five categories of needs. The need for achievement has been researched into the most. This concerns “the desire to overcome obstacles, to exercise power, to strive to do something difficult as well and as quickly as possible” (Murray, 1938).

McClelland (1961) has been one of the most renowned researchers with regards to the need for achievement theory. His view was that a nation's economic prosperity depends partly upon the level of need for achievement in its population. He also believed that people could be

trained to have a high desire for the need of achievement. There has been recent research that has been conducted with regards to the need for achievement and it has been found that when analysis in this area takes place, it should be restricted to the level of tasks (Sagie *et al*, 1996). Previous researchers (Parker and Chusmir, 1991) had begun to analyse the need by researching into status and power and found that individuals with high levels of the need for achievement tended to feel more successful regarding wealth and professional fulfilment.

## D.2 THEORY X AND Y

The above theories were regarding the needs of individuals and did not have a complete picture of the nature of individuals at different times. For instance, the theory did not describe whether trust or creativity had any impact on the work being performed by individuals. McGregor (1960) formed two assumptions regarding human nature that are applicable to organisational behaviour. The first is Theory X and this maintains that basically the average person dislikes work, is irresponsible, inherently lazy, self centred and ultimately this individual cannot be trusted. To get such an individual to work, threats, coercion or control are some of the methods employed. Theory Y on the other hand, is the opposite of X and assumes that individuals seek independence, self-development and creativity in their work. Individuals belonging to this category are responsible and moral beings and if treated well, will seek the benefit of the organisation.

Schein (1988) updated these theories by adding another category, that of the social approach. In this category, an individual's behaviour is determined by their interaction with the rest of the people within the organisation. Individuals seek meaningful social relationships at work and are more responsive to the expectations of the people around them, rather than monetary incentives.

### D.3 EXTRINSIC AND INTRINSIC MOTIVATION

Generally when individuals were questioned about the forces driving their work, and about pay and work, two broad categories emerged. One of the categories was that people worked in order to seek some form of monetary reward and not because the work was interesting and gave them greater satisfaction. **Intrinsic motivation**, which was viewed to have clear links with Maslow's theory, was based on rewards fundamental to the task itself (Deci, 1975). Examples of such motivation would be interest in work, sense of achievement and a recent phenomena that is becoming increasingly popular within organisations, empowerment. Extrinsic motivation is concerned with the rewards that are separate from the task. Bonuses and other monetary forms of reward would belong to this category (Deci, 1975). Presently, intrinsic rather than extrinsic motivation is found to be most commonly applicable in the reengineering area (Campbell and Kleiner, 1997).

Herzberg *et al* (1959) found two factors were motivating workers. One was the motivational factors or satisfiers, where job content or intrinsic factors are applicable. Therefore, these factors occur at the time the work is performed and make it rewarding in itself. The second was the maintenance or dissatisfiers factor, where the factors are part of the environment of the organisation and not of the work itself. This is also known as the two factor or motivation-hygiene theory.

This section has described some of the basic theories regarding motivation and the types of motivation that exist. These issues are viewed to be helpful in understanding the research in this dissertation.

## **APPENDIX E: THE CLASSIFICATIONS OF INTERVIEWS**

The interview was the dominant form of data collection method used in this research. There are various forms that interviews can have and this appendix describes them.

### **E.1. THE PERSONAL INTERVIEW**

The personal interview is described as “a face to face, interpersonal role situation in which an interviewer asks respondents questions designed to obtain answers pertinent to the research hypotheses. The questions, their wording, and their sequence define the structure of the interview” (Frankfort-Nachmias and Nachmias, 1996). This form of interview is strongly associated with the scheduled-structured one. The advantages and disadvantages of the personal interview have been summarised in Table E-1.

**Table E-1 The Benefits and Weaknesses of Personal Interviews**

Source: Frankfort-Nachmias and Nachmias (1996)

<b>Advantages and Disadvantages of the Personal Interview</b>
<p><b>Advantages</b></p> <ul style="list-style-type: none"> <li>• <b>Flexibility in the questioning process:</b> When a personal interview is undertaken, the way that the interview is conducted could run from being unstructured to structured. There is no restriction on the way that the interviews are undertaken. In a focused and non-directive interview, the interview has the opportunity of clarifying the asked questions and probe for additional information.</li> <li>• <b>Control of the interview situation:</b> When the interview is conducted, the interviewer is in control of some of the situation. That is, the interviewer determines who replies to a certain question, where the interview is held (upto a certain extent) and the order in which questions are asked.</li> <li>• <b>High response rate:</b> It has been found that respondents who would not readily consent to replying to an impersonal mail questionnaire will often respond to a personal interview (Frankfort-Nachmias and Nachmias, 1996). This was attributed due to the fact that some respondents could not read the language or understand it fully, therefore, accepting a personal interview.</li> <li>• <b>Fuller information:</b> In comparison to other techniques, interviews provide researchers with the opportunity of obtaining additional information such as the background information or natural reactions.</li> </ul> <p><b>Disadvantages</b></p> <ul style="list-style-type: none"> <li>• <b>Higher cost:</b> Interviews could turn out to be expensive, particularly if the subjects are dispersed in various distant places.</li> <li>• <b>Interviewer bias:</b> The inborn characteristics of the interviewer and the differences in interviewing techniques could have an impact on the subject's answers.</li> <li>• <b>Lack of Anonymity:</b> The presence of the interviewer may make the subject feel threatened or intimidated.</li> </ul>

The least flexible of personal interviewing is the scheduled-structured interview where the wording and number of questions that are asked are the same for all the respondents. Then there is the focused or non-schedule-structured interview. In this case, the interview is structured, but respondents are given certain freedom when providing answers. Researchers have identified four characteristics associated with this form of interviewing

- Respondents that have been involved with a particular experience are interviewed;
- Situations that have been analysed prior to the interview are employed;
- The interview proceed on the basis of an interview guide specifying topics related to the research hypotheses;
- Focus on the subjects' experiences regarding the situations under study takes place (Merton and Kendal, 1946).

