The Development of Knowledge Management and Innovation Management in a Management Consulting Organisation in the UK

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Dedication

In appreciation and gratitude for the pleasures of the Almighty, and in memory of my father.

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This thesis is a fulfilment of a dream, a father's promise, and an important milestone in a lifelong pursuit of knowledge. My parents made me believe I could do many things in life, including becoming a doctor; what I could not achieve in medicine I have now achieved in philosophy. I remain eternally grateful to them, for always instilling character and confidence in me. I am hopeful that I can do the same for my children Fatima, Muhammad and Abdullah, who, along with my wife Zainab, have patiently supported me and prayed for my success. They watched and listened to the intrigues of my philosophical journey, especially my wife, who has been of incredible support and sacrificed much throughout this journey.

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Abstract

This study sets out to explain knowledge management (KM) and innovation management (IM) developments within the context of knowledge-intensive business services (KIBS). The existing literature on KM development identifies theories on scope, key antecedents, styles and readiness, while theories on innovation management development are centred on contextual and evolutionary dimensions. None consider the development of both knowledge management and innovation management together, especially in the context of KIBS.

The research was conducted using an in-depth investigation of a UK-based management consulting organisation, spanning three iterative phases to achieve theory saturation. The data generated was analysed with data analysis software (Nvivo) in order to facilitate grounded analysis and theory development. The role of the researcher in the case organisation was that of an observing facilitator and there was sensitive interaction with existing theories/literature throughout the process, although theory development was grounded in the research data.

The three key findings of this research indicate that organisational responsiveness to the key environmental factors of competitive environment, client expectation and changing industry dynamics shapes the way knowledge and innovation management develop in the organisation. Second, that in KIBS business performance is essentially determined by client perception of value, an impression largely developed during service delivery. The research found a significant level of co-creation activity occurring out of the organisation's relational engagement. The organisation's knowledge and innovation management activities reflect this relational dimension of development, a process that has a significant influence on the development of knowledge and innovation management. Third, that there is a conflicted understanding of innovation performance in the organisation, varying from the consideration of it being an outcome of an innovative product or delivery, to it being the level of innovation in the delivery process rather than just its outcome. These conflicting understandings elicit certain responsiveness in the organisation that affects the development of knowledge and innovation management.

An original model grounded in data has been developed from the research, which seeks to suggest that these three factors of environmental responsiveness, client relational engagement, and conflicted understanding around innovation performance, combined together shape the development of knowledge and innovation management in the research organisation. The limitations of the research are discussed, along with wider implications.

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1.0 Chapter One: Introducing the research study

1.1 Introduction

This chapter contains the doctoral journey of the researcher, background and the context of the research study, together with its objectives. It also defines and describes some key terms in the study and the final section outlines the structure of the overall thesis.

The thesis describes the research study, which sets out to explain knowledge management and innovation management development within the context of a management consulting organisation. Existing work on knowledge management development presents theories around scope, key antecedents, styles and readiness, while theories on innovation management development focus on the contextual and evolutionary dimensions of innovation management in organisations. Evidently, the area of knowledge management and innovation management development in general has received little research attention, including unified consideration of the two phenomena (knowledge management and innovation management) in relation to the knowledge-intensive sector of management consulting.

1.2 Doctoral Journey

1.2.1 Personal Experience

The researcher's doctoral journey started from his personal experience, which encompasses his professional work experience and how the changing dynamics of his organisation and the regulatory environment of his operation challenged him and his team to do things differently. The researcher's work experience immediately prior to embarking on the research was in the area of customer experience management and retention services of a US$5 billion company with over 30 million customers (a multi-national telecoms company operating in more than 20 countries). He was the head of the department responsible for looking after the overall customer engagement of the organisation and ensuring an acceptable service level. The responsibility included managing eight different units distributed

over six locations with staff strength of +3000 FTEs. One of the key challenges of managing such an operation was in capturing key learning from across different areas and levels of customer engagement, and sharing these across the entire service points.

This experience became the researcher's first exposure to the challenge of knowledge management in practice. But importantly, it was not just sharing or managing the knowledge generated that was the challenge, it was also in the meaningful or value-added application or utilisation of the knowledge for the enhancement of the overall customer experience. A few years before the commencement of the research, the researcher was faced with a major professional challenge, emanating from some regulatory changes in service level compliance. These changes challenged him and his team to review their approach in terms of service level management, and also to consider how to do this in a very efficient way due to internal pressure on budgetary management.

