



**From Project Management as Instrumental Processes to
Projects as Social Processes: a Case Study Investigation**

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Elnari Hough

Statement

I hereby certify that this research report submitted for the partial fulfilment of the requirements of the MBL degree at UNSIA SBL is my own work and all references used are accurately reported.

Elnari Hough

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1. Introduction

1.1. Research Context

The use of projects and the “projectification” of organisations are expanding into many business sectors in an attempt to improve effectiveness such as the Renault Case (Midler, 1995), to manage change effectively (Clarke, 1999) and also to employ innovative features to new and existing product lines (Beaume, Maniak and Midler, 2009). The potential advantages to an organisation applying project management to their projects are, however, not always realised so that instances of late deliveries, budget overruns and unsatisfied customers are typical of the contemporary project (Cicmil and Hodgson, 2006).

These failures of project management are recognised by researchers and practitioners as a crisis in the field of project management with the result that the traditional approach to project management is questioned for its relevance to the contemporary project (Cicmil and Hodgson, 2006). The significance of this problem was validated when the UK’s Engineering and Physical Sciences Research Council (EPSRC) funded a research study in 2003 to find ways to enrich the subject field beyond the current theoretical basis into an area of practice and actuality. Groundbreaking insights into new directions for project management research were formed by this Network where five directions for future research were established.

This research study will focus on one of these directions—the move from Projects as an Instrumental process towards Projects as Social processes which are defined as:

“...the ever changing flux of events, the complexity of social inter-action and human action, and the framing and reframing of projects and programmes within an evolving array of social agenda, practices, stakeholder relations, politics and power.” (Winter, Smith, Morris and Cicmil, 2006:642).

Although the findings of the Network provide a high level categorisation of perceived social processes in the project environment, it does not provide any direction or indication as to how these social processes should be dealt with or the impact of better handling of social interaction on the project outcome.

To contribute to the field of research of *Projects as Social Processes*, this research study will investigate the various aspects of social processes in the project environment. The study will be qualitative in nature and will use a case study methodology investigating the social processes experienced by the project managers of the various subsystems of Bombardier Transportation, as part of the Bombela Concession Company, in the delivery of the Gautrain Rapid Rail Link project.

Project Managers were interviewed to understand how they experience the social processes taking place in the project environment as well as how they handle and approach these social interactions.

The above methodology used in this exploratory case study is specifically used to develop a justification for enlarging the existing methodological Project Management Bodies of Knowledge (PMBOK) and the Life Cycle processes applicable to System Engineering to include Social processes.

1.2. Research Question

The main research question of this study is:

- What social interactions are taking place in a project context that can influence the outcome of a project?

1.3. Research objectives

The objective of this research study is:

- to determine the impact and effects social processes have on the outcome of a project,
- to also show why project management cannot be viewed *only* as an instrumental process consisting of processes and techniques,
- to demonstrate why social processes should be included in PMBOK and Life Cycle Processes applicable to System Engineering.

1.4. Assumptions

- The assumption made in this research study is that all the project managers who will form part of the study are knowledgeable with regard to the processes and procedures as advocated by PMBOK.

1.5. Delimitations

- The limitations of this study are that the population of interest was limited to the project managers of Bombardier Transportation working on the Gautrain project for each of the various subsystems. It should be noted however that the various subsystems (Track laying, Signalling, Automatic Fare Collection, Communications, Radio and Overheads) are all different with regard to contractors employed, technical expertise of contractors, etc. and therefore provide a rich basis of different experiences.
- The project is reaching the end of its delivery and only project managers from four of the subsystems were available as interviewees.
- A further limitation to this study is that it only investigates projects as social processes. Other directions for research as indicated by the Network, such as the complexity of project, value creation, broader conceptualisation and reflective practitioners do not form part of this study.
- This research study is also limited to the social processes defined by the Network. These social processes include the flux of events taking place on the project. It is also limited only to the individuals, groups and organisations with whom interaction takes place on the project and the social skills applicable to each. The social processes are further limited to the social networks and the connectivity between networks and how it affects the interaction taking place with people. The role of culture and tribalism and how it affects strategies for interaction between people also form part of the defined social processes. Lastly the impact of language and metaphor in the interaction with people is included in the defined social processes.

1.6. Importance and Significance of study

The importance of this study is that, although it does not disregard the importance of theoretical and procedural practices as suggested by PMBOK, it attempts to provide evidence to collaborate the findings of the Network that the social aspects and activities project managers are immersed in on a daily basis play a critical role in the delivery of a project. It will also provide evidence that projects cannot only be seen as instrumental processes which involve a linear sequence of tasks, with codified knowledge and apolitical processes.

This research study attempts to provide practitioner experience of social processes in a project which can be used to enhance knowledge about contemporary projects.

1.7. Contribution of the study in relation to the existing body of knowledge

This study aims to contribute to two bodies of knowledge:

a. PMBOK

The PMBOK Guide presents guidelines for the application of project management. This standard documents the generally accepted project management practices which can be applied to most projects. Five process groups are identified: Initiating, Planning, Executing, Monitoring and Control, and Closing.

Nine knowledge areas are defined and are illustrated in Figure 1-1 in matrix format. This research study will attempt to provide an additional Knowledge Area—that of *Social Interaction* which is applicable to all process groups.

	Project Management Process Group				
Knowledge Areas	Initiation	Planning	Executing	Controlling	Closing
Integration Management	x	x	x	x	x
Scope Management		x		x	
Time Management		x		x	
Cost Management		x		x	
Quality Management		x	x	x	
Human Resource Management		x	x		
Communications Management	x	x	x	x	
Risk Management		x		x	
Procurement Management		x	x	x	x
Social Interaction	x	x	x	x	x

Figure 1-1: Process Matrix Chart

b. ISO/IEC 15288

The ISO/IEC 15288 is an international Systems Engineering standard created to provide a common framework for describing the life cycle of systems. It provides processes to support the life cycle of systems created by humans and it includes technical, project, agreement and enterprise processes (ISO/IEC, 2008). In a paper presented by Sparrus (2011) at the International INCOSE symposium, it is noted that although system engineering is practised on tangible objects, all activities within these processes involve human interaction; in the agreement process, for instance—confirming stakeholder requirements of the system, in the enterprise process, for instance—communicating roles and responsibilities, in the project process, for instance—the management of the project, in the technical process, for instance—performing reviews. It is concluded that system engineering involves largely social activities which means that this practice should therefore be supported by social research.

This research study will attempt to provide an additional activity to the “Special Process” (refer Figure 1-2)—that of Social Interaction.

System Life Cycle Processes ISO/IEC 15288

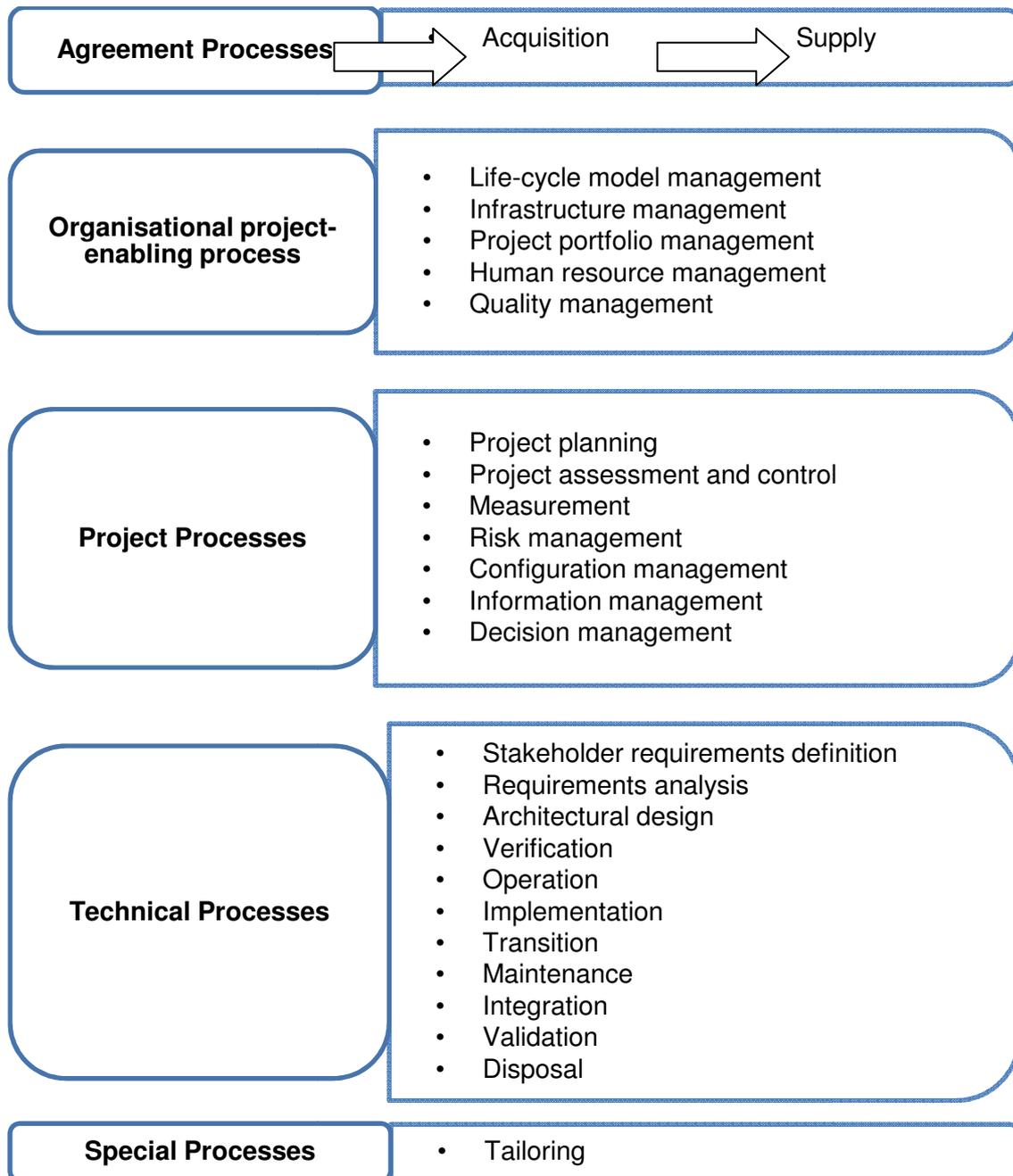


Figure 1-2: System Engineering Project Process (SEPT, 2008)

1.8. Clarification of Concepts

Table 1-1: Clarification of concepts and terms

Projectification	This concept is defined by Bredin (2008:1) as “...a general development process in which firms to a greater extent focus their operations on projects, project management and various types of project-like structures.”—i.e. the general trend of handling almost everything as a project.
Flux	Continuous state of change
Network	<p>The group involved in research to determine new directions for future research in the field of project management. This group was funded by the United Kingdom’s Engineering and Physical Sciences Research Council (EPSRC) and involved the following groups (Winter and Smith, 2006):</p> <ul style="list-style-type: none"> • Academics from fifteen UK universities covering business and engineering schools, and overseas academics from Canada, Europe, Australia and the US. • Senior practitioners from private, public and voluntary sector organisations including: Rolls-Royce, Human Systems Ltd, the Big Food Group, Warburtons, Daresbury Laboratories, Newcastle University, FAME National Project (ODPM), Newcastle-Gateshead Initiative, Office for Government Commerce (UK Government), GlaxoSmithKline, Ministry of Defence (UK), Sharefirst/South East England Development Agency (SEEDA), Airbus, High-Point Rendell, Halcrow, Royal Liver Assurance, and the National School of Government (UK Civil Service). • Representatives from the Association for Project Management (APM), the Project Management Institute (PMI), the Major Projects Association (MPA), and the International Project Management Association (IPMA). • The lead organisers of the Network were Dr Mark Winter and Charles Smith.

1.9. Outline of the research proposal

Chapter 2: Literature Study

In chapter 2 the foundations of projects as social processes will be reviewed. Most recent findings of researchers and practitioners with regard to social processes in the project environment will be reviewed and compared to the findings of the Network. The view of projects as instrumental processes will be examined and compared to current research on each of the perspectives of the view. Finally each component of the definition of projects as social processes will be reviewed to understand its impact on the research question.

Chapter 3: Research Methodology

In chapter 3 the general theory of using case studies as research methodology will be reviewed. The main components of a case study research design as promoted by Yin (2009) are also examined. Details with regard to the sample, data collection method, analysis, validity and reliability as well as ethical issues used in the study are also presented.

Chapter 4: Research Results

In chapter 4 the data that was collected during the interviews will be presented. These results will be analysed to determine recurring themes from which findings will be presented. Each finding will be compared and tested against available theory and, where possible, rival explanations will be presented.

Chapter 5: Conclusions and recommendations

In chapter 5 a summary of the findings from the previous chapter will be provided from which conclusions and recommendations for each of the components in the definition of projects as social processes will be made. This chapter will conclude with suggestions for future research in the area of projects as social processes.

1.10. Summary

The actuality of project management bodies of knowledge and education are questioned, due to the large amount of project failures. Actuality research suggests a move away from projects as instrumental processes towards projects as social processes. However, no clear indication is provided as to how these social processes should be applied and the extent of their impact on

the project. A study of social processes and their impact provides the foundation of the research question of this study. Findings of the study will aim to contribute to expand the knowledge areas of both the PMBOK as well as the ISO/IEC 15288, but also to provide evidence to collaborate the findings of the Network.

2. Literature Review

The concept of modern Project Management as a field originated in the late 1950s to early 1960s (Codas, 1987). The proliferation of information about planning and control methods, as well as literature addressing aspects related to project management such as human resource management, risk management and leadership, necessitated the creation of a structured work containing the best practices available. The Project Management Institute (PMI) took on this initiative and the result was the Project Management Body of Knowledge (PMBOK) presented for the first time in 1987 (Packendorff, 1995).

2.1. Rethinking Project Management

PMBOK became a standard after 1987. Nevertheless in the 1990s, practitioners and researchers started to question the universal techniques and abstract principles presented by PMBOK, based on the considerable amount of project failures in both public and private sectors (Cicmil and Hodgson, 2006). One of the earlier contributors to question these universal techniques was Packendorff (1995), who argued that there are three problems:

1. The underlying assumption of PMBOK that project knowledge is applicable to most types of projects in most types of organisations. It assumes that even though the outcomes of projects are different (as an example the outcome of a construction project may be a building and that of a software development project an application), the process groups of the project (initiation, planning, executing, controlling and closing) are the same in all projects. Packendorff (1995) argues that different projects require different approaches, teams, project managers, planning and evaluation methods and that the project as a unique undertaking has not received the required attention in research literature. He notes that valid observations from case specific studies are ignored in favour of observations that can be generalised to the *de facto* standards proposed in bodies of knowledge.
2. The lack of empirical research of projects which involve gaining knowledge by means of observation or experience. Packendorff (1995) argues that most textbooks and conference papers contain lessons

learned from projects that were either successes or failures by highlighting the correct or incorrect use of theory, procedures and approaches as advocated by bodies of knowledge. Empirical evidence and practical experience are rarely used in project management handbooks and research findings, as these most often cannot be applied to the 'universal project'. But projects still continue to fail and the reason for the failure of projects is not covered by the books available to project managers. Packendorff (1995) suggests that empirical studies must take place to understand the actual realities of a project as this sharing will be of more use to the project management practitioner.

3. Projects should not be researched merely in terms of their ability to deliver a certain undertaking, but emphasis should be placed on the project as a temporary organisation with its own culture, team motivation and processes.

Based on the above, Packendorff in summary suggests that project management research should move from:

"...prescriptive, normative theory, grounded in ideal models of project planning and control...(to that of) ...descriptive theory, grounded in empirical narrative studies on human interaction in projects. Research (should be) undertaken as comparative case-studies." (1995:326).

Hodgson and Cicmil (2006) also challenge the concept that all projects can be managed in a universal and consistent way as promoted by PMBOK and highlight that it is creating a dangerous perception—that the best practices offered are universal laws of project management application. Morris, Jamieson and Shepherd (2006) expand further on this and note that too much belief is put on PMBOK in its ability to guarantee performance. Implementing and accepting these best practices do not necessarily ensure project success or prevent failure. It is evident in current reports and studies indicating that only 16% of IT projects are generally considered successful by the project stakeholders. This is creating a disparity of what the bodies of knowledge offer vs. its effectiveness in delivering (Cicmil and Hodgson, 2006). Delisle and Olson (2004) investigated this claim that many projects still fail despite the availability of

better methodologies. The question remains: “What could cause these failures?”.

Some researchers also critique the narrow procedural view of the suggested practices noting that such practice should be extended and enriched and that the lack of current theory is the reason behind the large amount of project failures. This argument was investigated by Koskela and Howell (2002) in a study to determine if project management’s underlying theory is obsolete with specific reference to a construction project. They found deficiencies in the theory throughout the life cycle of the project.