The third and most flexible form of interviewing is known as the nonstructured or non-directive interview. In this situation, there is no schedule to ask the prespecified set of questions, nor are the questions posed in a set manner.

## **E.2 THE TELEPHONE INTERVIEW**

There are also telephone interviews, also known as telephone surveys. This form of interviewing is known as a semi personal method of collecting information. This form of interviewing is only used as an alternative to the face-to-face one under special circumstances. For instance, financial pressures, time constraints and rising fuel costs have made it an attractive option. The weaknesses and benefits have been investigated by previous researchers and are demonstrated in Table E-2.

**Table E-2 Telephone Interviews: their advantages and Disadvantages**

Source: Frankfort-Nachmias and Nachmias (1996)

<b>Advantages and Disadvantages of Telephone Interviews</b>
<p><b>Advantages</b></p> <ul style="list-style-type: none"><li>• <i>Moderate cost</i></li><li>• <i>Speed.</i> Interviewers employing this method can reach a larger number of subjects to interview in a short time. It is thought that with this method, researchers can code directly into the computer (Frankfort-Nachmias and Nachmias, 1996).</li><li>• <i>High response rate.</i> This form of interview allows access to individuals who are more likely to refuse a mail questionnaire or face-to-face interview.</li><li>• <i>Quality.</i> When interviewers are centrally located, there are more chances of high quality data being collected than otherwise. Also the presence of supervisors could ensure that the correct questions are being asked and the answers are being recorded properly.</li></ul>
<p><b>Disadvantages</b></p> <ul style="list-style-type: none"><li>• <i>Reluctance to discuss sensitive topics.</i> Respondents may be reluctant to speak about sensitive or confidential issues over the telephone.</li><li>• <i>Less Information.</i> Additional information about the environment or the respondents characteristics are not available using this method.</li><li>• <i>The "broken off" interview.</i> Respondents can terminate an interview before it is completed.</li></ul>



## **APPENDIX F: THE QUESTIONNAIRES USED FOR DATA COLLECTION**

This appendix contains the collection of questionnaires that were employed when collecting some of the information for chapter 4 of the dissertation.

It can be observed that although the first questionnaire has a broad focus, it is more closely linked to the theoretical underpinnings of chapters 1 and 2, particularly with respect to business process change. The one following that became more focused about the reengineering teams.

The first one was prepared when the first interview with the individual at pilot study 1 was held. That accounts for some of the initial constructs used at that stage displaying the theories cited in chapters 1 and 2. Thereafter, the questions became more open-ended and attempted to investigate the experiences of the organisations with reengineering teams.

A questionnaire protocol was established whereby a declaration was provided at the beginning of the questionnaire and this was abided to. This was to provide an assurance to the respondents from the case studies that they could trust the researcher. This step was taken since some organisations were unsure about releasing results, although some of them had provided data in earlier research.

The issue regarding trust was also dealt with when tape recording. Prior to the beginning of the research, the researcher made sure that the respondents were made aware of the tape recorder and its use.

**A.1 INVESTIGATING THE HUMAN AND ORGANISATIONAL ASPECTS OF BUSINESS  
PROCESS REENGINEERING QUESTIONNAIRE**

**THE HUMAN ASPECTS OF BUSINESS PROCESS  
REENGINEERING QUESTIONNAIRE**

**Notes of Guidance**

- 1) There are 2 sections in the questionnaire.
- 2) The first section includes the issues that we are currently researching into and for this part of the questionnaire short explanations along with the answers would be required.
- 3) The second section then asks general questions about the organisation. These are more straightforward, and general answers will suffice.
- 4) Please be assured that any information disclosed will be held in the strictest of confidence. The research material is for research purposes only. If any names are disclosed or information of confidentiality is released, than prior consent will be sought.

**SECTION 1: EVALUATING BUSINESS PROCESS REENGINEERING**

- 1) Business Process Reengineering has been defined in several ways. Could you please circle which definition is most appropriate to your organisation:
  - a) BPR is an improvement of the tasks that are being done rather than eliminating the delays between each step
  - b) BPR is the fundamental rethinking and radical streamlining or total redesign of an end-to-end process and may start with the question "Should we be doing it at all?"
  - c) BPR in this instance is being used by organisations to obtain step change improvements across all of their processes. In this case, the approach is being used to obtain change across the whole organisation
  - d) BPR is the organisation asking why it exists and what it is trying to achieve. After this questioning, then an examination of the processes and how to obtain the goals is found
  - e) BPR is the continuous refocusing and reinventing of the organisation as the world changes

- 2) What processes were chosen for reengineering? Are there any documents that have information about this matter? For instance, annual reports, memos and so forth will suffice.
- 3) Have there been improvements in the performance or operations of the organisation. Could both the respondent and maybe some other party, e.g. a customer, or supplier, answer this question. Does the organisation have any figures to support the improvements (Please include if this is the case).
- 4) Have the people working in the organisation found an improvement in their workload, or reduced times when their work is undertaken.
- 5) Since BPR was introduced have the workers acquired more skills and belong to many more departments than before? Is there more of a friendlier, more co-operative and consulting amongst one another atmosphere? That is, is there more of a multi-skilled and cross-functional team atmosphere within the organisation.
- 6) Have the workers become more responsible for their actions than before. That is, less supervision is required than before.
- 7) Does management consider the views expressed by the workers more than before and do they take action on the expressed views.
- 8) Are the workers happy with the new responsibilities and changes or are they unhappy. How was this determined?
- 9) Was the BPR project undertaken by people within the organisation or were consultants brought in from outside. Could the reasons for selection be included in the answer.
- 10) If the team was formed from within the organisation, did the team reduce any departments (in number and work).
- 11) How was the reengineering team formed? Was the Meyers Brigg Type of Indicator, or Belbin's questionnaire used at any stage of the formation?