This required setting up several task forces to identify major customer service requirements, carry out root cause analysis of those needs, and the presentation of solutions on either how to eliminate the service queries or manage then effectively. This was both to enhance service level in compliance with the regulatory changes and also to bring about operational efficiency. It was during this process that a novel idea was generated and implemented, that both changed the organisation and the industry, this being the way a major customer service need is approached. The idea was the introduction of an over-the-air SIM swap (OTAS), a process that involves having a mobile phone SIM card replacement over the telephone without having to visit a service outlet. As a SIM card swap is the main reason for customers to visit service outlets, this solution reduced foot traffic into some of the major centres by about 45%, and operating cost by about 10%.

As a multi-national organisation there was a call to share that process with other operations in other countries. It was during this exercise of reviewing the process that led to the OTAS innovation that the researcher and his team realised the role of effective knowledge management in the whole process: how engagement of employees from across different levels, units and location effectively facilitated the

identification of the problem; evaluation of different options as solutions; and development of a unique and practical option that changed the whole industry.

1.2.2 Why this topic?

The researcher's personal experience in relation to knowledge management and innovation coming from several examples, especially the OTAS one, has been one of the key flash points in engaging in further research into understanding what has been done in that area and what gap, if any, may exist in that research domain (knowledge management and innovation). As a regular reader of the Harvard Business Review (HBR), the researcher came across three seminal works from a 2010 HBR Spotlight that further shaped both his understanding and interest in the research area, namely The Knowledge Creating Company (Nonaka and Takeuchi, 1995), What is your strategy for managing knowledge (Hansen et al., 1999), and the Innovation Value Chain (Hansen and Birkinshaw, 2007). These works guided the researcher into further research within the domain of knowledge management and innovation management, and also fuel a wider interest in the role of knowledge and knowledge workers in the new economy.

1.2.3 Why the management consulting sector?

The big question about the role of knowledge and knowledge workers in the new economy makes the management consulting sector an interesting one to study in knowledge management and innovation management. As one of the most knowledge-intensive sectors that relies heavily on knowledge workers, any study of knowledge management in the sector will certainly be challenging and hopefully insightful. It is also interesting to note that most of the research done on knowledge and innovation management was carried out with examples from the sector (Hansen et al., 1999; Powell et al., 2007; Oke, 2007; Anand et al., 2007). All this is coupled with the fact that the researcher's future career aspirations are linked to working or supporting the knowledge-intensive business sector (KIBS) and the management consulting organisation is a good example of KIBS.

1.2.4 Contextualising the journey

The researcher's doctoral journey was mixed with challenges and development; it has evolved both in its approach and philosophy from a more substantialist position to a more constructivist viewpoint. This is a journey that has transformed the researcher's worldview and perception of knowledge, even beyond the realm of this research work.

1.3 Context and origin of the study

The importance of knowledge, both at individual and organisational levels, cannot be overemphasised; it is its definition that has been a point of debate for centuries. Knowledge has been presented differently by different authors. It has been described as decontextualised and independent of its carriers (Hall et al., 1982); as a social product, developed in interaction (Alvesson, 2001; Clark, 1995); as a phenomenon that resides in people's minds (Boland and Tenkasi, 1995); and as a phenomenon embedded in the context of meaning (Argyris and Schön, 1999; Sparrow, 1998).

The focus of this research is on the development of the management of this phenomenon (knowledge) in an organisational setting. Knowledge management is considered as a deliberate process by organisations to coordinate the acquisition, assimilation, sharing, integration and application of both the tacit and explicit knowledge available to them through internal and external sources. This is in order to deliver to organisations some form of innovation in their products and organisational processes (Akram et al., 2011).

Knowledge management in organisations can be viewed through three distinct dimensions; these dimensions signify the organisational philosophy on both knowledge and its management. The first of these dimensions is knowledge management strategy, which provides the focal point within which the organisation intends to approach knowledge management. The two dominant knowledge management strategies are knowledge personalisation strategy and knowledge codification strategy, which focus on the relationship and structured systematisation of knowledge respectively (Hansen et al., 1999). A more recent strategic approach to managing organisational knowledge has been suggested, known as the

pluralistic knowledge management strategy (Powell and Ambrossini, 2012). A pluralistic approach represents the appropriate contextual adoption of both personalisation and codification components of knowledge management in organisations. The knowledge management pluralistic principle suggests that organisations can adopt the two strategies complementarily at the same time, or contextually, as the situation may demand. This is opposed to the recommendation of the extant theory of knowledge management strategy by its early founders, who believed that the adoption of the two strategies together could be problematic for organisations.

The second dimension of knowledge management in organisations is through the different knowledge management processes. These processes can be defined as the different sets of organisational activities adopted by the organisation in the operational management of its knowledge. These processes have been presented differently by different authors: as knowledge acquisition, knowledge assimilation, knowledge distribution, knowledge sharing, knowledge retrieval and knowledge re-use (Akram et al, 2011). They have also been presented as knowledge creation, knowledge sharing, knowledge application and knowledge elicitation (Sparrow, 2001) and as knowledge exploration and knowledge exploitation (Nonaka et al., 2014).