As an example of a deficiency they mention that customer requirements are poorly understood, causing disruption to the planning. The disruptions then have an effect on the schedule which is not updated on a regular basis. Management are only aware of the ‘official’ schedule and different priorities are assigned, so work authorisation changes from planned activities to reactive management. This in most cases requires equipment and labour which is not on hand, thereby lowering efficiency and causing more delays on the schedule.

Koskela and Howell (2002) conclude that the theory as presented in the PMBOK is not sufficient, that complementary theories should be investigated and that urgent transformation of the project management field is required. This transformation, they claim, can only be achieved by close collaboration between theory and practice. Cicmil and Hodgson (2006) concur with this view by suggesting that project research should focus on what is really going on in projects namely the decision processes and the power relationships that create the social reality of projects.

Other influential attempts by groups to address the dissatisfaction of project management research include those of the ‘Scandinavian School’ of project studies. In an attempt to understand and analyse the variations between projects, it is argued that different types of theories are required—some looking at the universal or generic aspects of projects, some looking at the specific aspects of projects. To better understand the fundamental issues of project management these theories can, however, only be developed by empirical in-depth case studies—which is lacking (Söderlund, 2004; Lundin, 1995).

It is against this turbulent background that the UK's Engineering and Physical Sciences Research Council (EPSRC) agreed to fund a research study in 2003 to find ways to enrich the subject field beyond the current theoretical basis into an area of practice and actuality. The *Rethinking Project Management* Network was formed with its primary aims to create a network of researchers and practitioners that are concerned with project actuality and also to create a research agenda to improve project foundations. It should be noted that the purpose of this research was not to discredit or nullify the processes and practices promoted by the bodies of knowledge, but rather to complement and enhance knowledge of the project management field to make it more applicable to the contemporary project (Winter, *et al.* 2006). Meetings took place over a period of two years, involving academics from 15 universities and practitioners from private, public and voluntary sectors. The format of the meetings consisted of practitioners presenting detail of projects that they worked on, providing detailed accounts of what they experience on a daily basis on their projects. The Network then questioned the presenter on aspects of the project to understand what is really taking place in a project on a day to day basis and the influence of people interactions in these projects. Debates were formed between academics and practitioners with different views, around the actualities that practitioners experience and this formed the basis of directions for future research—arguments grounded in experience, not theory (Smith, 2007). The Network's findings were presented in a paper '*Directions for future research in project management: The main findings of a UK government-funded research work*', which contains five directions for future research work (Winter, *et al.*, 2006:642):

- Direction 1 (D1)—moving from;
 - the simple lifecycle-based models of projects as the dominant model of projects and project management,
 - and from the assumption that the lifecycle model is (assumed to be) the actual 'terrain'.

Moving towards;

- the development of new models and theories which recognise and illuminate the complexity of projects and project management at all levels
- and towards new models and theories which are explicitly presented as only partial theories on the complex 'terrain'.
- Direction 2 (D2)—moving from;
 - the instrumental lifecycle image of projects as a linear sequence of tasks to be performed on an objective entity 'out there',
 - using codified knowledge, procedures and techniques,
 - and based on an image of projects as temporary apolitical production processes.

Moving towards;

- concepts and images which focus on social interaction among people,
- illuminating the flux of events and human action,
- and the framing of projects (and the profession) within an array of social agenda, practices, stakeholder relations, politics and power.
- Direction 3 (D3)—moving from;
 - concepts and methodologies which focus on product creation; the temporary production, development or improvement of a physical product, system or facility etc;
 - and monitored and controlled against specification (quality), cost and time.

Moving towards;

- concepts and frameworks which focus on value creation as the prime focus of projects, programmes and portfolios.

- Direction 4 (D4)—moving from;
 - concepts and methodologies which are based on the narrow conceptualisation that projects start from a well-defined objective ‘given’ at the start and are named and framed around single disciplines, e.g. IT projects, construction projects, HR projects etc.

Moving towards;

- concepts and approaches which facilitate broader and ongoing conceptualisation of projects as being multidisciplinary, having multiple purposes, not always pre-defined, but permeable, contestable and open to renegotiation throughout..
- Direction 5 (D5)—moving from;
 - training and development which produces practitioners who can follow detailed procedures and techniques, prescribed by project management methods and tools, which embody some or all of the ideas and assumptions (noted in the above noted directions).

Moving towards;

- learning and development which facilitates the development of reflective practitioners who can learn, operate and adapt effectively in complex project environments, through experience, *intuition* and the pragmatic application of theory in practice.

The remainder of this literature study will focus on D2—moving from projects as instrumental processes to projects as social processes. In an attempt to better understand the suggested future direction of the project as a social process, a review of the current knowledge regarding projects as instrumental processes will first be presented followed by an exploration of projects as social processes.

2.2. Projects as instrumental processes

The field of Project Management has its origins linked to the methods of planning and control used by engineers in the industrial age—mid 18th to early 19th century (Packendorff, 1995). In 1910, Henry L. Gantt created the Gantt-chart, a significant planning tool that forms part of the modern project manager’s

toolbox. The importance of the Gantt chart in the scheduling of activities received much attention. By the end of the 1950s network-planning techniques, CPM (Critical path method) and PERT (Programme evaluation review technique), were created to address more complex planning issues that techniques available then, could not deal with. Software programs such as MSProject® and Primavera® have specifically been created to assist project managers in this task.

In the 1960s research started to focus on organisational structures such as the matrix organisation to combine the project organisation with the functional structure. Research in this era also focussed on project leadership, human resource management and team building (Packendorff, 1995).

By the late 1980's the proliferation of information regarding methods, techniques and advice available, necessitated the creation of a structured work containing this information—a task that was taken up by the Project Management Institute (PMI). The outcome of this work was the PMBOK (Packendorff, 1995).

The PMBOK is a method-approach guide focussing on the hard concepts of technical knowledge, management principles, tools and deliverables (Pant and Baroudi, 2007).

Wideman (1995) notes that the successful use of project management techniques by the US Navy in the development of the Polaris program, and by NASA in managing the Apollo program was the impetus for use of project management techniques by organisations in managing their projects. The view that the use of project management techniques as presented in BOKs will improve a project's chances of success, is also shared by McHugh and Hogan (2011). Packendorff (1995) summarises Project Management as an instrument to achieve successful implementation of an undertaking.

It can therefore be concluded that the PMBOK contains the best practices of available project management knowledge that are generally accepted and which have been developed over years by practitioners and researchers to address the best and most efficient procedures to deliver a project—it does not guarantee successful project delivery, but increases the chances of successful delivery.

The conclusion presented above is also shared by the Network which defines current knowledge of projects as 'instrumental processes' as:

'...the instrumental lifecycle image of projects as a linear sequence of tasks to be performed on an objective entity out there, using codified knowledge, procedures and techniques, and based on an image of projects as temporary apolitical production processes.' (Winter, *et al.*, 2006:642)

The Network, however, notes that this presentation of projects as instrumental processes is a very narrow view. They do not regard the methodologies, techniques and tools presented by BOKs as irrelevant or worthless, but note that this instrumental view should be expanded and enriched to create a better contemporary view of project challenges (Winter, *et al.*, 2006).

In the following sections each of the concepts provided in the above definition as projects as instrumental processes will be investigated.

2.2.1 Linear sequence of tasks

The PMBOK clearly notes that some processes as defined in the guide, may not be needed at all—since they would add no value. These processes should thus be tailored out. There is also no implied sequence amongst processes. Processes may occur concurrently or sequentially, and iteratively or recursively. Although there is no implied sequence, many processes depend on the output of other processes. These predecessor dependencies are situationally determined.

The Network refer to the defined tasks taking place inside each of these processes as the 'linear sequence of tasks' (refer to Figure 2-1 for an extract of the 'Executing Process Group' to illustrate defined tasks). Many project managers and training institutions incorrectly assume that by performing this sequence of tasks, they perform project management.

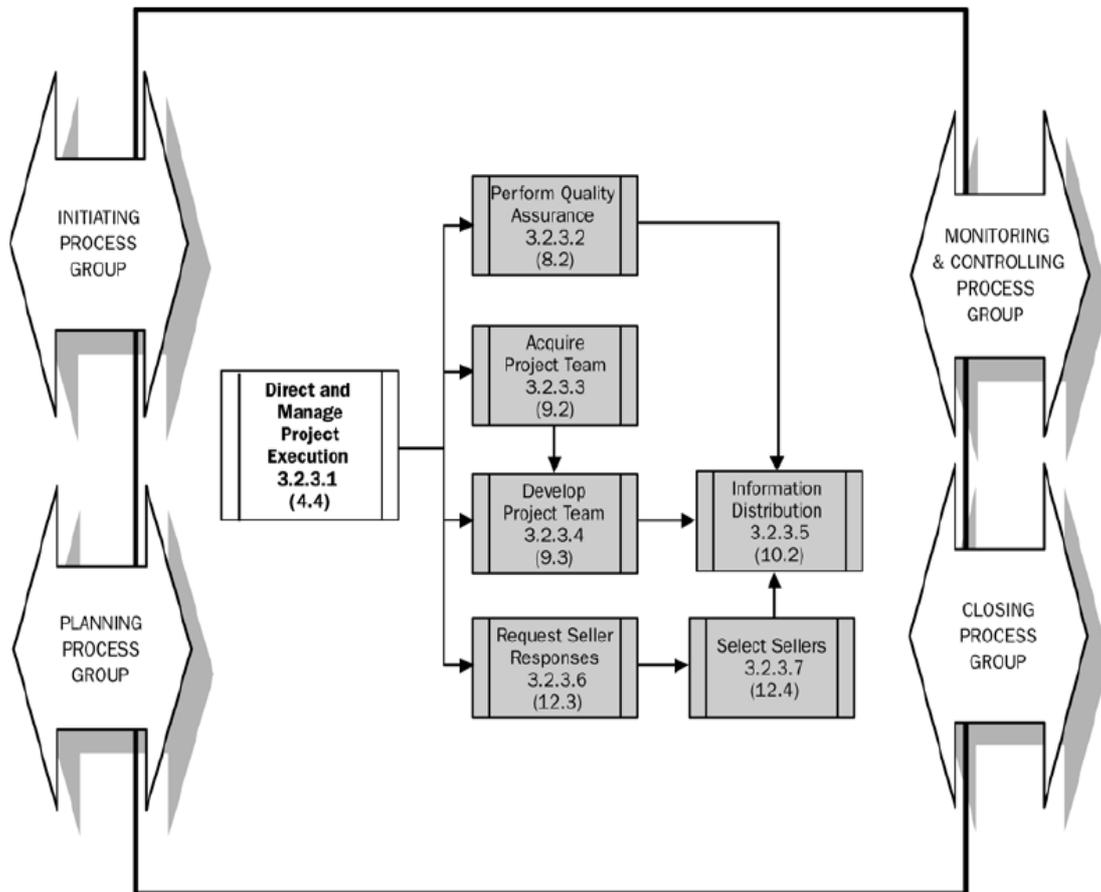


Figure 2-1: Executing Process Group (PMI, 2004)

2.2.2 Codified knowledge, procedures and techniques

Codification involves transferring tacit knowledge (knowledge gained through experience, insights and observations) into explicit knowledge (knowledge recorded as words, numbers or formulae) to facilitate knowledge transfer. The PMBOK codified what is generally recognised as good practices in the field of project management into an exhaustive guide covering all processes as promoted in the guide.

The focused approach used by the PMI to codify project management knowledge ensures easy access to parties interested in the field and achieves economies of learning in the development of skills. The codification involves a detail description of the process, the purpose of the process as well as an indication of the inputs required for the process and lastly the output of the process (refer Figure 2-2).

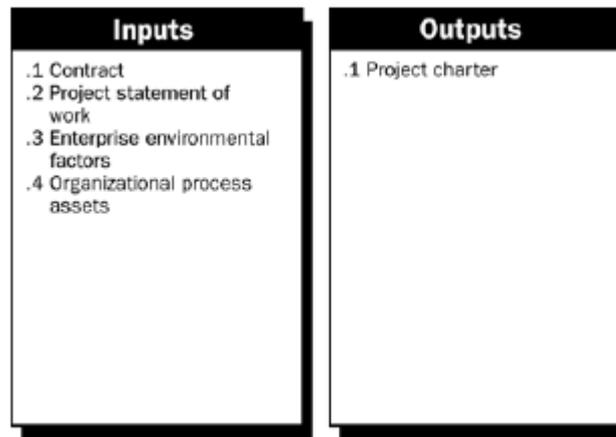


Figure 2-2: Develop Project Charter—Inputs and Outputs (PMI, 2004)

Codification certainly does have a downside—the large amount of data leads to information overload; it does not require participants to reflect on their experiences, nor does it stimulate innovation of actions to improve a process and can lastly also be understood as rules implying inflexibility (Schulz and Jobe, 2001; Prencipe and Tell, 2001).

2.2.3 Projects as temporary apolitical production processes

Politics involve power, status and influence, and the field of project management requires constant political manoeuvres by the project manager to ensure project success (Pinto, 2000). These politics involve understanding sources of power within the organisation (position, information resource, expertise, performance and personal traits), influence (threats, barter, appeals to values and emotions), status, importance of human relationships and communication (Snedaker and Hoenig, 2005; Pinto, 2000). Project managers are confronted by corporate politics on a daily basis—competition for budget and resources, setting of project priorities and identifying and supporting people to realise their personal and project goals.

Project managers do not, however, possess any real power as the project is a temporary endeavour, neither do they have a high status (with the exception of high-profile projects)—but they are required to take full responsibility and accountability for all project-related aspects (Smith, 2007). So with no real power (direct line authority) over those working on the project and no status—but entire responsibility for the successful outcome of the project—the only

political measure available to them is their ability to effectively create alliances with stakeholders, to negotiate mutually acceptable solutions and to bargain. These abilities could be translated into power and should be extensively used by the project manager to influence the success of his project (Pinto 2000).

The findings of the Network note that current knowledge sees projects as 'apolitical' (Winter, *et al.*, 2006). Investigation into the views of the PMBOK (1996 and 2004) with regard to politics suggests that the body of knowledge acknowledges politics in the field of project management; it is nevertheless limited to the Human Resource Management Knowledge Area with specific reference to: 1) the goals and agendas of the stakeholders (Enterprise environmental factors) and 2) the importance of networking and negotiation in staffing options and assignments (PMI, 2006). Meanwhile the use of politics in the contemporary project is applicable to all facets of project management, and it is concluded that the view of the body of knowledge is restrictive with regard to the importance and use of politics in the project environment compared with the importance assigned to it by various authors (Pinto, 2000; Snedaker and Hoenig, 2005; Sense, 2003).

2.2.4 Summary

The instrumental view of projects as promoted by bodies of knowledge has been investigated. The codified guideline creates a perception of a 'rule based' environment that will ensure project success if used as indicated. These theoretical practices do not, however, warrant project success. A shortcoming which is evident in the large amount of project failures, and the implication is that project managers should disregard their own sense-making of a project—even though they do not really have the power to reflect on their experiences and change their practice accordingly. Bodies of Knowledge also disregard the political environment of a project, with exception that of management politics involving the assignment of resources. The project environment is fraught with political manoeuvres and the narrow view presented by PMBOK creates the erroneous view that social political interaction has no place in the project environment. It should be noted that although there is criticism with regard to the method-based guidance PMBOK provides, projects are also instrumental processes with inputs, tools and techniques, and deliverables.

In the following section the view presented by the Network of projects as social processes will be reviewed to determine if this view is 1) supported by current research and 2) if it is relevant to the contemporary project.

2.3. Projects as Social processes

The Network defined projects as social processes as:

“...concepts and images which focus on social interaction among people, illuminating the flux of events and human action, and the framing of projects within an array of social agenda, practices, stakeholder relations, politics and power...” (Winter, et al., 2006:642).

This framework was further deconstructed by Winter and Szczepanek (2009: 58) into:

“...seeing projects as social processes, covering aspects such as the ever-changing flux of events, the individuals, groups and organisations involved, and other aspects such as social networks, culture and tribalism, and language and metaphor.”

In the following sections each aspect of this definition will in turn be investigated to understand its implications on the research question.

2.3.1 Flux of Events

Winter and Szczepanek (2009) note that the actual experience of project managers consists of the daily events, actions, changes, crises and challenges in various areas (HR, finance, communications, etc.)—these are the ‘flux of events’ and an actual reality that project managers face. It is not only the occasional crisis that needs to be addressed, but daily events inadvertently taking place during the projects that cannot be predicted or controlled.