- 12) Is there a list of all the team members that could be sent to the researcher? Alternatively, could the list be attached to this e-mail questionnaire? What was the mix of the team? (In terms of gender, education, and position).
- 13) Were the members of the reengineering team just working on the reengineering project or were they also working on their previous jobs? Who was the project champion? Was it someone from a top position?
- 14) Was the team welcomed everywhere and were their suggestions listened to and also acted upon.
- 15) (This question as well the next 2 questions are appropriate if the people from within the organisation formed the team that undertook BPR). Have the people who were involved with the BPR project still working in the organisation or have they left.
- 16) Were the people who were involved with the BPR project given any bonuses or promotions before, during or after the BPR project.
- 17) If no bonuses or promotions were provided, were the workers given any compliments. For example, did management send a memorandum letter to the workers concerned, or did someone from a high position go around congratulating the team for the good job done.
- 18) Are the people who remained in the organisation after BPR was undertaken still with the organisation.
- 19) Is the organisation that had the BPR project undertaken happy with the obtained results.
- 20) With reference to the people who have remained in the organisation after BPR was undertaken, are they working harder than before (in your opinion).
- 21) When BPR was undertaken, were all the workers in favour of the change or were there some people who were scared? How were the fears handled? Examples to this answer could be the workshops held, leaflets and any other publications distributed.  
(If any of the leaflets are still available, could they be sent or attached).



4) Number of employees:  
a) Within the organisation.

b) In each department

5) Is the organisation:  
a) Publicly owned

b) Privately owned (is it amongst the top 100 quoted organisations).

6) Name of respondent/s:

7) Job Title and Position within organisation:

8) When was BPR undertaken? (Year and month will suffice).

**THANK YOU VERY MUCH FOR YOUR CO-OPERATION. IT IS GREATLY APPRECIATED.**

**If there are any attachments to be included, then please attach as a Word document. Alternatively, if there are documents to be sent, then please address them to:**

**Ms. J. Choudrie,  
Brunel University,  
Uxbridge,  
Middlesex. UB8 3PH**

**To fax the material over, then please do so at the following number: (01895) 232806.**

## A.2: A QUESTIONNAIRE ABOUT THE REENGINEERING TEAMS

### **Questions regarding Teams**

#### Declaration:

Please be reassured that the information being provided is solely for academic and research purposes and will be used for those purposes only. If any information will be revealed, then prior written permission will be sought. Thank you for your assistance.

- (1) What was your role within the team and how much of a role did you have in the decision making?
- (2) What were the main roles of the reengineering project team? For instance, just planning what processes will be changed, direction givers and so forth.
- (3) Was there any conflict in the formed teams? How was it handled? Within themselves, or was a person of higher position required to solve the problem? Would the conflict be limited to issues regarding decisions or were personal issues involved as well.
- (4) Was there a mission statement developed by the organisation? (If so, would it be possible to obtain a copy). Was the mission statement referred to frequently during the development and implementation of the processes?
- (5) Was there a vision developed, and was it shared by all (please describe what is the vision)? If not, then how did all the team members share it?
- (6) How often were the team meetings held? What was their purpose? For example, were the meetings there for update purposes or were they for decision-making purposes?

- 
- (7) Where were the meetings held? IF possible, please provide a mental image of the location. For instance, were there flip charts, IT equipment, a round table and chairs in the location.
- (8) What was the duration of the meetings?
- (9) How did the team members communicate with each other? For instance, were memos or e-mail used? What was the purpose of these forms of communication?
- (10) If any workshops or meetings to inform the organisation were held, how long did this process continue for, what was the purpose and what was the reaction of the organisation's people?
- (11) Were there any organisations used as benchmarks when consideration was given to developing and implementing BPR teams? How often were those organisations referred to for guidance?
- (12) Were there organisations used as benchmarks for BPR? Were they the same as the ones used as points of reference for the team aspects?
- (13) Were the benchmarks useful?
- (14) What was the role of the consultants in the teams and for the overall BPR project?
- (15) How many of the team members were fully knowledgeable in both BPR and project management skills or in either one of the mentioned areas? Was it considered essential to have knowledge of either or both of these areas?
- (16) Was the formed team considered a benefit? If BPR is taking place in any other or the same organisation, would such a team or teams in general be utilised?



- 
- (17) Does the organisation have a culture of teams, or was the development and implementation of teams considered to be a new concept?
- (18) How was the success or failure of the team measured?
- (19) What preparations did the organisation have to make for the implementation of the teams?
- (20) Would it be possible to list the positions that the members of the team held before and after BPR?
- (21) Were any of the bonuses provided for, for only certain members or for the team as a whole? IF only certain individuals were provided with a bonus, how was it determined that only Certain Mr. or Miss X deserved a bonus.
- (22) Did the customers notice any change in service after the teams' plans were placed in motion?
- (23) Was there less absenteeism after the team was formed or was there more of it? Any evidence of this?
- (24) Would the members of the team ever work with one another again or will they refuse to do so, if the opportunity ever arises again?
- (25) How and who made the decisions within the team and how was it received by the Board? By the organisation on the whole?

(26) How much empowerment did the team have and can you provide an example of the empowerment?

(27) How was unity brought or achieved within the team?