The final dimension of knowledge management in organisations is knowledge management development, which is the focus of this research project. Knowledge management development represents the overall governance of knowledge management in an organisation; it captures the experience of the organisation and how it has evolved in its knowledge management over time. It can be defined as the retrospective evaluation of the knowledge management approaches of an organisation, capturing both the experience and the factors that have helped shape the experience. Existing theories on knowledge management development highlight theoretical factors such as scope (Sparrow, 2005; Ehms and Langen, 2002); styles (Choi and Lee, 2003); and readiness (Kochikar, 2000; Pee et al., 2006; Lee and Kim, 2001). It is important for both academics and practitioners to understand the development of knowledge management, because by understanding its context, organisations will be better equipped or positioned to manage the factors that most influence its development.

Innovation management development, like knowledge management development, represents the contextual evolution of the organisational approach to and experience in managing innovation. In the process it also acknowledges the influence of both internal and external factors that might have contributed to the development. Innovation can be considered here as the

> activities and processes of creation and implementation of new knowledge in order to produce distinctive products, services and processes to meet the customers' needs and preferences in different ways as well as to make process, structure and technology more sophisticated that can bring prosperity among individuals, groups and into the entire society (Akram et al., 2011, p.3).

On the other hand, innovation management is the management of these activities and processes by the organisation. It has been identified as a complex area of management research due to its transient nature, particularly in the non-manufacturing sector. Bessant and Phillips (2013) go as far as asking the question as to whether innovation can really be managed, due to its randomness and complexity. It has often been studied through different lenses by researchers, i.e. sources of innovation, outcomes of innovation, impact of innovation and innovation management development. A brief explanation of each of these will be provided in this section.

Chesbrough (2006) reviews innovation management in organisations from its sources, finding that although most organisations focus on their internally controlled environment as a source of innovation, collaborating with other organisations, suppliers or customers can also be an important source of innovation, in a process he defines as 'open innovation'. Some authors have also argued for the role of technology and the market as alternative key sources of innovation for organisations (Niosi, 1991; Dodgson et al., 2006).

Innovation management has also been investigated from the perspective of its outcome, whether it is product, process or service innovation. This dimension has been the most dominant of the other dimensions in the study of innovation management in organisations. The early work of Utterback and Abernathy (1975) pioneered the way for research on product innovation, as a means and process of

creating a new product or enhancing an existing one. This was the focus of early innovation management studies. Process innovation is considered as the enhancement of organisational processes in order to deliver efficiency or enhance the processes of other organisations in a value delivery engagement; this area has particularly been studied in manufacturing and service sector innovation studies. Service innovation is also gradually receiving more research attention; it is the creation or significant enhancement of service concepts or solutions for clients (Miles, 2013).

A number of studies on innovation management have also focused on its impact, which is usually defined by terms such as 'radical' and 'incremental' (Oerlemans et al., 2013). Radical innovation means introducing significant change in the context of the product, process or service being introduced, while incremental innovation is an enhancement, but not one which is significant in the context of its impact.

Another dimension within which innovation management has been studied or investigated in organisations is innovation management development; this is the dimension that will be explored by this research study. A number of studies have been conducted to explain how organisations have evolved their innovation management development, and the key factors that have shaped this development. The current theories on innovation management development are centred around the dimensions of contextual development (Ortt and Duin, 2008) and evolutionary development (Niosi, 1991).

Although a number of studies have been conducted to explain knowledge management and innovation management development, these have considered them independently. The focus of these theories has been on evaluating knowledge and innovation management as two distinctively different phenomena. But several other studies have considered knowledge management and innovation together (Gloet and Danny, 2013; Taminiau, 2009). The majority of these studies focus on the role of knowledge management either in organisational innovation (Lu and Sexton, 2006) or in innovation or organisational performance (Alhakim and Hassan, 2013). But in terms of development, knowledge management and innovation management have been studied separately, despite widespread recognition of the

complementary state or features of knowledge and innovation in organisations (Nonaka et al., 2014).

This research will attempt to demonstrate how the consideration of knowledge management and innovation management development in a unified approach has provided the research with a great deal of insight and explanation, which might have been difficult to achieve if they had been studied independently. The case study organisation offers the research a very good example in making such an evaluation, as a key player in the management consulting sector in the UK with very active knowledge and innovation activities.

1.4 Research aim and questions

The purpose of the research is to investigate knowledge management and innovation management development in an organisation, using the experience of a management consulting firm in the UK. The management consulting sector is heavily reliant on knowledge, both as a resource needed for business delivery, and also as a product with which they service their clients. Knowledge has thus become a component of management in consulting organisations as a source of competitive advantage and as a means of differentiation. Management consulting organisations, like most organisations in both the service sector and the manufacturing sector, now compete amongst themselves over the best ways to manage organisational knowledge.