To illustrate this point, Smith (2007) provides an account of events in a typical day in a construction project manager’s life (on which further elaboration was added); meeting with client on their new requirement which can cause major disruptions to the project schedule; internal meetings about new strategic intents which involves major resources to be re-assigned to other projects having an impact on the delivery and team, internal conflict between team members that is causing a decrease in the quality of work and assignments;

request for the preparation of a report of which the data is not available; receiving a call from site indicating that the equipment required to perform the job is not on site; meetings and calls to the procurement department and contractors determining the cause of the equipment delay and alternate delivery date; change in assignment of site teams to perform alternative work until equipment arrives; requesting permits for the new work assignment from the control department—and all this before lunch! As Abraham Lincoln said "I claim not to have controlled events, but confess plainly that events have controlled me" (Lincoln, 1953: 282).

Although the above account is that of a construction project manager, it can be generalised that all project managers experience a typical day as a day of planned activities which most of the time are interrupted or disrupted by unplanned events.

Events can be created amongst others by the organisation (such as assigning new strategic priorities to projects, thereby re-assigning team members to other projects), by contractual events (such as non-conformance to technical specifications) and by technical events (such as a new or changed design). Each event is also not merely something that takes place and can then be ignored, it must also be interpreted and understood by the project manager to ensure he can react to it in the required way (act, postpone or ignore) and make the correct decisions to bring the event within the control of the project sphere (Smith, 2007). It should also be noted that it is not only the project manager's reaction to the event that has an impact on the project, but that all events are experienced and interpreted differently by parties involved. Munns and Bjeirmi (1996) note that this specific type of environment requires different management techniques from those tasked to maintain day-to-day operations. Although other managers also experience this daily 'flux' of events—the project manager's undertakings call for:

"... more, and faster decision making techniques than possible in a normal operation and making the right choices will be critical to company success." (1996:81)

According to Smith (2007) other events that can be added to the 'flux of events' taking place in a project are also those of 'personal work'—which involves

amongst others: building and maintaining reputation, interactions required for inclusion into groups, and defending positions against criticism. He states that this type of event requires relationships which are by themselves also highly unpredictable and that it this unpredictability takes priority over standard work tasks—thereby adding even more complexity to the already complex project environment.

In sharp contrast to this view is that of the mechanistic project activities indicated by the PMBOK: practitioners follow the suggested processes, get the required inputs from the various stakeholders and produce an output. No mention is made of the typical daily events in a project manager's life. Project management education also only prepares project managers for the theoretical and procedural activities that takes place in a project, but not for the 'organised chaos' taking place (Smith, 2007). Capabilities to handle these unexpected instances or flux of events can however only be mastered by a person actively taking part in events. Participative learning is crucial, so organisations should provide structured programmes to their project people and give them opportunities to become skilled in their ability to successfully handle these events through experience (Smith, 2007).

Based on the above review, the 'flux of events' taking place in a project is the daily unpredictable interactions and events occurring on all levels and areas in a project. The events also include relationship-building by the project manager to ensure his status and that of the project. Educational material addressing and preparing the project manager for these daily events is not available. This shortcoming leaves an ill-prepared project manager who does not know how to cope with the problematic realities of a project.

These daily events involve ever-evolving relationships between people, and between people and organisations, a matter which will be reviewed in the following section.

2.3.2 People and Organisations

Involved in this often unpredictable flux of events are stakeholders interacting with each other. Stakeholders in this study will refer to individuals, groups or organisations who have a connection to the project (details with regard to the

identification of these stakeholders will be reviewed later in this section), and who are self-centredly pursuing their own interests and agendas. According to Winter and Szczepanek (2009) stakeholder interaction with reference to the social project context must be viewed from two perspectives:

- Stakeholders are involved in events, and such involvement includes discussions (talking and listening) where each person interprets and experiences an event differently. This is significant, as found in a study by Liu, Chua and Stahl (2010) where a direct correlation between the perceived quality of communication as experienced by people and the positive outcome of negotiations was found. It can therefore be reasoned that the improved quality of interaction on a project can have a direct positive impact on the results of the project as most interactions between the project manager and stakeholders involve influencing and negotiation (refer paragraph 2.2.3) i.e. the quality of the interaction as perceived by both parties (stakeholders and project managers) can have an effect on the outcome of the project.
- It is also important to understand stakeholders' relation to the project. To recognise that most stakeholders have an influence on each other, and that some stakeholders have no influence. This is referred to as stakeholder analysis and it represents two views:
 - Project manager view: The correct stakeholder view for a project is of utmost importance. Incorrect interpretation of this view by the project manager can have detrimental effects on the project as energy and effort are unnecessarily sometimes applied to stakeholders who cannot positively influence the project direction (Aaltonen; 2011; Winter and Szczepanek, 2009).
 - Other Stakeholder views: Just as project managers view the project from a certain perspective—so do each of the stakeholders. Each of these perspectives is different with regard to the importance of other stakeholders, and the positions the other stakeholders take or occupy. It is important to understand these rankings within the stakeholder group as such hierarchies underline political and social networks that can be used to

influence project success. Based on this analysis of networks Winter and Szczepanek (2009) suggest the use of a stakeholder analysis framework by the project manager to assist in the identification of stakeholder position on the project

The constant flux of events taking place in a project, involves interactions between people and organisations. The quality of these interactions is important as it determines the directions of future events. It is also important to correctly identify the various stakeholders involved in the project to ensure the right amount of effort is directed to their concerns and requests. These stakeholders are all connected through interactions taking place within social networks—which must be understood so that such interactions can be accessed and geared to the benefit of the project. The *Social Networks concept* will be reviewed in the next section.

2.3.3 Social Networks

Studies in sociology are increasingly focussing on dynamic social networks (Burger and Buskens, 2009). Social networks can be defined as a group of individuals, connected to each other through ongoing personal relationships such as friendship, common interest and beliefs (Doreian and Conti, 2010; Levitan and Visser, 2009). Using Social Network Analysis (SNA) the formal and informal relationships between people can be determined to understand knowledge and information flows. Social network maps (sociograms) consist of nodes (people in the network) and ties (indicating the relationships between people). Cross and Parker (2004) note that the hierarchical organisational chart presented by most organisations seldom captures who gets the work done, but that the social network map gives a more accurate indication as illustrated in Figure 2-3. In this figure even though 'John' has the highest position in the formal organisational chart, 'Carl' who is only a subordinate, has the most relationships with people in the organisation and has a very powerful position in the social network.

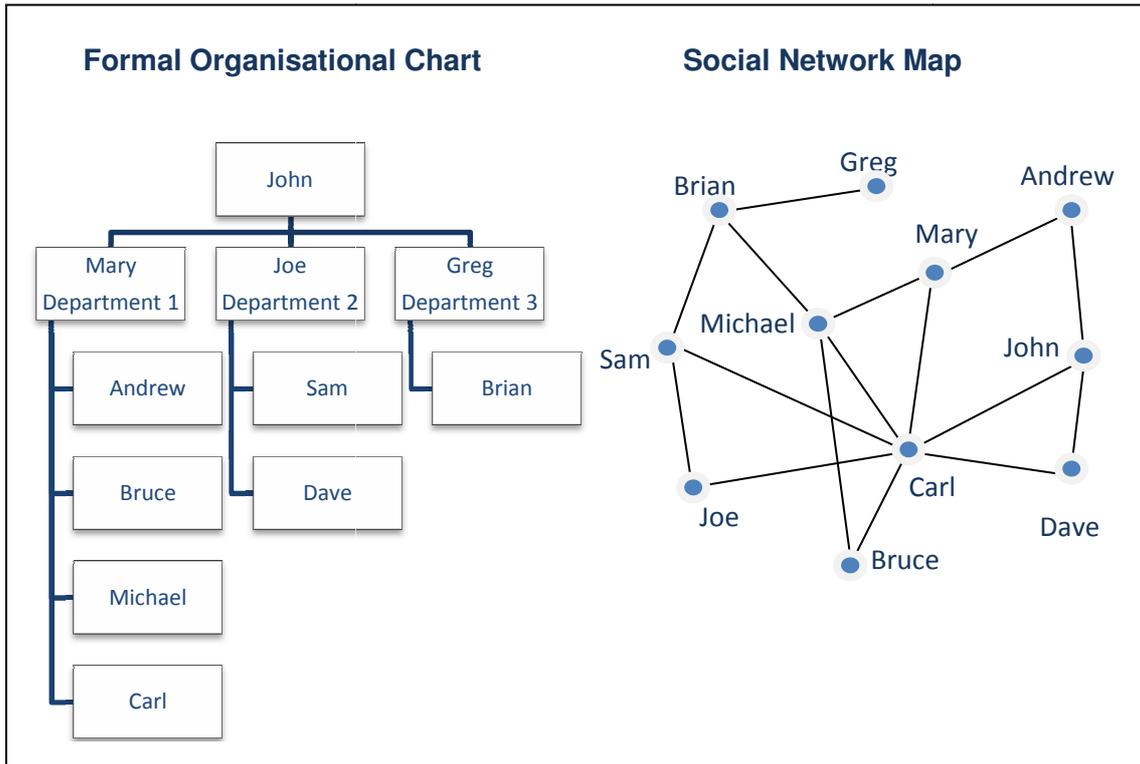


Figure 2-3: Formal vs. Informal organisational structure

People taking up central positions in social networks have better access to knowledge being distributed throughout the network. They are more prone to innovation but their behaviour can to a large extent be affected by insights gained in the social network they belong to (Smith-Doerr, Manev and Rizova, 2004). It was also found in a study by Levitan and Visser (2009) that the social networks in which people found themselves can influence and change their perceptions with regard to issues.

They also observed that in networks information does not flow unchanged, but additional context and meaning is added, distorting the original message to serve the individual's own agenda. Findings also indicated that creating connectivity between different networks improved responsiveness and success with stakeholders.

The constant flux of events taking place in a project involves interactions between people and organisations that are all interconnected through informal social networks. If project managers are aware of the social networks the various stakeholders of the project belong to, they should use their influencing power to ensure a positive perception of the project, as this will permeate

throughout the network. Also, by creating connections outside their organisation, project managers will be able to more effectively address stakeholder requirements. The social network diagram on its own, however, does not explain why certain things happen or not, as *culture and tribalism* play an integral part in interactions amongst people and this will be reviewed next.

2.3.4 Culture and Tribalism

2.3.4.1 Culture

Organisational culture can be understood as the forms of behaviour members feel are appropriate within their organisational holding environment—it represents “how things are done in the organisation” (Gould, Stapley & Stein, 2006). Winter and Szczepanek (2009) defines these behaviours as the roles, routines, structures and symbols within an organisation. Using the iceberg analogy for organisational culture—the visible part consists of the formal structures, symbols, routines and strategy and the invisible part consists of social networks, beliefs, values, attitudes towards authority, conventions and taboos (Winter and Szczepanek 2009; Gould, *et al.*, 2006). The invisible part is much larger than the visible—indicating how much of the organisational life is driven by the ‘invisible’. In a study by Gould, *et al.* (2006) it was found that when managers create an open and trusting environment by adapting their behaviour, it influences the psychological view of members who will change their perception of the culture to that of a positive environment, the role they play in that environment and will then adopt a task-related behaviour. De Witte and van Muijen (1999) concur with this view and indicate that participative approaches are likely to result in lasting changes at all levels of the organisation which involve conflict reduction, improved co-ordination and increased motivation amongst the group.

It can therefore be reasoned that by understanding the organisational culture, project managers should change their strategies, style of management and attitudes to create an environment of trust that is viewed positively by people and which will increase the probability of success. However, culture is not only found at organisational levels but also within sub-groups or ‘tribes’ within an organisation. Such tribalism is reviewed next (Smith, 2007).

2.3.4.2 Tribalism

In the previous section a figure of a social network was presented. Changing the view of this social network, by grouping the people according to their functional departments, another view of subgroups or 'tribes' can be presented (refer Figure 2-4).

Using the same organisation and individuals as presented in Figure 2-3, the tribal view clearly shows the deficiencies between knowledge and information flow between the functional departments, with no flow taking place between department 1 and department 3.

Tribes are formed by virtue of their function, but can also be created by location, hierarchy, tenure, age, race, supported rugby club or gender (Cross, 2009). Freiberg and Freiberg (2007) note that tribalism within organisations has negative connotations as it is seen as:

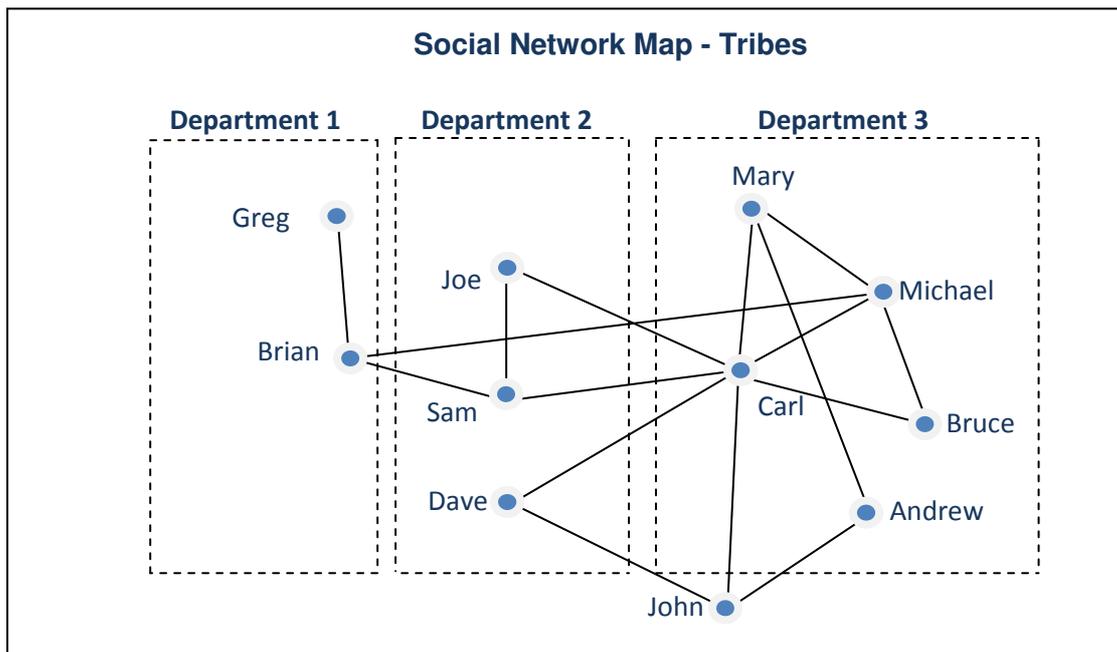


Figure 2-4: Subgroups/Tribes

- Creating conflict between organisational subunits with different goals rather than subunits supporting each other to achieve a common organisational goal and

- Organisational subunits thinking they are superior to other subunits (example engineering vs. marketing) and that their activities take priority over those of other subunits.

This creates an environment where each tribe is focussing on their own interests and agendas, no knowledge sharing is taking place between tribes as information flow is stopped resulting in an ineffective organisation that is slow to respond (Freiberg and Freiberg, 2007). Tribes also have their own 'sub-culture' and some tribes are highly influential in the organisation (such as the "old-boys club") and cognisance should be taken of their influence on a project (Smith, 2007).

The constant flux of events taking place in a project, involves interactions between people and organisations that are all interconnected through informal social networks. Within these social networks interactions occur based on the culture of the group. Tribes are created within these organisational groups, focussing on their own agenda and interests which do not necessarily include the goals of the project. The use of language and metaphor can however be effectively utilised to demonstrate the importance of the project within the agenda of groups, thereby gaining support for the project. This concept of the power of language and metaphor in interactions will be reviewed next.

2.3.5 Language and Metaphor

2.3.5.1 Language

Smith (2010) performed a study to investigate the use of language in cooperation and collective action problems. He found the following:

"Under many conditions, language facilitates complex coordination and is essential for establishing explicit norms and allocation rules that motivate people to cooperate voluntarily in large groups"(2010:242).

In a very interesting study performed by Hirschfeld and Gelman (1997) it was found that young children (even from 3 years of age) understand that different speech styles are related to social status or social group membership.

Based on the above findings, it can be derived that language plays an important part in influencing and motivating people in a project environment and that the

way in which language is used to communicate is perceived by others as an indicator of a person's social status within the social networks to which he belongs.

2.3.5.2 Metaphor

A metaphor is an expression which describes a person or object in a literary way by referring to something that is considered to have similar characteristics to the person or object being described (Cambridge Dictionaries Online, 2011). It is a figure of speech in which a term or phrase is applied to something to which it is not literally applicable in order to suggest a resemblance (*Webster's Online Dictionary*, 2011). An example of the use of a metaphor is "A mighty fortress is our God."

Alvesson (2002) notes that the use of metaphors is fundamental for the understanding of all aspects of life as presented in language and thinking. Metaphors are also used to support desired actions such as referring to a partnership as a marriage thereby promoting the good and supportive environment it will create, but at the same time the use of a metaphor downplays the hard, threatening aspect of commercial issues (Alderman and Ivory, 2007). In her study to determine the impact of metaphors on how a project is understood, Eskerod (1996) found that metaphors greatly influence what people choose to focus on. By using the correct metaphor for a situation, the project as a whole will benefit from it; however, using an incorrect metaphor changes attitudes of people to the detriment of the project.