## **APPENDIX G: THE FINDINGS OF THE PILOT STUDIES USED IN THIS RESEARCH**

As stated in the main part of the thesis, pilot studies 1 and 2 were initially used for forming research questions that would be as clear and precise and refining the interview techniques, which were utilised for the subsequent case studies used in this research. Also, since these are pilot studies and not the main cases studies used for research purposes, they were not used in the analysis part of the research, hence, the reason for not being included within the main part of the report.

In the following sub-sections, the backgrounds and findings of the cases are provided. As just mentioned, *the pilot studies were not part of the analysis phase of the research and consequently, the findings were not stated in the main body.* However, to provide the reader with some information regarding them, the following explanations are offered.

### **G.1. BACKGROUND OF PILOT STUDY 1**

For the research a pilot study of a large organisation located close to the research base was initially used.

The pilot case is a branch of a large, globally spread organisation that is listed amongst the top companies on the FTSE 100 and the DOW Jones stock exchange markets. The European headquarters of the organisation are located in the local vicinity of the pilot study. Presently the organisation is amongst the highest rated in the document world and specialises in the research, marketing, service and sales of documents. Amongst its competitors are companies such as Hewlett Packard and Ricoh. The organisation is arranged as a UK enterprise hierarchical structure at present, but is taking steps to operate as a European organisation consisting of strategic business units and service units.

The organisational structure that exists at present is arranged in about four layers, where progression to senior management is achieved by having a wide skills and knowledge base of the organisation. For instance, there are local 'career' paths in sales for example that show 3

levels of seniority, but again job roles in sales vary considerably given the variety of products that the organisation markets. The organisation's management styles have been recognised in the world as amongst the best in the world and for that it has achieved recognition in the media.

The working practices that the organisation operates are considered to be of a high quality where consideration to flexible working conditions and practices is amongst issues of top priority. For instance, to assist newly appointed employees, there are People development process programmes that are established in the organisation. The aim is to assist employees in assessing their skills, competencies and aspirations while working with their managers to develop and implement a personal development plan to reach their goals. The organisation also provides on the job training to tuition assistance to those individuals who want to gain an education as well as continue working.

In the face of such recognition, the organisation is always on the search for ways to maintain its stronghold in the market. During the 1992 period this particular part of the organisation wanted to improve its performance by undertaking a radical change. With the other parts of the organisation-the American and European sides having undertaken BPR and achieved successful results, the organisation was provided with plenty of reasons to undertake it. Additionally, the focus upon improving quality within the organisation is of great importance, thereby, creating an increased want for the approach.

In 1992 it was decided that the customer call handling process needed to change from its present status. For this, BPR was viewed to be suitable. *To undertake the approach, it was felt that a reengineering team is required.* The reason for this was that the task at hand was a large one and it was not enough to have only one individual managing it. Consequently, it was decided to form the team. In the following section the findings of the approach that was used to form the team, the human (behavioural) aspects that are existent in such teams are reported, thereby assisting in the long term objective of the research.

### G.1.1 REASONS FOR UNDERTAKING BPR AT PILOT STUDY 1

Business Process Reengineering has been viewed to take place in various ways. If the organisation is large with branches and sub-branches, then BPR could be carried out throughout the whole organisation. Alternatively, it could be that BPR is carried out on a departmental scale in order to determine whether the intended expectations are fulfilled and this form of BPR might transform all the processes within the organisation or it could change just a few of them.

There were 2 main BPR projects that were undertaken in pilot study 1 in 1992. The duration of the projects lasted from approximately 2 to 3 years. The first was the order management process and the second was connected to the customer service, particularly the call handling one. This research obtained results about the latter one.

To determine whether BPR should be undertaken or not, pilot case 1 undertook a comprehensive analysis of itself and its external environment and found that the customer satisfaction levels were not to the required standard. Late in 1990, it was felt that the organisation needed to change and an internal demonstration showed that a functionally aligned organisation structure was sub-optimal, particularly when considered by the customer as there were built in time delays. In comparison to a business process aligned structure, there were more expenses and less operating efficiency.

A strategic analysis also emphasised that the organisation had to be more outwardly focused, focused upon the customer, the market place and competition, rather than attending to the internal functional outputs and boundaries.

Additionally, the strengthening of its competitors in the market place made the organisation consider some form of change. To achieve these objectives, the operations of the organisation needed to be simplified and the way that the work of the organisation was undertaken had to be less complicated. It was found that the speed of the operations of the organisation needed to be changed, as they had to cope with the changes occurring within the environment.

### G.1.2 THE CHANGED PROCESSES

By undertaking intensive surveys, interviews and presentations between the organisation and the customers, it was found that the customer service area required changing in some way. Particularly the ways that the calls made to the customer service were handled were a major problem. When a call was made to the customer service department, there were many procedures to handle the call and that resulted in delays to the customer and transferring of the call from one section to another. "When customer X called at 11.00 in the morning, it was usual for the person to wait for someone to transfer the call between departments, since each specialised in a particular service and would not know how to deal with the query. In the end, there were mostly three routes that the call would take. Either, the caller would get frustrated and end the call, or the call would get off in the process of transfer. The last option would be that the query remained unsolved and the customer would be told that the problem has been noted and someone would call."

The expectations of the project were mainly 2. By reengineering the process, an efficient and effective service that would reduce the time dealt with the handling of the calls and attending to the problem itself would be achieved. An improvement in the relations between the customers and the organisation was also expected by undertaking BPR. The expectations from the first objective are explained in Table G-1.