The management of innovation in management consulting organisations has also received attention in more recent times, because offerings from the sector are largely knowledge-based. Most of the services offered by consulting firms are similar in their objectives, which is why differentiation or innovation in any form can be key to organisational competitiveness. Innovation management, like knowledge management, has become an important part of management decisions in management consulting organisations.

The key objective of this research is to investigate the development of knowledge and innovation management in the management consulting sector, using an example from the UK consulting industry.

There are three key areas of knowledge management: knowledge management development, knowledge management strategies and knowledge management practices. Innovation management also comprises three key areas: innovation management development, innovation strategies and the process of innovation. The development component of knowledge and innovation management provides an explanation of the experience of organisations as they evolve through the process of managing knowledge and innovation. It provides an overall understanding of both the successes and failures of organisations, and how they have coped with the adoption and the management of both knowledge and innovation. It also provides insight into the key factors that help shape the development.

The research aims to investigate the research organisation and provide an explanation of its experience in knowledge management and innovation management development by addressing the following **key research questions**:

- How do knowledge and innovation management develop in a management consulting firm?
- How do employees contribute to the development of innovation in the research organisation?
- How do the different approaches to innovation management affect its development in the research organisation?
- What is the role of customers in the development of knowledge and innovation management?
- What is the impact of customers on the development of knowledge and innovation management in the research organisation?

By addressing the above key objectives, it is believed that the research will be able to provide an explanation of the experience of the research organisation in the development of knowledge and innovation management, through a process that will evaluate both the internal dynamics of the organisation and the external dimensions, and by investigating the role and impact of employees and customers in the overall organisational experience.

1.5 Introductory discussion of key concepts in the research

The focus of the research investigation is on the management consulting sector in the UK; the research organisation is an active member of the UK management consulting industry. It is therefore relevant that a brief conceptual introduction to management consulting organisations is provided at this stage of the thesis, in order to highlight the uniqueness and relevance of the sector in terms of knowledge and innovation management research.

The second key concept to be discussed in this section is the constructivist grounded theory, a methodological approach that is now widely adopted in management research. Constructivist grounded theory was adopted in the analysis and interpretation of the research data in this study. A full description of the methodological design and philosophy of the research will be provided in chapter three of the thesis, but an introductory discussion of constructivist grounded theory will be made in this section, explaining why it is relevant for the research.

1.5.1 Management consulting organisations

Management consulting organisations represent professional practice and firms that work with other organisations in order to help them enhance their organisational performance through the process of evaluating their business and operational practices. The management consulting association (MCA), an umbrella organisation of management consulting organisations in the UK, defines management consulting as "the practice of creating value for organisations, through improved performance, achieved by providing objective advice and implementing business solutions" (Restell and Kumar, 2008, p.5). According to Restell and Kumar, organisations continue to patronise the services of management consulting organisations because of a combination of several reasons:

- To provide expertise not available in-house (too specialist, too many people required, too new or leading edge, too expensive to hire as permanent employees.)
- To bring fresh, innovative and objective thinking.
- To carry out unpopular policies.
- To help management make decisions.

Management consulting organisations represent an extreme case in understanding the dynamics of knowledge management. They are resourced by knowledge workers and are highly reliant on their skills to explore and exploit the knowledge in their domain to create value for their clients (Lowendahl et al., 2001).

They are resourced by knowledge workers and are highly reliant on their skills to explore and exploit the knowledge in their domain to create value for their clients (Lowendahl et al., 2001).

Restell and Kumar also list the following characteristics in distinguishing these organisations (p. 913):

- They deliver value to their clients in a knowledge-intensive way through a professional workforce that is highly educated.
- Their services are delivered after a professional diagnosis is conducted by subject matter experts, and solutions customised to clients' needs.
- Their solutions involve a degree of professional judgement by their employees in the execution of their duties, and often partners may have potential legal responsibility for some of their services.
- Services and solutions delivery always involves a client's interaction, from engagement through to diagnosis and delivery.
- Their operation is constrained by professional standards and ethical conduct, including the protection of their clients' interests and confidentiality within the ambit of the law.

According to the MCA, the UK consulting industry is now worth over £8 billion, and had around 80,000 employees at the end of 2013. The sector was initially segmented around strategic consulting firms, operational consulting firms and change management consulting firms. That segmentation is no longer valid as the sector has transformed itself around clients' needs, as some of the requirements of their clients can span all three segments and organisations are more comfortable dealing with one consulting firm where possible (Restell and Kumar, 2008). The intensity of their requirements and application of knowledge makes the management consulting sector a very good case environment for research into knowledge and innovation management.