2.4. Summary

Rethinking project management: In this section the various attempts by academics, groups and practitioners challenging the universality of knowledge as contained in bodies of knowledge is reviewed and how this global call for actuality in research and project management has led the UK's Engineering and Physical Sciences Research Council to fund a research study to create an agenda for future research in the field of project management. The agenda as presented by the Network is provided and the study is delimited to research involving only one aspect, namely that of moving away from projects as instrumental processes to projects as social processes.

Projects as instrumental processes: Current knowledge as described by the bodies of knowledge is discussed in this section. The view of PMBOK with regard to the life-cycle of a project, the codification of knowledge and projects as apolitical processes are reviewed and found to be too narrow and not applicable to the contemporary project as this view does not prepare the project manager for the daily realities of the project. The guide creates a perception of a 'rule based' environment that will ensure project success, but this is not the case in most instances—which is evident in the large amount of project failures.

Projects as social processes: The definition of projects as social processes is discussed in this section. It is concluded that there is a constant flux of events taking place in a project. These events involve interactions between people and organisations that are all interconnected through informal social networks. Within these social networks interactions take place based on the culture of the group as well as within tribes. The use of language and metaphor can however be effectively utilised to demonstrate the importance of the project within the agenda of groups, thereby gaining support for the project.

3. Research Methodology

In the preceding chapter literature available on the subject of projects as instrumental vs. projects as social processes was reviewed. It was found that the current view of projects as instrumental processes as advocated by bodies of knowledge is too narrow and does not address the actuality of projects. The actuality of projects in this research study is limited to the daily experiences of project managers, the social interactions with the various stakeholders and the impact of social networks. No educational material nor guidelines in PMBOK are available to assist project managers on how to handle these interactions and the impact of these social interactions on the project outcome.

In this section the research methodology that will be used to determine the social processes taking place in the contemporary project environment will be described. The discussion will first provide reasons why a case study methodology is the best suited for this research. Detail with regard to the research hypothesis, how the research is designed, sample and data collection are also provided. Issues of validity, reliability and ethical aspects are addressed as well as an indication of the limitations of this study.

3.1. Research methodology Theory

Case study research lends itself as a research method to contribute to knowledge and understanding of complex social phenomena, when contemporary events are examined and the relevant behaviours of the participants cannot be manipulated (Yin, 2009). Packendorff (1995) suggests that projects should be researched using action research which is defined as the human interaction within a project. This action research could take the form of a case study at the completion of a project to understand what was really happening in the project and not what was supposed to happen, and focus on the experience of the individuals in the project. As the focus of this research is to understand the social behaviour within a project environment, the recommendations of Yin (2009) to use the case study to understand complex social behaviour, and that of Packendorff (1995) to use the case study to understand what really happened in a project environment, will be adopted.

3.2. Research Design

This research design is a blueprint of how data will be collected, analysed and interpreted to answer the research question. For the research case study the components of research design as promoted by Yin (2009) will now be discussed:

3.2.1 Research Study Questions

According to Yin (2009) three types of case studies can be defined based on the research question: exploratory, descriptive and explanatory case studies. For the exploratory case study the 'what' question is used to create "*...hypotheses and propositions for further inquiry.*" (2009:9). For the descriptive case study the 'who', 'where', 'how many' and 'how much' questions are used to "*...describe the incidence or prevalence of a phenomenon or when it is to be predictive about certain outcomes*" (2009:9). Lastly the 'how' and 'why' questions are used in explanatory case studies as it "*...deals with operational links needing to be traced over time...*" (2009:9). Based on the above and the research questions presented in paragraph 1.2, this research will take the form of an exploratory study.

The case study will be a single case study taking the form of a representative embedded case, because the Gautrain project can be seen as typical in the construction industry where various disciplines are working together.

3.2.2 Propositions

When a study's topic is that of exploration—the case study has a legitimate reason for not containing any propositions. It should however contain the purpose of the design as well as criteria indicating what will constitute success of the exploratory study (Yin, 2009).

This study will show that Project Management includes social process that consists of a flux of events, involving people who belong to different social networks, where culture and language play a pivotal role in day-to-day interactions. It will also show why project management cannot be viewed only as an instrumental process consisting of processes and techniques.

3.2.3 Units of analysis

The unit of analysis is defined by Yin (2009) as the major entity (or what or who) being analysed in a study. For this study the major unit of analysis is Bombardier Transportation, as part of the Bombela Concession Company, working on the implementation of the Gautrain Rapid Rail Link.

Subunits of analysis are the group of project managers as well as the individual project managers employed.

3.2.4 Criteria for interpreting the findings

In a case study, the convention of statistical significance of a p level of less than .05 is not used, but rather the identification of rival explanations which can be used to explain findings of the study (Yin,2009). Where possible rival explanations will be provided and examined against each finding.

3.3. The Sample

For this research study project managers employed by Bombardier Transportation working on the Gautrain project will form part of the sample. The office is located at the Gautrain Midrand Depot in Gauteng.

3.4. Data Collection Method

Yin (2009) noted that the data collection process for case studies must follow formal methods to ensure 'quality control' of data, thus making it much more complex than other research methods. Three methods that will be used during the data collection process in this research are described below:

- **The use of multiple sources of evidence:** According to Yin (2009) the case study uses much of the same techniques as a history but include two additional sources – that of direct observation of the unfolding of events as well as interviews with people involved in the events. The major strength of the case study is its capacity to include a large amount of evidence such as documents, interviews, artefacts and observations to validate findings. These are used for 'triangulation'—the provision of multiple sources of information that corroborate a conclusion, thereby making the finding much more credible than uncorroborated data.

In this research study documents, interviews and observations will be used. The interview will involve face to face meetings with the project managers of Bombardier Transportation and where possible make use of a voice recorder. Project Managers will be interviewed to understand how they experience the social processes taking place in the project environment as well as how they handle and approach these social interactions.

- **Case study database:** Yin (2009) also promotes the use of a case study database that should include notes, case study documents, tabular materials and narratives.

For this research study, a database will be created that contains notes (categorised, complete and available for later access) with regard to interviews, and observations. The database will also include a bibliography of all documents pertaining to the research study which can be used by later investigators and all survey material and narratives created during the data collection phase.

- **Chain of evidence:** The chain of evidence provides a logical flow from the conclusions back to the case study protocol that establishes the method of data collection and involves clear cross-referencing (Yin, 2009).

Throughout the research, the researcher will attempt to ensure that where conclusions are made, they can be traced back to the database, which will contain the evidence to support the finding, but which will also contain the circumstances and questions applicable. These circumstances and questions will then be consistent with the data collection method established in the case study protocol.

3.5. Data Analysis

The analysis of case study research involves a cyclical process and involves actions of observation, thinking, testing and revising that proceed from general to specific findings. The data analysis for this research study will involve:

- analysing information obtained during interviews
- determining recurring themes found during the interviews
- grouping themes of similar information together

- create findings from the themes
- testing findings against theory
- finding documentary evidence that support findings
- performing observations to triangulate findings
- finding alternative explanations for findings.

3.6. Validity and Reliability

Four tests are commonly used to test the quality of social science research which includes the case-study (Yin,2009). In this section each of these four tests will be defined and methods which will be used in this research to ensure compliance will be described.

3.6.1 Construct Validity

Construct validity can be understood as the extent to which a measurement instrument correctly measures a characteristic that cannot be observed—such as motivation (Leedy and Ormrod, 2010). When the researcher therefore observes actions or asks questions during the interview process, evidence should be obtained that the approach used does measure the construct in question.

To ensure construct validity of this research study:

- Multiple sources of evidence will be used such as documentation (which includes e-mails, calendars and minutes), observation reports and interviews.
- It will also be possible to trace all findings against a chain of evidence to ensure that the conclusion can be traced back to the case study protocol and that the correct data collection methods were used.

3.6.2 Internal validity

Internal validity is the extent to which a research design and the data obtained allows the researcher to draw accurate conclusions about relationships between data (cause and effect) (Leedy and Ormrod, 2010). An example of suspect internal validity is measuring the effectiveness of two different ice-cream commercials. Where one commercial is aired in winter and the other in summer

and drawing conclusions that the commercial showed in summer is more effective. This conclusion ignores the seasonal impact on the buyers' behaviour. This type of validity is, however, not applicable to descriptive and exploratory studies and will therefore not be considered in this research study because it uses the exploratory approach (Yin, 2009).

3.6.3 External validity

External validity is defined as the extent to which the results and conclusions obtained in the study can be generalised to areas outside the group studied (Leedy and Ormrod, 2010). Yin (2009:43) notes that the case study will:

“...rely on analytic generalisation (where the) investigator is striving to generalise a particular set of results to some broader theory”.

For this single-case study the results will be tested against the theory of projects as social processes as presented by the Network.

3.6.4 Reliability

Reliability refers to the ability of the measuring instrument to yield consistently the same results when the characteristic or object being measured has not changed (Leedy and Ormrod, 2010). As per Yin's (2009) recommendations to improve the reliability of a case study the following measures will be taken:

- For this case study a 'Case Study Protocol' is developed (refer Annexure A: Measurement instrument) which guides the investigator in the data-collection process keeping the investigator focussed on the topic, it prepares the investigator for possible problems that can be encountered during the data collection phase and also documents procedures and processes used to enable later investigators to conduct the same research and arrive at the same findings.
- A case study database will also be created that includes notes, documents, survey findings and narratives – all in an annotated bibliography to organise all data collected during the research.

3.7. Limitations

The limitations of the case study method are that during the interview process, informal manipulation can occur.

3.8. Ethical issues

All participants will be informed about the full nature of the research study to enable them to make an informed decision about their possible voluntary participation. Full approval was received from Bombardier Transportation to use the organisation in this research study. All participants will be issued a consent form as well as an explanatory overview of the case study informing them about the full nature of the research study to enable them to make an informed decision about their possible voluntary participation. The identities of all participants will be treated as confidential.

3.9. Summary

In this chapter the detail of how this research study is designed, is indicated. The study will take the form of a representative embedded exploratory case study. Criteria to determine the success of the study is provided as well as detail with regard to the sample. Three principles of the study design are discussed including an indication of how the data will be analysed. To ensure the quality of the data, issues of validity and reliability are addressed. This is followed by discussing the limitations and ethical issues pertinent to the study.

4. Research Results

The previous section contained a description of the research methodology that will be used to determine the social processes taking place in the contemporary project environment using a case study methodology. Detail with regard to the research hypothesis, how the research is designed, the method of sample and data collection was also provided including issues of validity, reliability, ethical aspects and the limitations of this study.

In this section, data collected through structured interviews, observations and record review as guided by the Case Study Protocol (Annexure A: Measurement instrument) will be presented. The first part of the research results will present the profile of the interviewees, which will be used to establish their knowledge of PMBOK and their experience in a project environment. This is followed by the findings of the project managers within Bombardier, with regard to their perception of the applicability and use of PMBOK in their project environment. Findings based on how the project managers experience the flux of events taking place in the project, the people and organisations they interact with, the social networks present in the project environment, the role of culture and tribalism and lastly the effect of language and metaphor on the outcome of the project—are presented. The final part of the findings will describe the link between the actual experiences of project managers with reference to the social processes and how their experience can be used to improve PMBOK and System Life cycle processes such as contained in the ISO/IEC 15288.

All results will be analysed and presented to determine recurring themes. Findings created from these themes will be presented and tested against available theory. Where possible, alternative explanations for each of the findings will also be attempted.

4.1. Profile of Respondents

The demographic profile of the interviewees in this study is limited to gender, years of project management experience, formal project management training received and project management certification.

Three of the four interviewees were male (refer Figure 4-1) of which 50% has project management experience between 11 – 15 years, and 25% experience of 6 – 10 years and 16 – 20 years respectively (refer Figure 4-2). The majority of interviewees (75%) received formal project management training (refer Figure 4-3) but none have any type of project management certification (refer Figure 4-4).

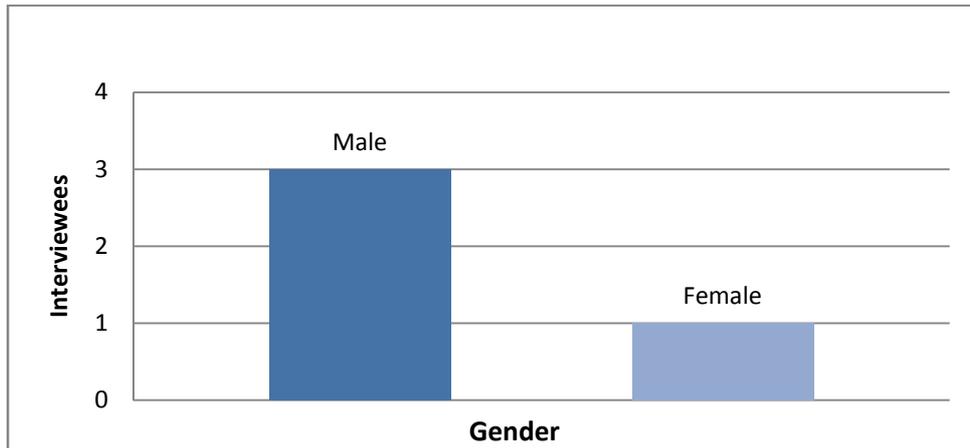


Figure 4-1: Gender Profile of Interviewees

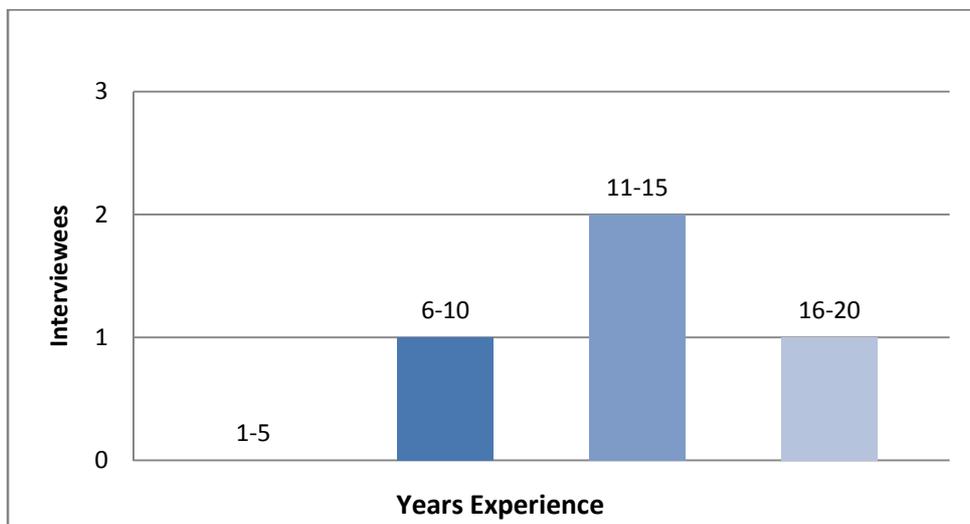


Figure 4-2: Years experience as PM

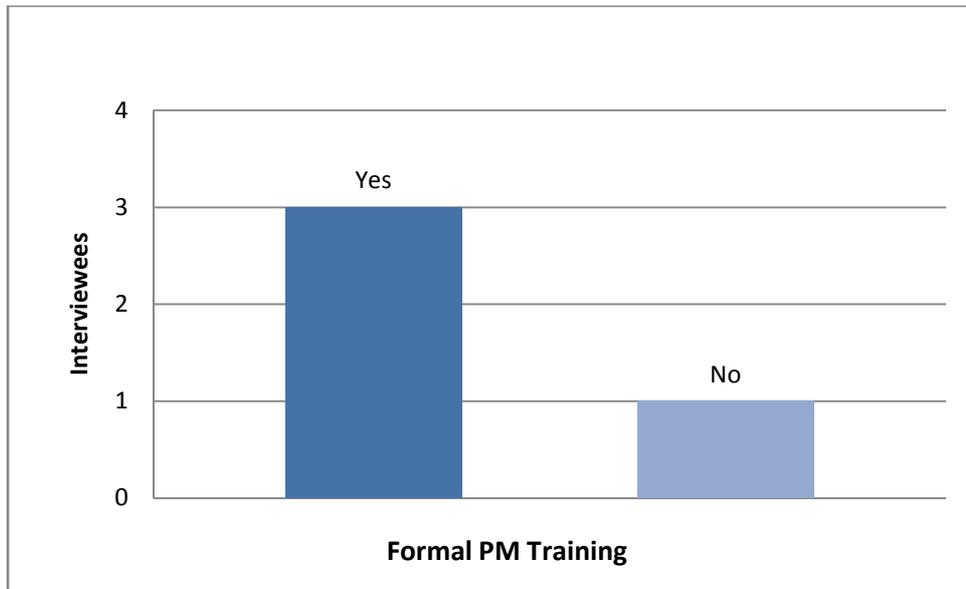


Figure 4-3: Formal PM Training Received

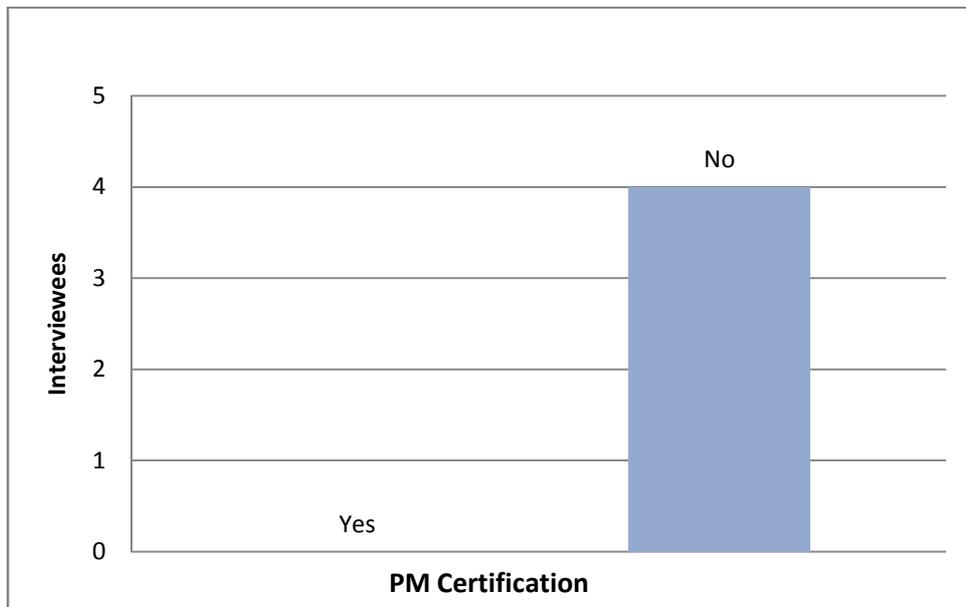


Figure 4-4: PM Certification

4.2. PMBOK Knowledge

The majority of interviewees (75%) indicated that they are proficient with regard to PMBOK principles compared to 25% that have a high knowledge base of PMBOK principles (refer Figure 4-5). Based on the confirmation that the interviewees are skilled in PMBOK, detailed questions with regard to its use could be further investigated.