**Table G.1 The expected outcomes of the BPR project undertaken at pilot study 1**

(Adapted from a document used in the project)

• A single point of contact for the customer to request support, with prompt call handling
• The customer should make only one call - case study 1 should then proactively manage progress
• Be able to ascertain the customer's level of urgency and prioritise calls accordingly to maximise customer uptime
• Give the customer a problem owner to whom he/she can refer to regarding problem status/development (including Call ahead)
• To have the same engineer or one from a small group who is familiar with the customer and his machine
• Fast and complete repair at first visit by a highly trained engineer
• Service levels which match or exceed other suppliers
• Improve account management with closer links between sales and service

### G.1.3 ESTABLISHING THE REENGINEERING TEAM IN PILOT STUDY 1

Teams are essentially a part of pilot study 1's working life. When entering the allocated work area in the offices, there are no partitions between desks and the environment is quite open with no barriers. Individuals working in the organisation move around quite freely and do not have any restrictions placed upon their movements and activities. Within pilot study 1, temporary teams or full time teams are a normal prospect. Temporary teams are set up within business units to work on a specific task. Alternatively, there are full-time teams and that is what the reengineering teams were.

Pilot case 1 conducts a lot of research into various subjects, including how to introduce teams within an organisation and that proved beneficial for the reengineering teams. There are research laboratories established in various countries that undertake this task, not only into ways of improving its products, but also on how to improve its services. From the time that pilot study 1 began to focus upon quality, teams were developed and as such have become part of the organisation.

The idea that BPR should be undertaken to solve some of pilot case 1's problems came from one of the Managing Director's working for the organisation. Besides suggesting that this approach should be utilised, the support of this director was there from the initiation to the end periods and this individual became known as the sponsor of the project. "With competition becoming stronger, customers not getting their utmost satisfaction, it was thought that something should be done, and one of our Managing Director's came up with the idea of BPR."

To undertake the project, large amounts of resources in the form of money, time, facilities and people were involved and for this the permission of the higher authorities was deemed to be necessary. Members of the Board were approached and their support was sought.

Once the approval was obtained, a selection of the appropriate team to undertake the project began. "Selecting the team is a major step for the organisation and is something not taken upon on a light basis. For this, the role of the Board is necessary. Any large decisions made within the organisation are done so by the Board." The members of the Board in the

organisation were viewed to be serving more of a Steering Committee's role where the approvals for major decisions, reporting of the progress of work and overall support were obtained. This was due to the nature of the work, the positions of the members within the organisation and due to the members having other very important responsibilities to the organisation.

After the approval, the next step was to determine the appropriate size of the teams, what were the teams meant to work upon, prepare for their absences (determine whether secondments or temporary promotions should be introduced) and to prepare for the formation of the team. "We knew that the team would have to work away from their usual places of work. This was to keep them away from being distracted by the workings of the old departments. For this, a room similar to the one that we are sitting in, was prepared and to inform the team and to have the right candidates, the Human Resources department personnel were involved."

The reengineering team was composed of individuals belonging to various departments within the organisation since the processes being changed were cross-functional ones. As the change to be obtained was to be achieved in the customer service department, a manager of the department was included within the team. Also included within the team were members from the departments of Finance, and IT.

Following the importance of the customer services department, the areas that were largely affected by the changes, were the Finance and IT ones. Members from these two departments were viewed to be especially vital since they were providing the main resources of money and the equipment to be employed to obtain the desired change.

To form the team, the backgrounds of the team members were analysed. As part of this process, knowledge was one of the criteria utilised. Knowledge of the organisation, their own departments, project management and business process reengineering areas, were some of the examined fields. Skills of the individuals were also investigated and they included ones such as team development, presentations and writing skills. Thereafter, the attributes of the individuals were analysed and issues such as the personalities, values, interests, needs and prejudices were investigated.



Since the knowledge, attributes and skills selection criteria was being utilised, there were certain members within the lower or implementation teams who were non-graduates, however, since they were familiar to the areas being transformed, and experienced they were included. However, the main team consisted of graduates. For this step and to determine the final decisions, the responsibility lay with the project manager and the sponsor of the team (the Director).

While the selection process was carrying on, other activities were being accomplished in the background. The tasks of establishing the facilities whereby the team would work, the rewards and recognition schemes that were to be set up, assessing the job descriptions and obtaining the permission of the appropriate department leaders for the individuals who were going to be part of the team was being undertaken. It was at this stage that the Human Resources department's role became prominent, as they had to establish the appropriate job descriptions as well as reward and recognition schemes.

Additionally, preparations for the facilitation team began. This team consisted of facilitators whose roles were viewed to be that of (a) mediation; (b) acting as project managers; and (c) sitting besides the team as moral supporters. Therefore, two teams had to be established. One, the reengineering team and two, the facilitation teams. However, the facilitation team was also counted as one of the elements of the reengineering team.

#### **G.1.4 SELECTING THE REENGINEERING TEAM**

After the discussions between the members of the Board, Director, Human Resources department and the managers from the departments that the team members belonged to, the selection of the team began. Along with the knowledge, experience, and skills of the team members an analysis of how well the individual would fit in with the other team members was also undertaken. When selecting the team members, there was no use of any psychometric test. Psychometric tests were used only after the team was formed. The purpose of the tests was

mainly to demonstrate to the team members their areas of strengths and weaknesses. The psychometric tests utilised were the Meyers-Briggs test.

Size was also an important determinant to consider when forming the team and a maximum of ten members comprised the reengineering team. It was felt that teams composed of large numbers would be difficult to manage and a personal view was that the room size where the team would be working would not be able to accommodate large numbers of people. This could result in tight working spaces and irritation and lower productivity could occur. The main reengineering team can be described as follows: There was the **facilitation team** that consisted of 3, or 3 to 4 people, and the **design team**, consisting of 6 to 8 people. The team size was thought to contain a maximum of 10 people.

There was one team that was used throughout the whole project, however, when implementation took place, then additional teams were formed and they also contained two to ten members and were employed to work alongside the original team. However, that there was to be one team was considered to be a necessary requirement as the utilisation of different teams could result in different decisions. "If you pass something on to somebody, there's a difference in interpretation. The interpretation results in "I've got a good idea, so I'll do it this way" (Mr. A, 1999). Consequently, decisions could be going in tandem and the original objectives might disappear.