1.5.2 Constructivist grounded theory

Due to the absence of a unified theory of knowledge management and innovation management development, the research had to approach the study using a rigorous methodology that would ensure that the explanatory model to be generated from the research was grounded in the empirical data. The constructivist grounded theory (Charmaz, 2000) approach offered the research a rigorous iterative method of analysing the research data, which would ensure that the eventual model generated was grounded in data. This approach is a revision of the grounded theory methodology first introduced by Glaser and Strauss (1967), and later developed by Strauss and Corbin (1990).

This method will provide the research with the opportunity to become immersed in the raw data through the experience of the participants and to provide an analytical narrative that will capture the action, the context and the mood of the observed, in a reflexive reconstruction of the research experience rather than as a distant observer.

1.6 Structure of the thesis

The thesis is divided into nine chapters. The first chapter is the introductory section, which incorporates the doctoral journey of the researcher, the background and the context of the research study. Chapter one also highlights the purpose of the study, along with the key research questions to be answered. The chapter concludes with an introductory discussion of key concepts in the research. These concepts include the management consulting organisations and constructivist grounded theory.

The second, third, and fourth chapters deal with the review of the literature. This starts with the broader issues around knowledge management, then innovation management and later the link between the two (knowledge management and innovation management). Chapter two reviews the different approaches to knowledge in both definition and classification, and also reviews work on knowledge management, its strategies of codification and personalisation and also its processes. Existing work on knowledge management development is also reviewed in this chapter. Chapter three focuses on reviewing literature around innovation, its definition, classification and types. Key perspectives on innovation, its processes and

its different dimensions are also reviewed in this chapter, along with service innovation. The literature review on innovation also reviews the scope and management of innovation in the service sector, as well as open innovation and innovation management development. Chapter four focuses on reviewing the literature on the relationship between knowledge management and innovation management, the knowledge intensive business sector (KIBS), and finally a conceptual framework of knowledge management and innovation management in a management consulting organisation was developed and proposed.

The fifth chapter focuses on the methodology used in investigating the research study. This part incorporates the research philosophy, research design and methods, and highlights the elements of qualitative research and the constructivist grounded theory. This chapter also reviews the ethical considerations in the research organisation and the iterative process of data collection, interpretation and theory generation, guided by the principles of constructivist grounded theory.

The sixth chapter is an overview of the research organisation, and the research engagement process, including the interview strategy and approach.

The seventh chapter covers the data analysis and interpretation. An in-depth analysis of the open and axial codes generated from the research investigation is presented, along with an explanation of the theoretical coding, leading to generation of the theoretical proposition of the research.

The eighth chapter is the discussion chapter and highlights the implications and the impact of the research model in the research organisation; it begins with a presentation of the research summary and of the research theoretical model, situating the model within the existing literature on knowledge management and innovation management development.

The ninth chapter of the thesis presents the concluding part of the research; It highlights how the specific research questions were addressed, It also covers the research contribution to knowledge, methodology and practice; the limitations of the research study and makes some recommendations for future research in the area of knowledge and innovation management.

2.0 Literature Review: Knowledge Management

2.1 Introduction

Early literature on management practices mainly emphasises information management and the tasks related with it as a routine and ordinary exercise (Handy, 1976). But knowledge management has now become an important academic discipline in business management and is widely associated with organisational competitive advantage (Sparrow, 2011). To reinforce this, organisations are now beginning to formalise the process of accounting for their intellectual capital in order to show the importance of knowledge for them. The key objective of organisations is to create value and by doing so to sustain competitive advantage; effective management of knowledge is now a critical means of achieving this (Nordstrom and Ridderstrale, 2000). This includes clear appreciation and effective utilisation of organisational assets and competencies in order to gain this competitive edge. A major challenge still exists over the specific meanings and relationships between data, information and knowledge (Davenport et al., 1998). It is therefore important to give clear explanations of these terms at the onset of studying knowledge management. An attempt will be made to critically analyse knowledge management, and to define some of the terminologies associated with knowledge, its classification and practices.

2.2 Knowledge

Knowledge management literature has been unable to provide a universally accepted definition of the term *knowledge* (Hlupic, Pouloudi and Rzevski, 2002). Philosophers as far back as the ancient Greeks have attempted to define it, and it has been an area of great epistemological debate (Alavi and Leidner, 2001). The aim of this section of the research is to provide an understanding of the term and the various perspectives of its meaning in relation to knowledge management.

In his early work, Locke (1690) argues that human beings' capacity for comprehension has limits, but that it is sufficient for the understanding of those matters that are necessary for their existence; that "the candle that is set up in us, shines bright enough for all our purpose …and does not demand certainty where

probability only is to be had. If we will disbelieve everything, because we cannot certainly know all things, we shall do much what as wisely as he, who would not use his legs , but sit still and perish, because he had no wings to fly" (Locke,1690 p. 53). He asserts that knowledge does not come from maxims, but that the true method of advancing knowledge is by considering our abstract ideas, contemplating and considering their relations and correspondences and improving these by our experience.