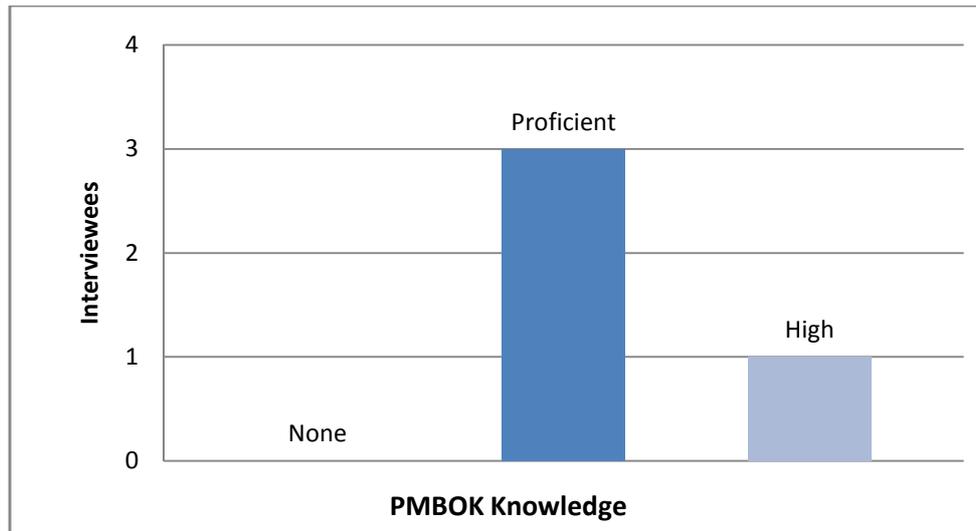


Figure 4-5: PMBOK Knowledge

All interviewees are in agreement that PMBOK provides a solid foundation of project management fundamentals and that it offers users a better understanding of project management methodology.

Only 50% of the interviewees had a copy of PMBOK in their possession, but all respondents (all with more than 10 years experience as project managers) indicated they do not refer or use PMBOK in their daily activities or projects, and that PMBOK is more relevant and useful for:

- organisations starting to create project-oriented environments and which need a solid structure to create this environment from, and
- young and inexperienced project managers who need to establish and understand PM foundations,

“It is useful but more applicable to people that are just starting out on project management as they still have to understand the basics of PM”

“It should be treated as a dictionary or encyclopaedia – having something like that available for when you get stuck, or when you are a young manager and trying to learn.”

“Yes, but only in training to establish foundations, not for the experienced PM”

“It is more like a manual and is more applicable when you start out as project manager “

Respondents further indicate that PMBOK laid a foundation for them, but that they are using their experience from working on various projects during their careers, to decide on the different techniques and methods required for the type of project they work on. One of the interviewees maintained that the type of governance structure in an organisation also determines the corporate procedures that project managers should follow. This is, however, only applicable to organisations which have reached some level of maturity as a project-based organisation.

Even though the respondents are in agreement that PMBOK provides a standard for PM methodologies and practices, it was noted by all that there are dimensions that PMBOK does not address. The dimensions indicated were politics, people and soft issues which are summarised by an interviewee as:

“It is difficult to explain but I experience project management as more of a human interaction going on—than drawing up schedules and documents.”

The similarities in responses from the interviewees on the aspect of social interaction, and the immediate identification of the specific social processes that this study investigates was surprising to the interviewer despite care being taken to ensure no interviewer bias by leading questions (by using semi-structured interviews) or any type of influence or discussions regarding detail of this study. A consent form and explanatory statement were issued to the interviewees which provided only a high level overview of the study (refer to Annexure A: Measurement instrument).

Based on the above information, the findings from this analysis are:

- experienced project managers perceive PMBOK as creating a solid foundation of project management fundamentals, but it is more relevant to young or inexperienced project managers,
- There are dimensions that PMBOK does not address such as politics, people and soft issues.

These findings are directly comparable with the findings of the Network with regard to the importance of PMBOK but also that the instrumental view should be expanded and enriched to create a better contemporary view of project

challenges (Winter, *et al.*, 2006) such as politics and influence tactics to ensure project success (Snedaker and Hoenig, 2005; Pinto, 2000).

4.3. Flux of Events

All project managers interviewed described their typical day consisting of planned meetings and continuous unplanned interruptions. Although planning is done in advance, this is seldom relevant on the applicable day.

“Chronically unplanned, you plan in advance, but on the day it is not relevant, you can keep meeting times and meeting content, but other than that—no.”

“My day is planned to an extent, and it is driven mostly by meetings. Free time is mostly spent on working on items of highest priority—the rest is left for the next day. There are always fires to put out. This is not an environment where you can plan 15 minutes. You sort out problems, and try to deliver against your plan—you are solving problems continuously.”

“Interruptions all the way for which I cannot plan. The average day will start with planned meetings; however, during the meeting some senior managers will require information, or a technical issue will come up that needs to be resolved urgently. Most of the time there are around 5 urgent actions that require immediate attention.”

With the exception of one project manager, the rest of the interviewees consider the above described flux of events taking place on a daily basis as common to all projects that they have worked on. Only one of the interviewees received some type of formal education and mentoring on how to handle this daily flux of events taking place in the project environment by means of mentoring. The rest of the interviewees are using their experience to cope with the flux.

Finding 1a:

The flux of events taking place on a daily basis is experienced as common to all projects, and project managers use their experience to cope with the flux. This confirms the view of Winter and Szczepanek (2009) and Smith (2007) describing a typical day as planned activities which most of the time are interrupted by unplanned events.

None of the interviewees further experiences this flux of events as negative but one of the more positive aspects that they do experience as project managers—

“...love the buzz”, “...extremely satisfying” and “...you can deliver anything that comes your way”.

Finding 1b:

Project managers experience this flux of events as one of the more positive and challenging aspects in the project environment. They love the “buzz”, some describe this as part of being “...an adrenalin junkie—I love it”. As all the project managers have more than 10 years experience and still enjoy this turbulent environment, it can be proposed that a project manager is a different type of manager—confirming the view of Munns and Bjeirmi (1996) who note that this specific type of project environment requires different management techniques, and more of these techniques. Furthermore it requires faster decision making techniques than needed in a normal operation.

It was further interesting to note that all interviewees used different techniques in deciding on the priority and action that are allocated to an interruption. Common to all project managers is that they do allow interruptions—to determine the impact of it on the project and based on that information make a decision on its priority to bring the event within the control of the project sphere.

“It all depends on the urgency of the interruption. I compare it with other actions I know I need to complete, but also consider the impact on the people that require the information and how it will affect them or enable them to perform their work.”

“The benefits achieved determine the priority of actions. Then you should also consider the corporate directives such as payment that guide your priorities. Also important is that you should manage expectations.”

“Gut feeling—when in a meeting and phone rings, I will answer to determine if it is an emergency. If it is not, I will call back, I will interrupt something to give it a new timeslot – example if someone is standing at my office, I will allow the interruption to get the people on their way.”

“If it is a small issue that I can immediately address, I will do it—regardless of priority.”

An interesting point noted from the above information is that all project managers indicated that they put a higher priority on actions to assist people

that require information immediately: “...to enable them to perform their work”, “...manage expectations”, “...to get people on their way” and “...small issue...I will do it—regardless of priority”. From the above comments, it can be concluded that *‘the urgent often trumps the important’*. Although the interviewees feel that these matters are urgent, most of the time interruptions are possibly due to unimportant requests and needs of others. They are therefore in these cases spending most of their time in quadrant 3 when the majority of time should be spent in quadrant 2—indicating ineffective time-management on their side (refer Figure 4-6).

	Urgent	Not Urgent
Important	<p>Quadrant 1</p> <p>Crises, pressing problems, deadline-driven projects, fire-fighting</p>	<p>Quadrant 2</p> <p>Preparation, planning, relationship building, prevention</p>
Not Important	<p>Quadrant 3</p> <p>Interruptions, phone calls, unprepared meetings, drop-in visits</p>	<p>Quadrant 4</p> <p>Web surfing, games, facebook, time wasters, unproductive activities.</p>

Figure 4-6: Important vs. Urgent Quadrants (Covey, 2004)

The implication of ineffective discernment is that the interviewees ineffectively manage their time, and do not spend time enough time focussing on the important tasks ahead of time to avoid them becoming urgent. By spending more time in quadrant 2, long-term planning can be performed, problems could be anticipated and prevented. This would not only increase productivity in the long-run but also minimise stress.

Finding 1c:

Project managers are aware of the importance of social interaction with people on their team and that by reacting to an event in such a way as to assist a team member—they are creating a more positive attitude between members within their complex social project environment. This

is parallel to the view of Winter and Szczepanek (2009) and Smith (2007) who indicate that a reaction on an event has an influence, or creates, or affects events on other levels which create a very complex social project environment and which influence the outcomes and success of a project.

All interviewees experienced interruptions from organisational, contractual and technical levels, and identified *team and HR requirements* as an additional facet that create interruptions. The most interruptions originated from the technical level which has a direct impact on the project delivery but a large amount of time is also spent on team interaction.

However, events are not only created by external parties, but also by project managers themselves. Half of the interviewees made a conscious effort in establishing rapport with the “right people” to improve the standing of their project within the organisation. This unfortunately is a highly unpredictable relationship which makes the project environment a much more complex one than it necessarily is.

Finding 1d:

A large part of the flux of events that take place on a project involves interaction not only with team members, but also other stakeholders, such as senior managers, to improve a project’s performance and the perception of project performance. It is therefore important for the project manager to understand that how people perceive and experience his social interaction with them has an impact on the project. This finding confirms Smith’s (2007) view that it is not only the project manager’s reaction to the event that has an impact on the project, but that all events are experienced and interpreted differently by parties involved which again has an impact on the project outcome.

4.4. People and Organisations

The primary medium of interaction between project managers and people is e-mail followed by verbal communication.

Each of the interviewees acknowledges that the interaction and influencing tactics used on individuals to successfully achieve results, depend on the

specific individual with whom the interaction is taking place. Although the interviewees thereby recognise the importance of social skills in interactions with people, none of them received any type of social-skills training in this regard and base their interaction on their personal experience.

Even though none of the interviewees received any type of social-skills training, they all indicated that they are effective in influencing the people they interact with and that this impacts positively on the project outcome.

“Yes. I am very hands on. This ensures that when I need to influence people to do certain things, they know that issues that have a direct impact on them have been considered. I also strongly believe in respect—even to the lowest of labourers. We are all people, and by respecting each other a lot more can be done.”

“Yes, the results are my successful project delivery. I further allow them to make one mistake, after that—they are dead. Also part of influencing is building respect between people, this increases efficiency and output.”

“Mostly—there are people where the influence is not as good as it can be—it is a continuing fight to get results. But for the rest of the team the styles that I apply to each individual works.”

Finding 2a:

The quality of the interaction as perceived by both parties has an effect on the outcome of the project. These results are in correlation with a study by Liu, Chua and Stahl (2010) where they found a direct relationship between the perceived quality of communication as experienced by people and the positive outcome of negotiations (or when referring to the project environment—the outcome of the influencing tactic).

Within the case study, all project managers interacted with all of the groups indicated in the Gautrain project hierarchy as indicated in Figure 4-7, with the exception of “Subcontractors” which were project specific.

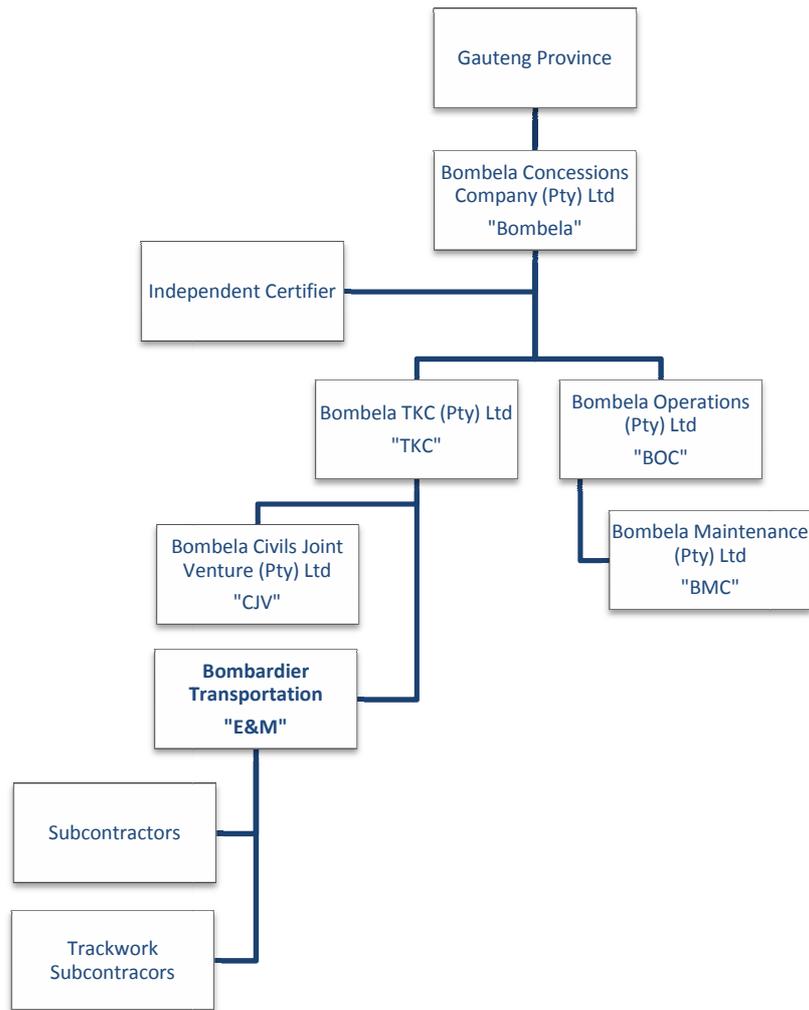


Figure 4-7: Gautrain Project Hierarchy (Bombardier, 2010)

Although a stakeholder analysis has been performed on the project, none of the project managers received a copy of it. All project managers acknowledge that it is a very helpful tool at the start of the project and that it can assist them in correctly identifying and involving the important stakeholders in the project; determining what is driving the different organisations; knowing who has influence on the project, and understanding and addressing the concerns of stakeholders.

Project managers indicated that a stakeholder analysis will not only improve the project perception and status, but will also enable project managers to manoeuvre the customer to be more collaborative.

“Yes. By ensuring that you involve all the stakeholders and looking after their concerns, they can have a huge impact on your project’s perception and status.”