The team comprised a mix of both male and female and according to our source "there were more females than males." There were about 60% females and 40% males. However this was not a conscious decision. "The team consisted more of females than males. This is something that just occurred and is something that we did not go out of our way to obtain." This also reflects the assertion that the organisation has. On the website, the organisation asserts that it does not discriminate amongst age, race, colour or creed. When the organisation is visited, it can be seen that there is a generous mix of both females and males in the organisation and the stated view was held true. Also it was stressed that women as well as men are holders of senior positions within the organisation. As aforementioned, the team was composed of a wide variety

of people, from the sales to administrative areas since all the areas within the organisation were viewed to be affected.

The positions that were held by the team members were mostly project managers and senior managers from the various departments and the age range was balanced (in their 20s to 50s). The positions held by the individuals also served a second purpose in that since the members were holding responsible positions, they could not be taken away from their departments for very long periods. Although secondments were arranged, the organisation had to make sure that not too much responsibility was assigned to the replacement individual and that the individual was made comfortable with the new role.

Additionally, it has to be remembered that the reengineering teams also consisted of the facilitators (usually 2, but in some exceptional cases 3). The team members were all graduates, but belonged to different disciplines. For instance, some individuals had a BSc. degree from the Economics faculty, whilst others had one from Engineering. At the time that case study 1 undertook the BPR project, the approach was still being researched and there was little known about the practical implications of the approach. Consequently, an external consulting company that was involved in another project of another nature expressed an interest in the results and management of the approach. They were included in the project, but were not directly involved in the undertaken task and benefited by obtaining the experience of a large organisation undertaking BPR. In exchange, the consulting company assisted in providing research material about the methodology of the approach.

#### **G.1.5 THE REENGINEERING TEAM'S PREPARATION AND UNDERTAKEN WORK**

Since the individuals belonged to different departments and had varied backgrounds and were going to work upon a common project, training had to be provided. A week of intensive training where a familiarisation to the operations of the organisation, required project management skills, visions to the project and the aims and objectives of the project were provided. "For any new project or task that is undertaken, there has to be training provided. Not

everyone has all the required knowledge, experience and skills and to overcome this, training is usually provided.”

There was also an introduction to the BPR area for those not familiar to its theory and concepts and how the team would work together to deliver documents at each stage. Even though the team members worked in one building, there could have been little contact amongst each one of them; therefore also to make them all accustomed to one another, the induction week was introduced.

During this period other issues that were discussed were emphasising the facilitators roles, the methods of communication (usually paper based, however, when not in the room, the e-mail facility would be utilised) that would be employed for the project and how it would work. Also included within the course of the week was a familiarity with team building skills, which was viewed to be rather important for the project.

The training was undertaken in one of the several allocated conference rooms located within the buildings. During this process, the role of the facilitator also became clearer as this individual assisted in mediating tactics and reducing fear or resistance to new ideas. Once the training was completed, the team began to work in a set space within the building.

There are sets of meeting rooms within the building and it is there that they worked. Flip charts, desktop computers, and a filing system were provided. However, most of the undertaken work was either drawn or written. This position was adopted as it was felt that visual communication is remembered by the mind. As Mr. A. stated, “Make information visible, put it onto the walls and it does form an impression.”

Leadership was also viewed to be particularly important in determining and ensuring that the team understood the objectives, as they were involved in the workings of the team. Therefore, leadership was seen to have a distinct role (guiding, facilitating, and setting targets) and yet they were part of the team.

### G.1.6 EMPOWERING THE TEAM

During the induction period, in addition to some of the aforementioned required information, the boundaries of the decisions that the team could make were set. For instance, at the first stage of the project, the Director who was the sponsor of the team empowered the team, all the individuals within the team, to think of ways of obtaining a percentage improvement in the current state of the organisation. This was something different as the individuals thought in terms of the current state and in terms of their own roles within the department. For instance, in their new roles, the team was provided with almost unlimited powers. They produced recommendations on decentralisation, empowerment and process redesign and the Board accepted them all. Therefore, in this new role of empowerment, the team was provided with the power to provide a business case for senior management that would show how benefits would be obtained.

The process of the discussions would be as follows. After the discussions between the team and the leader relating to the suitability of the new ways took place and suggestions about new issues were put forward, the changes would be implemented. There were rare occasions when the recommendations were overturned; usually it was the suggestions put forward that were acknowledged and implemented. Therefore, when plans were put forward, members of the team would have made visits to departments and considered the impact of the changes. Prior to the changes, managers of the finance department would be responsible only for the operations of their own department, however, as a result of the incoming changes, their decision would make an impact upon the orders department. Examples of empowerment when BPR was implemented were provided as described below.

Empowerment is particularly important at the implementation stage when teams are formed of individuals from lower as well as senior ranks of the organisation to manage the new processes and consequently, provided with new powers to resolve problems and decide how the objectives will be achieved. Within the teams there were managers as well as the engineers. The role of the field engineer was critical in this project as engineers were given the new 'power' to

decide how they would deal with the problem say for instance, of a product (photocopier) within a desired time and within an allocated time period. Thus, for instance, if a customer was informed by the organisation that within five working days, the machine would be serviced and parts replaced, then that action would be completed within the stated duration.

Prior to BPR, the manager would be responsible for the allocation of the duties and as a result would be pressing for the engineer to look after the customer and his/her needs. After BPR, the manager was expected to trust the training provided to the engineer to attend to the task and within the specified five days and instead attend to other duties within the department. Also after BPR occurred, the initial point of contact people, (the welcoming centre people) were provided with training to be able to attend to a query over the phone. This assisted in eliminating unnecessary visits by the engineers and alternatively, also assigned more responsibility to the welcoming centre people. They were given the authority to make decisions for themselves by their training and the managers also had to become accustomed to the fact that the individuals had new responsibilities and were aware of how the objectives would be obtained.