Polanyi (1962, p. 252) believes that as humans we know more than we can tell and claims that "I believe that my words must mean more than I shall ever know, if they were to mean anything at all". He considers knowing as an active comprehension of the things known and an action that requires skill: "It is not words that have meaning, but the speaker or listener who means something by them" (p. 252). He claims that the expression of articulate intelligence is rooted in the inarticulate, unspoken and yet decisive being.

Johannessen (2008), on the other hand, views knowledge from the point of view of context, arguing that we tend to know considerably more than we can possibly articulate verbally. Moreover, individual experience makes people look at the same piece of information differently; as such, knowledge cannot be considered without its full context. He presents the nature of knowledge along the lines of the ancient tradition championed by Aristotle, in which intellectual virtues play a central role in the analysis of man as a moral being. According to Johannessen, Aristotle analysed knowledge from three aspects: *Episteme* (scientific knowledge), *Phronesis* (practical wisdom) and *Techne* (craftmanship). He further argues that knowledge can be presented as propositional, that which can be expressed by some form of linguistic means, and tacit, which cannot be adequately articulated by linguistically. Johannessen asserts that the position of logical positivists in terms of the relationship between knowledge and language is not tenable, in that they argued that linguistic articulation is an unconditional characteristic and requirement of knowledge.

2.3 Approaches to knowledge

Due to the ambiguity around the definition of knowledge, different approaches have been adopted to explain it, assess the strategies to manage it and to

understand its implications. Three major and divergent perspectives will be highlighted, which are relevant to this research and which have been developed by knowledge management researchers.

Data, information and knowledge perspective

Studies in the IT area tend to define knowledge in relation to information and data in a hierarchical order, with data leading to information and information leading to knowledge (Nissen, 2000). On the other hand, knowledge is also considered as information that has been processed or as authenticated information (Vance, 1998). Alavi and Leidner (2001) argue that the distinction between knowledge and information is not really evident in their structure, content or utilisation, but rather that knowledge is personalised information which may be accurate, unique, or new.

The data-information-knowledge hierarchy is viewed inversely by Tuomi (1999), who argues that knowledge must first exist before it can be verbalised or structured and passed on as information. With regards to innovation, the data-information-knowledge hierarchy runs both ways, because one might need to have knowledge about what to innovate, have information about it and then pass that on as data. That is why it is important in innovation processes to have a shared understanding of the data and information for a process to be efficient (Alavi and Leidner, 2001).

Davenport and Prusak (1998) introduce another level to the data-information-knowledge hierarchy, which includes wisdom, insight and action, illustrated in a pyramidal way, with wisdom at the peak and data at the bottom. However, Fireston (2003) argues against such an illustration, on the basis that one man's data may be another man's wisdom, because of the varying contexts, interpretations and usefulness.

Cognitive theories argue that knowledge is created and acquired through different mental processes which go beyond simple input (data and information) provided by the senses (Misch and Tobin, 2006). Kagono (2006) asserts that human cognition begins with data and information and terminates with decisions or actions processed via internal thought processes. From the cognitive views highlighted above, one can deduce that knowledge can be described as data and information processed through an internal mental process, which can be converted to information when articulated propositionally or imagistically.

Personal and social perspective of knowledge

Knowledge is viewed from this perspective to exist at the level of the individual, a position which is epitomised by the work of Polanyi (1958), through his theory of tacit knowing. Polanyi describes knowledge as highly personalised, context-specific, hard to formalise and communicate, and as such difficult to transfer to another person.

The social perspective presents knowledge as a product of the social process, which is created and inherent in the interactions between different individuals working together within a given context. Communities of learning and professional networks are both examples of this process (Brown and Duguid, 2000). Brown and Duguid consider knowledge as a community asset, which individuals imbibe as they participate in the community, assimilating the ideas, prejudices, practices and perspectives of it.

Organisational perspective of knowledge

This perspective presents knowledge within the context of the other perspectives (data, information and knowledge; personal; and social), in considering how it is created in organisations via a unique pattern of interplay between people, technology and the processes shaped by the organisational culture and strategy (Berger and Luckman, 1996).

It focusses on the management of knowledge as stocks of data and the process of making it accessible, including the simplification of its retrieval process; the development of the understanding of the organisational core competences and values; and the leveraging of intellectual capital in order to benefit the organisation (Alavis and Leidner, 2001).