“Yes, it should be done at the early stages of the project. It is not the obvious stuff that is critical, but the hidden agendas—what is driving the different organisations is important—now it is clear (at the end of the project)—but if we had done it at the start we might have been able to manoeuvre and manipulate the customer to be more on our side rather than being an enemy”

“It is useful at the beginning of a project to understand who has influence on the project”

“Depending on the size of the organisation, it can be a useful tool.”

Finding 2b:

A stakeholder analysis is an important tool to be used specifically at the start of a project. It is used to assess the interests of the various parties involved. It can also be used to determine the capability stakeholders have to block or promote project concerns. Furthermore, it can be used to determine the ability of people to join with others to form a coalition. Lastly, this type of analysis can assist the project manager to formulate appropriate forms of engagement with these groups. This analysis confirms study findings by Aaltonen (2011) and a view by Winter and Szczepanek (2009), that a stakeholder view is important to a project. The analysis also supports Aaltonen (2011) and Winter and Szczepanek’s (2009) opinion, who emphasise the importance of creating a stakeholder view for a project—noting that the incorrect interpretation of this view by the project manager can have detrimental effects on the projects.

It is interesting to note that all interviewees misinterpreted the importance of the **same** stakeholders within the Bombardier project. During the first phase of the implementation of the project (OR Tambo to Sandton) all attention was focussed on getting approval of the deliverables from Gauteng Province and the Independent Certifier (refer Figure 4-7). However, it soon became obvious during the delivery of the second phase of the project which took place in parallel to the operational first phase—that the two organisations, none of the

interviewees considered important, now became the major acceptance authority. These two organisations are Bombela Operating Company and Bombela Maintenance Company. Clearly notable was the amount of influence these two stakeholders had on other stakeholders. As none of the interviewees engaged with these organisations or considered them important in defining the project outcomes, major difficulties were experienced during the acceptance of project deliverables.

4.5. Social Networks

Initially the concept of “Social Networks” was investigated to determine the interviewees’ understanding of the term. Examples are amongst others, as follows:

“Basically ways and means of interaction with people in order to extend your influence or your ability to get to next job.”

“Group of people that have the same thing in common.”

“Chatting to people, getting to know who gets things done.”

“A social network is people with the same interests as you.”

The interviewees were then questioned to determine whether they think that social networks are important in the project environment. All interviewees are in agreement that social networks are important:

“If you are the right kind of person, they are very good tools. It can make a big difference—in how people perceive you, that you are not an enemy and going in the same direction they are. Being part of a social network can assist you with the project as you get insider information that can assist in the perception of your project success and gives you information that you can respond to, to support your project. It is important—when they work, they really do help.”

“Yes, a large social network is important as it opens up opportunities, social business and also builds on your support base.”

“Yes, although not hugely so. Not in the project delivery but more in career development.”

“Yes it is very important as it can influence how easily you can get things done and assistance that you can get to achieve certain results.”

It was agreed by all that the knowledge that a person has, has a direct effect on his perceived position in a social network. It was also noted that a person's personality has a direct impact on your positioning even if you possess a high degree of knowledge. Although the interviewees indicated that they try not to interact differently with people that have a high standing in a social network when compared with someone with a low standing in the network—it does take place unconsciously. Reasons offered include: skill base, the creation of a certain perception of yourself, discussion of topics you do not normally discuss and to use a person with a higher social position to assist you with getting results. An example provided was requesting assistance from a person with a higher social position to use his influence to get additional people assigned to your project.

Finding 3a:

The more knowledgeable a person is, the higher his standing in a project-related social network and the more relationship connections and interactions he has with other people. This finding supports the notion of Smith-Doerr, Manev and Rizova, (2004) that people taking up central positions in social networks have better access to knowledge that is distributed throughout the network.

The project managers are all in agreement that the hierarchical organisational chart of Bombardier does not capture how or who gets the work done, but rather informal networks.

Finding 3b:

People with many and varied connections in a social network are central to the organisation as they possess unique experience and knowledge. Because of their connections, they can effectively utilise these to get easier and quicker access to information to solve problems. This finding correlates with the view of Cross and Parker (2004) who note that work occurs increasingly through coordination between informal networks of relationships rather than the formal structures as indicated in hierarchical organisational charts presented by most organisations.

The project managers interviewed noted that they do make a conscious decision to pass information with change (or withhold information). Additional

context and meaning is added to serve the individual's or project's agenda within their operating social network.

"I do withhold some information to serve the project."

"I do not withhold information, but it is presented differently depending on the technical and intellectual skill of the receiver. There are circumstances where information is withheld—specifically with customers where certain information will have a contractual impact."

"I do change information to get the right results but also if there is a commercial impact (you do not wash your dirty laundry in front of everyone). I also change information when I need to get things done and will assign higher priority to a certain task even though in the bigger picture, the priority is not that high."

"Where possible I try to be transparent. But I do sometimes withhold information not to create a fuss by exposing certain information."

Finding 3c:

Information is changed when presented to other social networks to serve the project or individual. This finding compares with the findings of Levitan and Visser (2009), who note that information does not flow unchanged, but additional context and meaning is added distorting the original message to serve the individual's own agenda.

Interviewees further acknowledge and understand that social networks are intimately interconnected.

"It is very connected, and very intricately. They all talk outside the project as the project environment is very small and a negative word very quickly goes through the network."

"Yes, there are interactions at lots of levels."

"Connected."

Finding 3d:

Social networks are interconnected. Interesting is that even though the project managers understand the interconnectivity and importance of social networks, only half of the interviewees made a conscious effort to

be on good terms with someone with a high standing in a social network or with a social network that can affect the outcome of their project.

In an effort to determine if this conscious effort to interact with social networks has any type of effect on the success of the project, the success “status” of each project first had to be determined.

Using the definition of project success as on-time delivery, within budget, within quality requirements and providing customer value (Diallo and Thuillier, 2005; Dvir, Raz and Shenhar, 2002; Milosevic and Patanukul, 2004) each of the areas for which the interviewed project managers were responsible were investigated to determine if the delivery of their respective projects within the case study environment were successful.

The investigation comprised of comparing actual schedule information for all projects of Bombardier at the start of the trail-running period for the delivery of the 2nd phase of the Gautrain project, available financial data with reference to the budget of each project at the same period and quantitative data obtained from the maintenance environment with regard to the amount of open snags reported during the same period.

Table 4-1: Project Success

	Project Success criteria				
	On schedule	Within Budget	Within Quality	Customer value	Success?
PM1	Yes	Yes	Yes	Yes	Yes
PM2	No	Yes	No	Yes	No
PM3	No	No	No	Yes	No
PM4	Yes	Yes	Yes	Yes	Yes

From the above results it can be concluded that based on the defined project success factors, only half of the projects can be declared successful.

The success status of each project was mapped with the feedback of each project manager’s input; with regard to the importance of social networks, the

interconnectivity of social networks and the effort they make to be on good terms with a social network (refer Table 4-2).

Table 4-2: Social Network Perception impact on Project Success

	Importance	Interconnected	Effort	Success
PM1	Yes	Yes	Yes	Yes
PM2	Yes	Yes	No	No
PM3	Yes	Yes /No	No	No
PM4	Yes	Yes	Yes	Yes

From the above analysis, it is very revealing to note that even though the project managers understand the importance and interconnection of social networks, they do not make an effort to use these networks to the benefit of their projects.

Therefore a possible correlation could exist between making use of networks in the project environment and project success—this was however not measured during this study. Without measuring both of these characteristics with a reasonable degree of validity and reliability, causation cannot be indicated. Nevertheless this is an interesting area for further investigation or research.

Interviewees are certainly in strong disagreement with Smith’s (2007) proposition that project managers neither possess any real power when the project is a temporary endeavour, nor do they have a high status.

“No—power comes from the individual and it is something that you learn when you learn management properly. People respond to you based on the authority you project. You feel and wield authority—people will allow you to do things you do not necessarily have the authority to do.”

“Yes and no. You have direct access to appointments and budget. Internally you sometimes have less power—where you need to get people to want to deliver for you (but then always there is the fact that a bad report of performance can be sent to his line manager).”

“No, you do employ people and you have the ability to arrange and negotiate bonus incentives.”

4.6. Culture and Tribalism

The concept of “Culture” was first investigated to determine the interviewees’ understanding of the term.

“Culture is how things are done in an organisation, what is taboo, how you interact with people.”

“Resulting behaviours caused by the personalities and behaviours of senior managers and their imposition or view on how rules should be imposed.”

“It is the informal way of doing business in a certain manner.”

“It is the organisational attitude towards its people and how it gets the most out of it (commend vs. criticize, etc.)”

Interviewees are all in agreement that the culture of the organisation is determined by its senior management and that it does have some impact on how people work. However, project managers indicated that as the leader of their team, they are largely responsible for the team culture. They actively try to shape this culture to be participative in nature, and promote open communications. This participatory communication has the effect that people in their team are taking initiative on actions and are not afraid to voice their suggestions for improving work.

Finding 4a:

Even though the organisational culture is determined by senior management, the project manager determines and shapes the culture of his team. This confirms the finding of Gould *et al.*, (2006) where it was found that when managers create an open and trusting environment by adapting their behaviour, it influences the psychological view of members. They will change their perception of the culture to that of a positive environment. People will feel that they play an important role in their work environment and will also adopt task-related behaviour. The findings from the interviews also confirm De Witte and van Muijen’s

(1999) proposition that participative approaches are likely to result in lasting changes at all levels of the organisation.

As a multi-national project, different national cultures also have an effect on the team culture and changes were incorporated by all project managers in their approaches towards team members, such as changing their decision approaches to a more collaborative approach. In the opinion of the project managers, no challenges or issues were however experienced within any of the project teams with regard to national culture.

The following aspect that was investigated was “Tribes”. To ensure that all understand the term in the same manner, the following definition was provided in preparation for the detailed questions with regard to this concept that is further investigated.

“Tribes” are formed by virtue of their function, but can also be created by location, hierarchy, tenure, age or gender (Cross, 2009)—such as the “old boys club”.

Two tribes were identified within the organisation and the majority of interviewees experienced these tribes negatively.

The first tribe is Bombela Operating Company (BOC). This organisation is responsible for the day-to-day operations and maintenance of the Gautrain which includes train and bus services, stations and railway infrastructure. Senior management and decision makers are all French expatriates who formed a very close-knitted group—this tribe was formed by virtue of their national culture.

“They are very difficult to work with, to infiltrate ... are very territorial, and protective of their own.”

The second tribe is the senior management of Bombardier Transportation which is formed by virtue of their function and hierarchy in the organisation.

“They have a narrow-mindedness and inability to listen to expert advice from below.”

Finding 4b:

Tribes within an organisation are negatively perceived and their actions are experienced as detrimental to the functioning of a project. Findings

from the interviews confirm that tribes are focussing on their own interests and agendas, and that they are negatively experienced within the organisation (Freiberg and Freiberg, 2007; Smith, 2007).

4.7. Language and Metaphor

A significant finding is that the local South African project managers did not experience any issue with regard to language within their teams compared to the expatriate project managers (Australia and United Kingdom) who did—even though all teams were multi-national. The nature of the difficulties that the expatriate project managers experienced was related to how their team members comprehended requests and instructions issued by these expatriate project managers.

“Language is a difficulty as there are different levels of language skills. French people has a different comprehension on how things work, and local African people also struggle with comprehension which is critical to get ideas across which are critical to progress.”

“Language difficulties are experienced with people from Asia.”

All interviewees acknowledge that the way in which they communicate certainly has an effect on how people perceive them doing a good job.

“Yes, by giving bad news a certain way using the correct words, or just by giving bad news has a definite impact ...it creates an impression with the audience that you know what you are doing”

“Yes, people come across in different ways. Pandering to the audience is an important part.”

“Yes, I get complimented on my presentation skills and it gives a good impression of the project and my abilities and shows that you can think on your feet.”

“Yes, communication up into the leadership is essential for the perception that you are progressing in the project and its environment. Not communicating creates the false perception that you are not working.”

Finding 5a:

A project manager's proficiency in the language used in the project environment and his ability to present his project, has an impact on how his ability as a project manager is perceived.

Metaphors were not used as a communication medium by the interviewees during the project to explain a principle. One interviewee noted:

“If the people are from the same country they will understand what you are meaning, but definitely not in an international team.”

This statement can indicate that the interviewee is not a good communicator as a metaphor is merely a figure of speech which is often universally applicable. A good communicator must select a metaphor that is understandable to the audience.

Finding 5b:

The use of metaphors are not perceived as a tool to improve understanding between people a finding which negates the findings of Eskerod (1996). Information with regard to the national culture diversity of the people in her study is not available to compare with the multi-national diversity of culture in this case study.

4.8. Social Process

Finding 6a:

All project managers agreed that Project Management can be described as both a social and an instrumental process.

“Both, you cannot do one without the other.”

“Both, socially you need to understand what makes people tick but you also need to follow the process.”

“Both. There are things that follow one another such as the life cycle and we use concepts as provided in the PMBOK, a major part of project management is however the social interaction between people.”

Finding 6b:

Most of the project managers also agree that the way they interact with people on the project will have an impact on the project success:

“Yes—absolutely. One of the projects that I worked on in Sydney was a failure. PM only worked on instrumental process with no concept of managing the people. He will pick someone he did not like or who did not agree with him and then present them as the sacrificial goat—a lot of senior good people left because they did not agree with him. If you cannot manage people you cannot manage the project.”

“It can create an environment conducive to the project delivery and make project easier to deliver.”

“Yes, I have to motivate people to want to do things for me—thereby delivering a successful project.”

“Yes, by successfully interacting you can inspire and motivate people to go above and beyond their job descriptions and time at the office. They will be willing to work overtime (not for long) but to go the extra mile.”

Finding 6c:

When presented with PMBOK process view (refer Figure 1-1), all interviewees concurred that “Social Interaction” should be added as a knowledge area to make the guide more useful, and that this knowledge area is applicable to all stages of the project lifecycle. Reasons offered were:

“...it will indicate to people that social interaction is a very important part of project management, and not just sitting behind a desk issuing instructions and making up schedules. Project managers must be made aware of the importance of their interactions.”

“...it is an important piece that is missing.”

“...it can create an environment conducive to project delivery.”

One of the interviewees however offered an interesting insight:

“I am however wary that if it is included in the PMBOK a new recruit will not understand it. He should experience it through mentorship. It will be a good

idea to include it in PM courses and also in your performance review to indicate areas where you can improve on.”

4.9. Summary

The findings above indicate that experienced project managers perceive PMBOK as creating a solid foundation of project management fundamentals, but that it is more applicable to young and inexperienced project managers to establish and understand PM foundations. It was concurred that there are dimensions that PMBOK do not address such as politics, people and soft issues.

The flux of events taking place on a daily basis is experienced as common to all projects. Project managers use their experience to cope with the flux. This is experienced as one of the more positive and challenging aspects in the project environment and a higher priority is placed on actions to assist people that demand information immediately, interrupting a planned daily schedule.

Influencing tactics are used on individuals to successfully achieve results, but the tactic is dependent on the specific individual. Although they all indicated that they are effective in influencing the people they interact with none of the interviewees received any type of social-skills training. Stakeholder analysis is perceived as a very helpful tool at the start of the project and that it can assist them in performing their job better. In this study a stakeholder analysis was, however, not received which resulted in all project managers misunderstanding the importance of the **same** stakeholders within the project.

Although all project managers understood the importance of social networks, the interconnectivity of social networks and the positive impact on the project when they are on good terms with a social network, only half of the project managers made a conscious effort to interact with social networks. This has a direct impact on the perceived success of a project.

Project managers indicated that their team's culture is closely related to their own way of getting things done and that it is different compared to the organisational culture. National culture further has an impact on the team culture and changes to approaches were incorporated by project managers to incorporate these. Only two tribes were identified within the examined

organisation and the majority of interviewees experienced these tribes negatively.

The way in which communication takes place does have an effect on how people perceive project managers doing a good job. The use of metaphors in communication attempts is not perceived as a tool to improve understanding between people—particularly in a multi-national team. In fact, misinterpretations could occur that could spoil communication and working spirit.

All project managers agreed that Project Management can be described as both a social as well as an instrumental process. It was also agreed that the way in which they interact with people on the project does have an impact on the project success. It was concluded by all that “Social Interaction” should be added as a knowledge area to PMBOK to make the guide more useful, and that this knowledge area is applicable to all stages of the project lifecycle.

5. Conclusions and Recommendations

The purpose of this research report is to gain insight on how project managers experience the contemporary project environment with specific reference to projects as social processes with regard to the flux of events, the people and organisations with which project managers interact, the impact and interactions with social networks, the role of culture and tribalism and the impact of language and metaphors in the delivery of a project. These insights were presented in chapter 4 from which findings were created and compared to theoretical propositions.

Based on the findings presented, this chapter will present the conclusions and recommendations that can be logically derived from the analysis performed. This chapter will conclude with a section suggesting areas for future research.