It can be observed that this was a new role for the team as previously, in their own departments, managers would be the only ones responsible for making and implementing decisions. In this new role, decision-making was a joint or team effort; therefore some responsibility also lay with the various members. Some individuals were not ready for this change in roles and eventually left the team. "Theoretically, you will always get at least about 20% who resist, don't want to change or are unlikely to change. Therefore, you plan for it" (Mr. A, 1999).

As the new roles and responsibilities of the team members began to occur, the role of the leader also changed. From the traditional, hierarchical one role where the leader is viewed to be rather high up on the hierarchy map and delegating duties to the team, the role changed to that of an information gatherer. Therefore, with the new responsibilities the team was expected to proceed with their assigned tasks and at the set deadline, was expected to provide the results to

the leader. So, the leader was still there and worked within the team but now had fewer responsibilities and could pay attention to other areas requiring attention.

### **G.1.7 CONFLICTS IN THE TEAM**

Within the allocated working space, the team members had developed an air of friendship with each trusting the ability of the other and not disagreeing with the other and working together at the assigned tasks. However, although there was a presence of unity and co-operation within the team, conflicts were viewed to be a natural outcome in such situations, “Conflicts will occur. It’s a natural outcome of getting a group of people together” (Mr. A, 1999).

The reasons for conflicts to occur were contributed to two main factors. The initial reason could be due to some individuals within the team doing their own thinking and designing, in other words not co-operating with the rest of the team and working on their own. However, the other instance could be that some individuals truly do not understand how the current state works and have difficulty in understanding how something can be achieved for the future.

An example of this was when the team was informed that the welcoming centre individuals would be able to attend to queries that were dealt by transferring calls within departments. Some managers were not used to the idea that a certain individual who previously dealt only with the transfer of calls would be able to handle quite detailed questions. However, once the routes (the training and the equipment) that would be undertaken to achieve this objective were described, the doubts subsided, however, not completely.

To prevent dramatic failure rates due to conflict, the organisation applied a few steps. The first act that was undertaken was to actually consider and express to the team how the diversity within the team would actually evolve. This was to let the team become aware of the fact that the team was composed of different individuals and it would be likely for conflicts to arise. The other solution to the conflict resolution was to have the facilitators enter the situation. In fact Mr. A remarked “facilitation is a critical thing.” By having facilitators, then it is known that

there is a route by which the problem can be solved or at least reduced. Conflicts were a source that led to the development of the team to break down and this resulted in the team moving from norming to storming and led to the incremental pattern being followed to being disrupted. As Mr. A. stated, “conflicts were a major source of disruption and this led to the repetition of some of the steps in Tuckman's model.”

## **G.2 PILOT STUDY 2**

Pilot Study 2 was another organisation that assisted the research during the initial stages. Its eventual main purpose became to assist in refining the interview and questioning techniques. This organisation was different to the other cases and the aforementioned pilot in that it was a small to medium sized enterprise and so the information that was obtained was minimal. However, the pilot study was beneficial in illustrating that it is not always the instance that what the research intends to find will be established and that it can be difficult to determine the human and organisational aspects within organisations that are small in size, thus researchers should be attentive to the size of the organisation when considering the case studies to be used in the research.

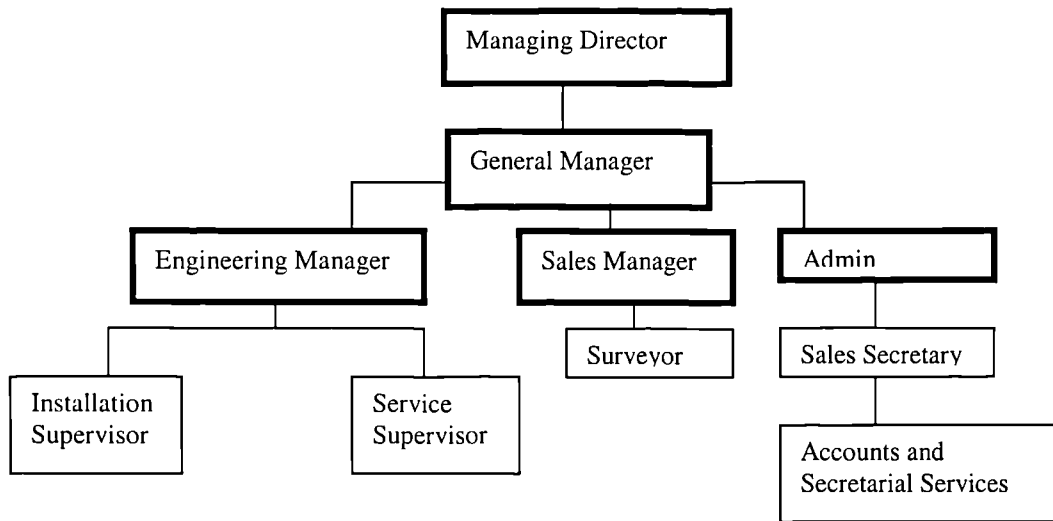
### **G.2.1 BACKGROUND OF PILOT STUDY 2**

Pilot study 2 is a small company engaged in the installation, contract maintenance and service of security systems. The functions of service and maintenance of the alarms are extremely important to the organisation, generating revenues in excess of £800, 000 annually. The company was established in 1975 in a part of London, and steadily progressed by increasing sales or acquiring businesses of similar stature. The growth also made the organisation move from its premises to larger ones in order to cope with the situation. The organisation employs about 28 people of whom the majority are the service engineers and thus being out on the road for most times. There are about 8 administrative individuals who remain



on the premises and attend to the paperwork in the office and mostly attend to the calls made to the offices.