2.4 Knowledge classification

From the above debates it is clear that one of the major points of argument is on the elicitation or transferability of knowledge, a dimension that can be better clarified after reviewing the basic classification of knowledge. This classification is important because the distinction between the different types of knowledge greatly influence the theoretical development of knowledge management research (Alavi and Leidner, 2001). Various positions have been advocated by different authors in the

attempt to classify knowledge, the most common of which is classification along the line of tacitness and explicitness, as developed by Nonaka and Takeuchi (1995). This research will review other key classifications presented in different knowledge management studies.

Tacit and explicit

The tacit and explicit distinction was founded on the basis of Polanyi's work on tacit knowing (1958), further expounded by Nonaka and Takeuchi (1995). It has been elaborated by several other knowledge management researchers, such as Davenport and Prusak (1998), Sparrow (1998) and Nonaka et al. (2011). Many of the developing distinctions have been drawn from this early work; as such, the research will make an in-depth review of this classification.

Polanyi (1962) describes tacit knowledge as knowledge that we have but sometimes do not even know we have it, or cannot even express it to ourselves; for example, we are able to do something without thinking about doing it, such as riding a bicycle. He argues that tacit knowledge can be considered as knowledge that is unspoken, subjective, highly personalised and consists of understanding or know-how with implicit mental models. Polanyi describes explicit knowledge as a body of knowledge that is codifiable and can be passed on to others as information.

Polanyi's work had been developed by several researchers, such as Grimen (1991), who describe tacit knowledge as a form of individual knowledge that cannot be adequately articulated verbally, but can be presented by nonverbal articulation.

Nonaka and Takeuchi (1995) present tacit knowledge as a body of knowledge that cannot be fully articulated and is difficult to codify, and explicit knowledge as knowledge that can be documented, verbalised, and is easily communicated and shared. They claim that tacit knowledge can be technical and cognitive. Technical tacit knowledge is expertise that consists of know-how or informal skills that come from experience, while cognitive tacit knowledge is mental modes stirred by the emotions, beliefs, values and perception ingrained in people and often taken for granted.

Grimen (1991) argues that we sometimes *consciously under-articulate* our knowledge, not because we cannot articulate it, but because we do not want to. He gives an example of a relationship and political compromises. Largely because sometimes the tacit knowledge we know could be upsetting or counterproductive in the situation at hand, we may choose to under-articulate it.

His second interpretation was influenced by Gestalt psychology, so he called it the *Gestalt thesis of tacit knowledge*. He argues that tacit knowledge in activities such as swimming, driving or playing sports can be articulated by linguistic means. But such articulation can interfere with the fluent execution of the activities; it can, however, be articulated by a third party or the person at the end of the activity.

The third interpretation argues that no one can simultaneously articulate one's entire knowledge system, but only a certain part at any given moment. No element of an individual's knowledge is un-articulable, but people lack the unifying perspective to explicitly articulate at the same time all the knowledge that they possess. Grimen refers to this as the thesis of epistemic regionalism, in that we are all regionalist in the context of possessing a perspicuous overview of the knowledge that we have and making it explicit.

The strong thesis of tacit knowledge is Grimen's final interpretation of tacit knowledge, in which he argues that there exist in the human knowledge system certain kinds of knowledge that are in principle un-articulable. This, however, does not support his second and third interpretations of tacit knowledge. He stresses here that tacit knowledge cannot be logically articulated adequately by verbal means, due to a gap in logic that exists between knowledge and language.

Developing the role of elicitation in describing knowledge, Johannessen (2008) argues that knowledge, particularly knowledge proving something new or a further development of an existing idea, cannot be tacit. It would be very ambiguous and confusing to expect people to believe that something existed when it was not adequately articulated in a verbally precise manner. To make a legitimate claim that knowledge exists, it must at least fulfil the following two conditions: it must be capable of formulation in some language or other and must be supported by experience or be proven by formal means. He strongly argues that to claim the existence of any kind of knowledge or context to exist in any dimension must be

done in a logical form and empirically proven for it to have any intellectual value. The empirical nature of knowledge is established in terms of knowing and knowledge, and whatever cannot be explicitly produced within an intellectually responsible context cannot be accepted as knowledge.

Considering explicit knowledge further, Blair (2002) describes it as codified technical data or information, usually presented in documents, databases, books, mathematical formulas and patents. Explicit knowledge can also be expressed, captured and shared in a systematic way, while the tacit is considered as implicit knowledge that is undocumented, highly personal and generated in people's minds. It is difficult to formalise or codify because it is subjective and bounded by emotions and hunches (Choo, 2000; Jasmuddin et al., 2005).

According to Choo (2000), explicit knowledge can be object- or rule-based. The object-based is knowledge codified into symbols (numbers, words, formulas), embodied in physical entities (models, equipment and substance) and usually presented as software codes, patents, computer databases, photographs and products. On the other hand, the rule-based is explicit knowledge that is typically represented as procedures and rules, such as intellectual assets, blueprints, project plans and product specifications. Some intellectual assets are converted into intellectual property by giving them legal protection, such as patents, trademarks and copyright.