5.1. Summary of findings

Table 5-1 presented below contains a summary of the findings presented in the previous section. These findings are based on a single project and the information gleaned from four project managers. Universality of these findings cannot therefore be claimed, but its purpose is to be indicative and exploratory of the social process in a typical construction project environment in South Africa in 2010/2011.

Table 5-1: Summary of findings

Flux of events	1a	The flux of events taking place on a daily basis is experienced as common to all projects, and project managers use their experience to cope with the flux
	1b	Project management is different to general management
	1c	Project managers are aware of the importance of social interaction to create a more positive attitude between members within their complex social project environment

	1d	How people perceive and experience a project manager's social interaction with them has an impact on the project's success or failure.
People and organisations	2a	The quality of the interaction as perceived by both parties has an effect on the outcome of the project
	2b	A stakeholder analysis is an important tool to be used specifically at the start of a project to assess the interests of all the various, involved parties
Social Networks	3a	The more knowledgeable a person is, the higher his standing in a project-related social network and the more relationship connections and interactions he usually has with other people
	3b	People with many connections between social networks get the work done – not necessarily people at the top of an organisational chart
	3c	Information is changed when presented to other social networks to serve the project or individual
	3d	Social networks are interconnected.
	3e	Not making an effort to use social networks to the benefit of their projects, has a negative impact on the success of the project.
Culture and Tribalism	4a	Even though the organisational culture to some extent is determined by senior management, the project manager more strongly determines and shapes the culture of his team
	4b	Tribes within an organisation are negatively perceived and their actions are experienced as detrimental to the functioning of a project
Language and metaphor	5a	A project manager's proficiency in the language used in the project environment and his ability to present his project has an impact on how his ability as a project manager is perceived.

	5b	The use of metaphors is not perceived as a tool to improve understanding between people
Projects as Social processes	6a	Project Management can be described as both a social and an instrumental process.
	6b	The way in which project managers interact with people on the project has a marked impact on the project success.
	6c	“Social Interaction” should be added as a knowledge area to make the PMBOK more useful, and more importantly that this knowledge area is applicable to all stages of the project lifecycle.

5.2. Conclusion and Recommendations

5.2.1 Flux of events

A typical day of a project manager consists mostly of unplanned events that require immediate action and decision which in turn have a direct impact on the project outcome. These events and interruptions that take place, are common to projects throughout their lifecycle, involving continuous and constant decision-making as well as providing crucial information. As noted by Munns and Bjeirmi (1996), there is a vast difference between the management techniques project managers employ when compared to management of day-to-day operations—project managers are therefore a unique type or breed of managers that thrive on pressure and challenges. A project manager should therefore be skilled in multi-tasking and how to handle pressure to ensure his reaction to the event and the people involved, within the short period available during the decision-making process, to bring about a positive outcome for the project.

Project managers are not trained in skills that enable them to handle a typical day and currently tend to rely only on their experience. This leaves ill-prepared project managers that cannot cope with the constant bombardment of goal-directed decisions and actions. It is therefore recommended that project management training as well as mentoring include training on how to handle

pressure and how to cope with the constant demand of actions and their envisioned consequences.

5.2.2 *People and Organisations*

All these events taking place during a typical day are created at different levels in the organisation, but it work as a project manager always requires interaction with people. These interactions by default involve influencing people to perform a certain function or action to advance the project. People are by nature sensitive to how other people react and interact with them, and to complicate the project environment even further, different people require different influencing tactics. It is therefore of utmost importance that project managers influence people in such a way that they ensure project objectives are met. They need to know how workers on the teams, tick.

When project managers operate in their high pressure environments, and they struggle to cope with the constant flux of events, their reactions to people could become short-tempered and aggressive. As they are also not aware of the impact of their interaction on people within their team and the organisation, and that their reaction is perceived as them being incapable of performing their job—they are not able to motivate and influence people to positively affect the outcome of their project. It is recommended that project managers are *continuously* trained in the use of social skills. Their social skills should also form part of their performance review where feedback not only from their superiors but also team members are provided in an open discussion. Areas identified where improvements can take place should be immediately addressed because it will not only improve the functioning of the project manager but also the outcome of the project.

Stakeholder analysis is a severely underestimated tool in the project environment, and it is often indicated at the end of a project in retrospect that stakeholder analysis would have assisted project managers to affect the outcome of their project. Specifically in a large, complex project with numerous stakeholders, the stakeholder analysis can guide a project manager to ensure that communication is taking place with the correct stakeholders to understand their concerns and requirements and then to shape the project to address these

expectations—thereby gaining their support and ensuring that the project succeeds.

When a stakeholder analysis is not available to project managers or when the analysis is outdated, project managers could incorrectly assume the importance of certain stakeholders spending time and effort addressing issues that have no relevance to the success of the project. Even though the requirements of all stakeholders are relevant—some are more relevant to the success of the project than others. It is recommended that a stakeholder analysis is performed at the start of a project, and that it should be reviewed and updated when the project is handed over to assure its usefulness—for example, during the construction phase of a project, there is little change in stakeholders; however, when the construction phase is complete and the project is handed over to the operator and maintainer—the stakeholders change, and they then have different requirements and concerns that elicit different approaches. The stakeholder analysis should also not be performed only by the project manager, but should involve people across the organisation to ensure that all expectations and views are included.

5.2.3 Social Networks

Social networks are formed within an organisation and outside it. A person's position within a social network is mostly determined by his store of knowledge and this increases the number of his connections with other social networks. The more connections a person has with other social networks, the more it could indicate that this person will get the work done. Flows of information between social networks are however consciously changed by actors in the social network to serve the project or individual and this is achieved as social networks are interconnected. Social networking is a powerful means of communication and should not be underestimated. Social networks should be used by project managers as a tool to communicate progress and requirements to the benefit of the project as it does assist in getting things done.

Project managers should take cognisance of the fact that social networks exist and that it can assist them both in their careers and project delivery. Social networks are highly political and require political actions from the project manager to improve his status and that of the project within the social networks

surrounding him. It does not matter from which environment a project manager comes—technical or administrative, a project manager must have political savvy to influence people and to steer the situation in a favourable direction to create an environment for positive politics. Unfortunately this is not an aspect that can be taught in project management courses or even presented in project management handbooks. It is recommended that project managers are mentored with regard to this aspect of leadership and how to identify the social networks and the interconnections between networks.

5.2.4 Culture and Tribalism

To a great extent the project manager determines the culture within his team. This is achieved not only by communicating expectations and requirements, but also by influencing and *acting* according to the expected cultural behaviour, in other words by setting an example.

Too often project managers perceive their function as updating schedules and managing projects from behind their desk—thereby creating a culture where internal communications are strained and perceived as formal. Furthermore, the project manager could be regarded as having no idea of what is actually going on at ground level. Project managers should interact with team members where they are physically performing their jobs to understand the difficulties and challenges they are experiencing, and to communicate with members in an open and supportive manner. This creates a culture of understanding between project managers and team members in which issues are presented *without* change (i.e. a non-political environment) so that the required actions can be determined to address issues for the successful outcome of the project.

5.2.5 Language and Metaphor

Project managers interact on a constant basis with people. These people are team members, senior managers, stakeholders and other organisational members. Interaction takes place mostly verbally but also non-verbally. It mainly requires the use of language. In order to instruct effectively, influence or present information in such a way that the required response is achieved, project managers must understand that their ability to communicate effectively depends on their proficiency and ability to 'play' with words to get the correct

message across. Here, understanding what words can be understood to mean in widely-differing cultures is a definite asset of the project manager.

Language and communication skills are important and determine how information is presented to another party. This has an effect not only on the people level but also when interacting with social networks. A project manager must have the ability to use language correctly and in such a way that he is perceived as knowledgeable and competent. It is recommended that project managers who operate in a project environment where the language used is different from his home language to receive advanced language skills—he might understand the language and might be able to communicate in it—however it is the way in which he communicates that will improve his success.

Metaphors can be used to improve the understanding between people or to explain a certain concept, however its use is limited to projects where people of the same culture are working. As soon as a project becomes multi-cultural, metaphors could hamper understanding.

In conclusion, project management consists of both instrumental as well as social processes—one which cannot exist without the other. A recurring theme found throughout this study is that project managers interact with people at various levels and the way in which this interaction is perceived has an impact on the outcome of the project. No material is available, nor is any reference given to this aspect of project management in PMBOK or system lifecycle processes. “Social Interaction” should be added as a knowledge area to make the PMBOK more useful, because this knowledge area is applicable to all stages of the project lifecycle. By including this process and acknowledging its relevance in the contemporary project, project success may be improved.

5.3. Suggestions for future research

This exploratory case study is confined to a single construction organisation with information provided from four project managers. Inclusion of more construction organisations as well as projects outside the construction environment in similar future studies, will provide a fuller picture regarding the effect of social interaction in a project environment.

Social interactions are mastered through experience but also learned by observing and coaching. Future research could investigate possible ways of how this type of mentoring should take place. Research is needed on aspects it can involve to teach project managers how to interact successfully with their team and stakeholders to benefit their projects.

Very little research has been conducted on projects as social processes – only one could be found namely *The emergent realities of project praxis in socially complex project environment* by Small and Walker, 2009. Their research findings have, however, not been made available, and their findings can therefore not be compared to this study. Future research could compare findings between these two studies.

Future research studies could also examine at the possible relationship between project success and the use of social networking.

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Annexure A: Measurement instrument



Case Study Protocol
for
Research Report on
Social Processes in Project Management

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Change Record

Rev	Description/Reason for change	Date
1.0	First revision	7 May 2011
1.1	Updated with study leader's feedback	28 July 2011
1.2	Updated to include actual actions	14 August 2011

Introduction to the Case Study

A large amount of researchers and practitioners are indicating that the processes and procedures as advocated by the PMBOK are not relevant to what is really taking place within the project environment. Although these codified procedures have their place in project management implementation, it is creating a perception that these are the “rules” to be followed and if not carried out correctly the project will fail. However, numerous projects in construction, IT and engineering are failing even though no clear indicators that the processes were not followed correctly, are available.

Based on this trend and the increasing number of researchers indicating that the actuality (what is taking place) of a project should be considered, a significant research undertaking by the UK’s Engineering and Physical Sciences Research Council (EPSRC) started in 2004 and took place over a period of 3 years. It involved researchers from 15 universities and practitioners from public, private and voluntary organisations. The aim of the research was to determine and set an agenda for future research that should take place in project management. The outcome of the research was 5 directions for future research. These are:

- Direction 1 (D1) – moving from the lifecycle model of projects and project management to theories of the complexity of projects and project management.
- Direction 2 (D2) – moving from projects as instrumental processes to projects as social processes.
- Direction 3 (D3) – moving from product creation as the prime focus to value creation as prime focus.
- Direction 4 (D4) – moving from the narrow conceptualisation of projects to a broader conceptualisation of projects.
- Direction 5 (D5) – moving from practitioners as trained technicians to practitioners as reflective practitioners.

This research will only focus on D2 – to move from the view of projects as instrumental processes to that of projects as social processes. The research Network defined projects as social processes as:

“...seeing projects as social processes, covering aspects such as the ever-changing flux of events, the individuals, groups and organisations involved, and other aspects such as social networks, culture and tribalism, and language and metaphor.”

In this study each of the concepts as indicated by the research Network will be studied in a real project environment to determine the extent of social interaction in the project as well as the impact of this interaction on the outcome of the project. The study will be limited to the project managers of Bombardier Transportation working on the Gautrain Rapid Rail Project.

Purpose of Protocol

The purpose of this protocol is to guide the investigator in the data collection process as it keeps the investigator focussed on the topic. It prepares the investigator for possible problems that can be encountered during the data collection phase and also document procedures and processes used to enable later investigators to conduct the same research and arrive at the same findings.

Background

The importance of this study is that although it does not disregard the importance of theoretical and procedural practices as suggested by Project Management Bodies of Knowledge, it attempts to provide evidence to collaborate the findings of the Network that the social aspects and activities project managers are immersed in on a daily basis play a critical role in the delivery of a project. It will also provide evidence that projects cannot only be seen as instrumental processes which involve a linear sequence of tasks, with codified knowledge and apolitical processes.

This research study attempts to provide practitioner experience of social processes in a project which can be used to enhance knowledge about contemporary projects.

Objectives and research questions

The objectives of this research study are:

- To determine the impact and effects social processes have on the outcome of a project.
- To also show why project management cannot be viewed *only* as an instrumental process consisting of processes and techniques.
- To demonstrate why social processes should be included in PMBOK and Life Cycle Processes applicable to System Engineering.

The main research question of this study is:

- What social interactions are taking place in a project context that can influence the outcome of a project?

The study results will be used to provide actual data of the social processes within a project to collaborate not only the theoretical framework of projects as social processes as defined by the research Network, but also to provide findings that can be used by other researchers for future investigations into this topic. The findings can also be used to provide a basis for frameworks for both the PMBOK and ISO 15244 for social interaction.

Method

Study Design

The case study will be a single case study taking the form of a representative embedded case, as the Gautrain project can be seen as a typical in the construction industry where various disciplines are working together.

As the focus of this research is to understand the social behaviour within a project environment, the recommendations of Yin to use the case study to understand complex social behaviour, and that of Packendorff to use the case

study to understand what really happened in a project environment, will be adopted.

Study Population

The population of the study will be limited to the project managers of Bombardier Transportation. This is appropriate as the study requires specifically the feedback from project managers practising and experiencing everyday life in a project environment. Access to all project managers is available to the researcher, however their availability and acceptance to be available for an interview is unclear at this stage.

There are no criteria for exclusion.

In the case of refusal to take part in the study, supervisors working with the project manager will be approached.

Data Collection Procedures

Data will be collected by the researcher (no assistants) using the following methods:

- Interview
- Observation
- Record review

During the face-to-face interview each interviewee will be asked the same questions from a predefined questionnaire. Information will be recorded in a table format while the researcher will also try to establish the availability of records to collaborate this information. Follow-up meetings with the project manager will take place during their meetings to also collaborate information based on observation.

The interviews will be transcribed by the researcher on computer using MSWord after the interview. Details of each interview will be captured in the bibliography. The transcriptions will not be in detail, but will contain only the discussions of the main topics as indicated in the protocol.

Version 1.0 Original interview

Version 1.1 Authorised interview

Validity (limitations and weaknesses)

Potential sources of biases are:

- Information Bias
- Interviewer bias

The above identified biases will be dealt with as follows:

In the Design:

- Information Bias: respondents could have difficulty in understanding the question, to recall their experience or to articulate their experience. There is also the possibility of unwillingness to disclose as well as social desirability influences. This will be addressed by careful wording of questions and also the manner in which they are asked.
- Interviewer bias: by using interview guides the researcher can ensure that the same questions are asked of all the participants.

Ethical Considerations

A consent form as well as an explanatory overview of the case study will be presented to each interviewee (refer to the annexure for the consent form as well as the explanatory overview).

All participants will be informed about the full nature of the research study to enable them to make an informed decision about their possible voluntary participation. Full approval was received from Bombardier Transportation to use the organisation in this research study.

Case Study questions

Profile of participants:

For this section the researcher would like to determine the overall profile of the project managers to determine their experience level which can be used to make general observations of the profile of respondents.

1. How did you become a project manager?
2. How long have you been a project manager?
3. Are you certified by any project management institution?
4. Have you received any formal education for project management, if yes what did it involve and do you think education is important?

PMBOK Knowledge

5. Rate your knowledge of the PMBOK between 1 to 4 with 1 being no knowledge and 4 very good knowledge.
6. What do you understand of the PMBOK with regard to its life-cycle phases and knowledge areas? (Provide a diagram – Annexure C)
7. If you look at the activities indicated in the PMBOK for the planning process (refer Annexure B), one version indicates a linear flow of activities where the other version indicates that activities can oscillate between phases – which version applies the most to your daily experiences? And why?
8. Do you make use of the PMBOK principles in this project? Why and how? Or why not?
9. Do you have a copy of the PMBOK or do you refer to it for information? For what use, or why do you not use it?
10. Do you think that the PMBOK is a useful guide? Why or why not?
11. In your experience, does the PMBOK guide address issues and actions that are taking place in the project or do you feel there are dimensions that it is not addressing? What?

Flux of events:

What is the flux of events taking place on the project and on which level (organisational, technical, contract, etc.) is it created?

12. Will you describe your typical day as planned with little interruptions? Why or why not? Please provide a description of how you experience your average day.
13. Has any education or material that you have read prepared you on how to handle your daily activities and interruptions? or was it more experience?
14. Is the average day experience on this project similar to other projects that you have worked on, or is it limited to this project only?
15. What is the biggest factor that helps you to cope with your daily activities?
16. How do you handle an interruption, do you go through a check to determine if it is urgent or not and then based on that leave it for later, or do you act immediately on it? What process do you use to decide to act or not?
17. Do you experience interruptions from the following: organisational, contractual, technical? This is on a high level, details with regard to individuals and groups will follow later.
18. Can you indicate any other level where interruptions are created?
19. Rate where the most interruptions originate: organisational, contractual, technical and other?
20. Do these interruptions have any effect on your project delivery?
21. Do you make time for “personal work” to improve your standing and that of the project within the organisation, such as approaching the “right people” during lunch or having conversations in the hallway?