The organisational structure of the company is as follows.



**Figure G.1 The Organisational Structure of Pilot Study 2**

## G.2.2 THE CHANGED PROCESSES AND REENGINEERING TEAM

The problems facing the organisation were in complying with the policies of the alarm regulating bodies. As it was, there was a diary that logged the maintenance and service appointments of the clients and this was not in electronic form. This meant that there was only one copy that was distributed amongst 6 individuals. The decision to keep a single copy was taken to prevent duplication that could result in customer annoyance. However, this resulted in several people writing out different schedules on different memorandum sheets and instead caused more duplication than ever foreseen. This meant that engineers arrived at locations where they were not meant to be, resulting in unnecessary time, money and effort usage.

Both the managing director and general manager sought a solution as they had the largest stake in the organisation and were responsible for any implemented actions. Previous to the change there were also several systems that dealt with different clients and it was decided that only one system should deal with all clients. This system would link up with the company's

main computer system and update all false alarms and service statistics resulting from its interface with the customers. Installing electronic diaries on the system eliminated the problem regarding the diaries. These diaries allowed access to all key personnel and the service engineers.

For all these changes both the General Manager and Administrative Manager provided personnel with training. A team known as the reengineering team was established and this consisted of the Managing Director, General Manager and Administrative Manager. The Managing Director was the individual who formed the original vision that BPR would be a suitable approach to utilise. Information regarding this was obtained from the MBA course that the Managing Director manager was undertaking. Since he was the leading authority in the hierarchy, there was no one above the hierarchical ladder who needed convincing. However, he had to convince both the Administrative and General Managers that this was an appropriate route and to provide their utmost support. "I knew that this was the right way to go, but the problem was that the others were not so familiar with it" (Mr. J).

To solve this problem, both the individuals attended evening courses for a year. The courses were meant to provide the personnel with obtaining more knowledge into the IT area in order to provide suitable training. This also allowed more information regarding IT to be obtained and the delegation of responsibilities, and this new power was the empowerment that Mr. J foresaw in his organisation. "According to my understanding, the fact that these two are allowed to make responsibilities that they did not have before, I think makes them empowered" (Mr. J). Previously, the two had the responsibility for only their jobs. The education that they had obtained allowed them to provide comments and views and get involved in the major decisions. This was something that they had not previously had.

By allowing these individuals to obtain the appropriate training, trust was built by the Managing Director into the decisions made by these two individuals. The research also attempted to determine whether Tuckman's (1965) model could be matched to the team's development, but it was discovered that there was no place for conflicts since the team was so small and each one of the team member's seemed to agree with the other. There was no way

that forming could take place, because all the members were known to one another and thus, the research could not declare any substantial findings as those in pilot study 1. The motivation within the team was intrinsic and mostly a sense of pride and overall improvement for the organisation were the main reasons for seeking BPR.

## **APPENDIX H: DESCRIBING THE DATA ANALYSIS TECHNIQUES**

This Appendix lists the technique used for data analysis in detail. This is to assist the reader in understanding Chapter 5 where the data analysis was undertaken.

### **H.1 DETAILING THE PROCESS OF CODING**

The initial step was to record the interviews using a Dictaphone. Thereafter the interviews were transcribed. The results of the transcriptions were several words of interview data obtained from each of the organisations. The next step involved reading the interviews, paragraph-by-paragraph and word-by-word. From the theoretical survey undertaken in chapter two some views about concepts had been formed and thus, each time a particular idea or concept was mentioned or explained, it was marked off.

For example in one of the interviews when asking about conflict, the question was worded as follows:

“Was there any conflict within the teams?”

The reply obtained was:

“Yes. No. It depends upon what do you mean by **conflict**?”

At this point, the first step was to mark the term **conflict**. Once the term conflict was marked, a note was made on the front set of sheets that the term “conflict” is in this set of sheets. The page number that the term appeared upon was also stated on the front page of the sets of interviews. This is more commonly associated with the process of coding as described by Rubin and Rubin (1995).

### **H.2 DESCRIBING THE PROCESS OF THEORETICAL IMPLICATIONS**

Once questioning about a certain topic begun, it was the policy of the researcher to obtain as much in-depth information about it. For instance then, once questions about conflict begun,

the questioning then began to find out what were the types of conflict that were evident within the organisation.

Question: "Could you please describe what were the types of conflict within the team?"

Reply: "Well, it depends upon what you mean by that. There were disagreements mainly about the undertaken tasks. For instance, if person 1 proposed something that was suitable in his/her opinion for a particular process, person 2 may just disagree with the suggestion. This was maybe on the basis that person 2 was more familiar to the workings of the department and so could justify the reasoning. However, person 1 was insistent that they knew this was the most appropriate route to follow. This resulted in a deadlock and caused the team to address the issue in the conflict resolution meetings."

This result was very informative for the data analysis as it became clearer that the conflict being referred to in the interview was "task related" rather than "personal" and this also noted in the margin. An observation was also made about conflict resolution. Therefore, the implications of conflict were recorded and noted. All these responses assisted in analysing the data for Chapters four and five.

Sometimes it became impossible to complete the whole interview since the respondent had to refer to previous documents and the following interviews then attempted to revive the respondent's memory by prompting:

"Last time I asked you to provide me with an example of empowerment and you asked me to remind you about it. So could you please refer to the documents and then assist me with that."

What can be deduced from the descriptions is that the process of data analysis involved reading the paragraphs and the words in them in detail. Thereafter, a process of coding and the theoretical implications of the concepts in practice were noted.