Individuals, groups and organisations:

Who are the individuals, groups and organisations with whom interaction takes place on the project and what social skills are applicable to each?

22. On your project, who are the individuals, groups and organisations you interact with? Create diagram of all.
23. For each of these, how do you interact with them? (Memos, mail, communication, etc.)
24. How do to ensure that when you interact with them you influence them effectively to achieve your results? Or do you just issue a request?

25. Do you think you are effective in influencing them or not? Why?
26. Have you attended any course or read material on social skills and how to use it?
27. Have you used a stakeholder analysis for this project? Why or why not?
28. Do you think that a stakeholder analysis is a valid tool to be used or not?
29. Have you correctly identified all the stakeholders in this project, or have you misinterpreted the importance or non-importance of one of the players which had a negative impact on your project?

Social Networks:

How do social networks and the connectivity between networks affect the interaction taking place with people?

30. What is your understanding of social networks?

In the following questions with regard to social networks will be asked to ensure that all participants understand the concept, the definition for this study will be provided: "Social networks can be defined as a group of individuals, connected to each other through ongoing personal relationships such as friendship, common interest and beliefs".

31. Do you think social networks are important? Why or why not?
32. Do you think that the knowledge that a person has, has an influence on his position in a social network?
33. Do you interact differently with people that have a high standing in a social network when compared to someone with a low standing in a network? Why?
34. Do you make an effort to be on good terms with someone with a high standing in a social network to affect the outcome of your project?
35. It is often said that project managers have no power as we do not appoint or have access to bonus budgets – the only way we achieve our objectives is by influencing people. Do you agree with this statement? How do you influence people with high social network status to achieve your project results?
36. Do you experience the different social networks to be connected or not and why do you say so?

37. Can you provide an example of your experience (good or bad) with a social network on this project?
38. If you look at the organisational chart, does this indicate who gets the work done?
39. When interacting with someone from a social network about an important aspect of your project, do you make a conscious decision to pass information without change or do you change information (or withhold) to serve your project?

Culture and tribalism:

How does the role of culture and tribalism affect strategies for interaction between people?

40. What do you understand of the concept of culture in an organisation?
41. Does the culture as you defined it, have an impact on how people work?
42. Who in your mind creates the culture of an organisation?
43. Does your team have its own culture and how is it different from the organisational culture?
44. As leader of your team, does your team culture reflect your culture?
45. Does the type of national culture affect how you interact with different people?
46. What issues or challenges have you experienced with regard to the different national cultures?

For the next questions the issue of tribalism or cliques will be investigated. A definition of tribalism will be presented:

Tribes are formed by virtue of their function, but can also be created by location, hierarchy, tenure, age or gender

47. Can you identify the various tribes in this organisation?
48. How do you experience these tribes?
49. Do they provide a positive or negative influence on how you are able to perform your job?

Language and metaphor:

Does language and metaphor play a role in interaction with people and how does it affect interaction?

50. In this multinational company there are people from all over the world with English as the common language, what difficulties do you experience in language to interact with the different nationalities?
51. Do you think that the way in which you communicate can have an effect on how people perceive you doing a good job or not? Why do you say so?
52. Do you make use of metaphors to explain a principle so that people can understand better what you are trying to communicate?
53. Do you think the use of metaphors will improve understanding between people?

Social Process

How should social interactions in a project context be handled to positively influence the outcome of the project?

54. Would you describe project management as a social process, instrumental process or both? Why or why not?
55. Do you think that the way you interact with people on the project will have an impact on a project's success or not? Why or why not?
56. With reference to the Project management process as indicated in the PMBOK, do you think that by adding an additional process such as "Social interaction" it will make the guide more useful? Why or why not?
57. With reference to the PMBOK matrix (Annexure C), where do you think social processes are applicable in each process?

Data Analysis

The data analysis for this research study will involve:

- Analysing information obtained during interviews and while transcribing it
- Determining recurring themes found during the interviews
- Grouping themes of similar information together. The table below is an indication of the relevant question number with similar themes.

Question #	Analysis
1,5	Accidental project manager or profession, does it have impact on social interaction?
2,6	Relationship between experience and perception of importance of social interaction
3,4,15	Importance of certification and education
7	PMBOK knowledge
8,9	Linear sequence of events
10,11,12,13	Applicability of PMBOK
11	Codified knowledge
	Apolitical process
14	Flux of events
15,17,18	Education preparation or experience – to handle daily pressures
16,63,64,65	Applicability/generalisation
19,20,21,24	Level where flux is created
22,38,39,43, 47,62	Effect on project delivery
23,43,58	Improvement of project standing
24	Who Interaction takes place with
25,52,57	Type of interaction
26,27,58,60	Effectiveness of interaction
28	Education preparation or experience – to socially interact
29,30,31	Stakeholder analysis
32,35,36,37	Social network understanding and if it has impact on standing
33	Identification of social networks in company
34	Importance of social networks

37,38,39,54	Social interaction
40,41	Interconnection between social networks
42	Social networks and how it determines what gets done on a project
3,4,15,17,18, 28	Education relevance and importance
44,49,51	Definition of culture and types
45,46,47,53	Impact of culture on organisation
48,50	Leadership
54,55,56	Tribes and effect on organisation
57	Importance of language
61	Social processes in a project

Further research activity to be undertaken in this study are:

- Create findings from the themes
- Testing findings against theory
- Finding documentary evidence that support findings.
- Performing observations to triangulate findings

Annexure 1 – Consent Form and Explanatory statement

Projects as Social Processes – Case study consent form

This case study is being prepared by Elnari Hough as a requirement for the Masters in Business Leadership programme offered by UNISA. The purpose of this research is to complete a case study in determining the social processes and actuality project managers' experience on a day to day basis in a project environment.

The study will involve an interview of approximately 1 hour. Approval for the use of Bombardier Transportation in the case study has been received from the organisation.

By signing this consent form you agree to the following:

- I agree to take part in the research project specified above. I have had the project explained to me, and I have read the Explanatory Statement, which I keep for my records. I further agree to be interviewed by the researcher.
- I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way.
- I understand that any data that the student extracts from the interview for use in reports will not, under any circumstances, contain names or identifying characteristics.
- I understand that any information I provide is confidential, and that no information that could lead to the identification of any individual will be disclosed in any reports on the project, or to any other party.
- I understand that reports based on the interview(s) will be kept in a secure storage and accessible to UNISA examiners only.

Participant's name:	
Signature:	
Date:	
Interviewer's name:	

For any queries related to this study, the Academic Director of UNISA SBL can be contacted at 011 652 0375 or e-mailed at AAOkharedia@sbleds.ac.za.

Explanatory Statement:

A large amount of researchers and practitioners are indicating that the processes and procedures as advocated by the PMBOK are not relevant to what is really taking place within the project environment. Although these codified procedures have their place in project management implementation, it is creating a perception that these are the “rules” to be followed and if not carried out correctly the project will fail. However, numerous projects in construction, IT and engineering are failing even though no clear indicators that the processes were not followed correctly, are available.

Based on this trend and the increasing number of research indicating that the actuality (what is taking place) on a project should be considered, a significant research undertaking by the UK’s Engineering and Physical Sciences Research Council (EPSRC) started in 2004 and took place over a period of 3 years. It involved researchers from 15 universities and practitioners from public, private and voluntary organisations. The aim of the research was to determine and set an agenda for future research that should take place in project management. The outcome of the research was 5 directions for future research, these are:

- Direction 1 (D1) – moving from the lifecycle model of projects and project management to theories of the complexity of projects and project management.
- Direction 2 (D2) – moving from projects as instrumental processes to projects as social processes.
- Direction 3 (D3) – moving from product creation as the prime focus to value creation as prime focus.
- Direction 4 (D4) – moving from the narrow conceptualisation of projects to a broader conceptualisation of projects.
- Direction 5 (D5) – moving from practitioners as trained technicians to practitioners as reflective practitioners.

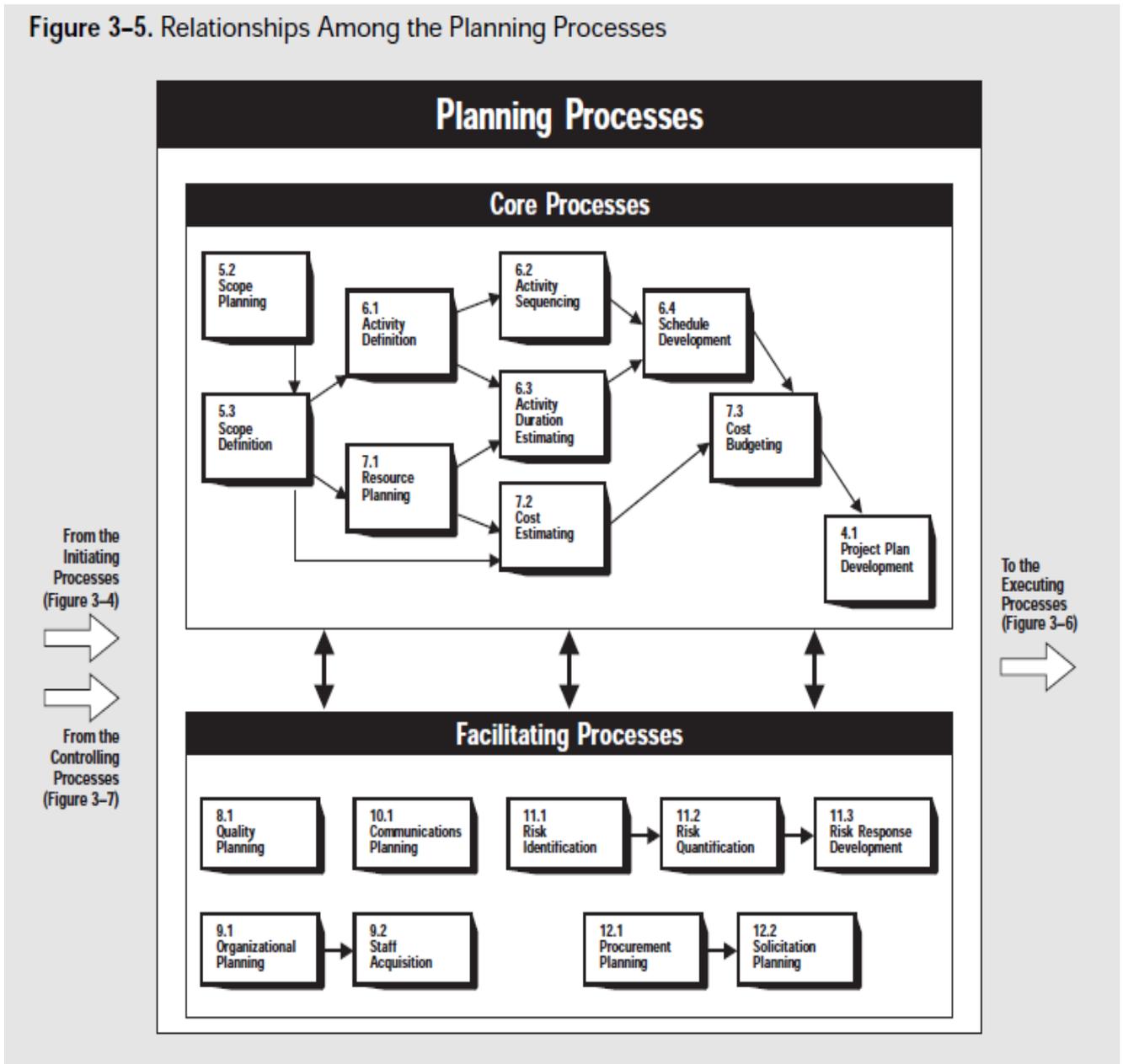
This research will only focus on D2 – to move from the view of projects as instrumental processes to that of projects as social processes. The research Network defined projects as social processes as:

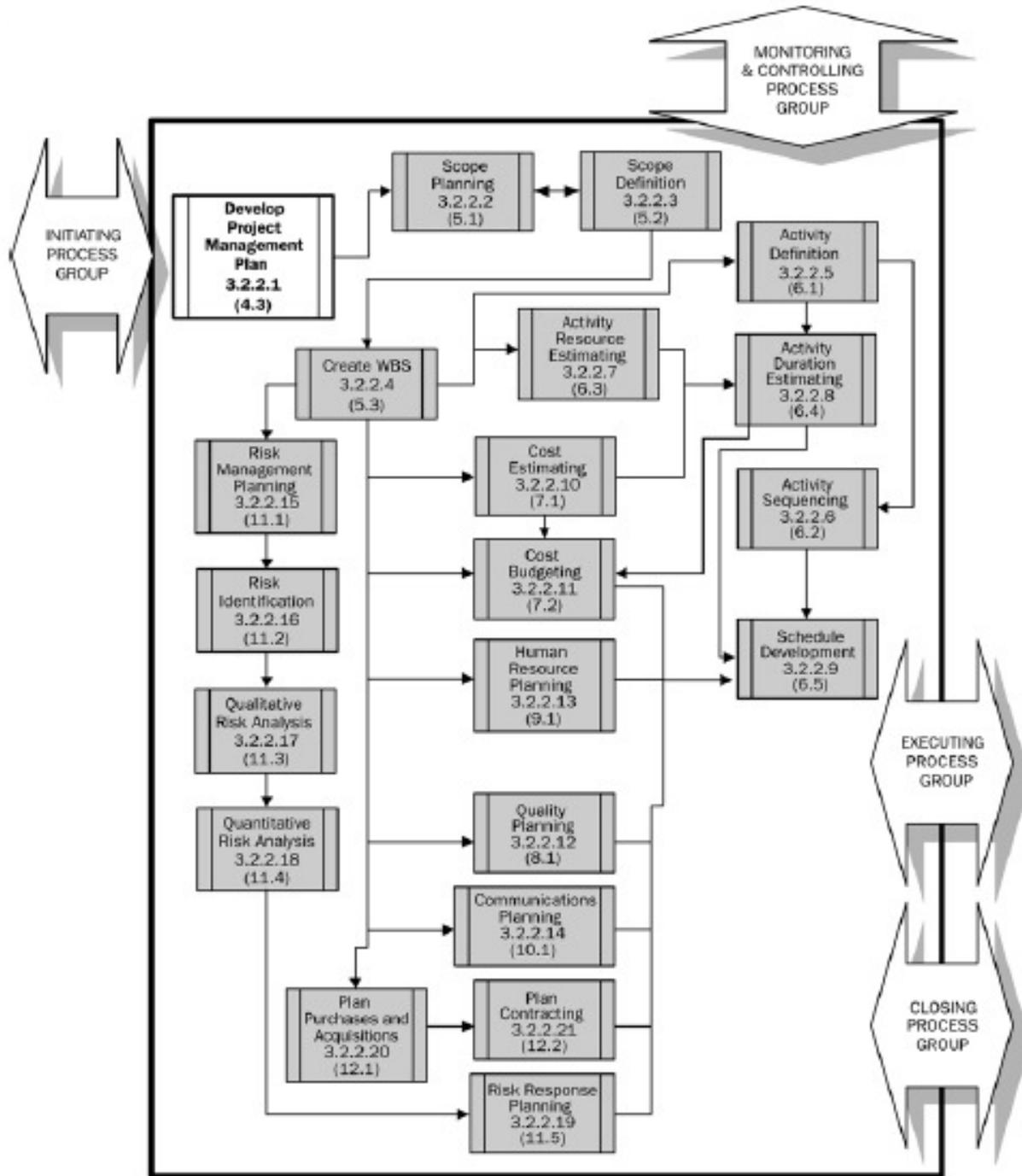
“...seeing projects as social processes, covering aspects such as the ever-changing flux of events, the individuals, groups and organisations involved, and other aspects such as social networks, culture and tribalism, and language and metaphor.”

In this study each of the concepts as indicated by the research Network will be studied in a real project environment to determine the extent of social interaction in the project as well as the impact of this interaction on the outcome of the project. The study will be limited to the project managers of Bombardier Transportation working on the Gautrain Rapid Rail Project.

Annexure 2 – PMBOK Planning process

Figure 3-5. Relationships Among the Planning Processes





Note: Not all process interactions and data flow among the processes are shown.

Figure 3-7. Planning Process Group

Annexure 3 – PMBOK process view

	Process				
Knowledge Areas	Initiation	Planning	Executing	Controlling	Closing
Integration Management	x	x	x	x	x
Scope Management		x		x	
Time Management		x		x	
Cost Management		x		x	
Quality Management		x	x	x	
Human Resource Management		x	x		
Communications Management	x	x	x	x	
Risk Management		x		x	
Procurement Management		x	x	x	x
Social Process					