A further distinctive way of assessing these two broad classifications of tacit and explicit knowledge is along the lines of knowledge considered as a category or as a continuum.

Polanyi (1962), Hansel et al., (1999) and Dixon (2000) argue that knowledge is classified exclusively along the lines of the tacit and explicit, both having distinctive features that significantly affect the way they are shared, while other researchers (Spender, 1996; Jasmuddin, et al., 2005; Nonaka et al., 2011) argue that tacit and explicit knowledge are mutually dependent and exist as a continuum within the same spectrum. That is, the tacit and explicit are not two independent types of knowledge, but rather, are complementary and influence each other by continuous interaction and interplay.

Knowing as knowledge

Knowledge has also been categorised along the lines of the hierarchy of non-rational aspects of knowing by Kogut and Zander (1992), Dixon (2000) and Partriotta (2004). They claim that knowing consists of know-how, know-why, know-about, know-with, know-when and care-why.

Dixon (2000) and Partriotta (2004) refer to know-how as common knowledge, knowledge of how things are done and how to follow procedures such as driving a car, while the knowledge of why things happen is referred to as know-why (Kogut and Zander, 1992), which requires some perspectives and understanding of the interplay across different knowledge areas, such as knowing why a car has broken down. Know-about is factual knowledge that requires a high level of skills sets and mastery of knowledge areas such as car tyre pressure. Know-with seeks to establish the relationship between things; it is relational knowledge. Know-when is the knowledge that seeks to establish when things are to be done, such as when to fuel the car or increase the tyre pressure. Care-why is socially contextualised and the highest level of knowledge; it seeks to evaluate and analyse notions such as cost benefit, impact assessment and contingency planning.

Declarative, analytical and procedural knowledge

Declarative knowledge is explicit knowledge that is a description of something (for example, facts or methods) (Zack, 1999). Kogut and Zander (1992) argue that it involves knowledge that can be articulated and shared without losing its value, once the rules for decoding it have been applied properly. It is consciously assessable, such as the marketing or sales reports of a firm.

Analytical knowledge, on the other hand, refers to knowledge that is deeply rooted in the mind of the individuals and is very difficult to express; it is the reason why an individual will reach a conclusion or take certain action. It is sometimes referred to as strategic knowledge at an organisational level (Kogut and Zander, 1992).

Procedural knowledge manifests itself in the act of doing something or knowing how it is done and sometimes involves a step by step guide or the procedure of doing something, such as tailoring or playing a guitar (Kogut and Zander, 1992).

Human, mechanised, documented and automated knowledge

This characterisation was championed by Jacques et al. (1996). According to them, human knowledge is present in individual members of society or an organisation, while mechanised knowledge is knowledge that is present in machines and is necessary for specific tasks.

They consider documented knowledge to be that present in books, charts, design specifications or archives, with automated knowledge present in an electronic form, which can be accessed electronically by individuals or by computer programs.

Semantic understanding, episodic memories, skills, tacit feel and unconscious interpretation

This categorisation is advocated by Sparrow (1998), who argues that individual decisions or actions are not taken based on simple facts or opinions, but within the context of different types of thinking processes and mental materials. He lists five kinds of mental materials, Semantic Understanding, Episodic Memories, Skills, Tacit Feel and Unconscious Interpretation, that organisations need to appreciate and embrace, and which are important in order to understand certain decisions or actions taken by individual organisational members.

Semantic understanding, according to Sparrow (1998), is largely developed by formal education and heavily influenced by facts. It is our own understanding or perception of things based on the facts or the properties associated with them, while episodic memories are based more on our personal memories of things, based on what we remember of them from our past exposure. Skills are presented as another kind of mental material that influences people's decisions or actions as something developed over time, due to either prolonged exposure or experience in that activity.

Tacit feel, as in the case of the earlier categorisation of tacit and explicit knowledge, is presented by Sparrow (1998) as inarticulate, a product of past experience and hard to express. He argues that tacit feel is not acquired through conscious stages like skills, but rather acquired latently and is readily accessible verbally. He describes unconscious interpretation as a kind of mental material that occurs at a non-

conscious level as we try to process and interpret information about ourselves and our perceptions.

In conclusion, the attempt here was not to present a dichotomous or static state of knowledge in the different classifications, but rather to offer an insight into the nature of knowledge and how it has been presented in different academic studies. This is important to the research, as it attempts to explain how organisations manage knowledge within their domain.

2.5 Knowledge management

Although knowledge management is gradually becoming an important field in management, researchers are still exploring issues relating to its definition. Darroch and McNaughton (2002) observe that until an acceptable definition is presented, the full effect of knowledge management on business performance and processes such as innovation will be difficult to determine. This research will attempt to narrow down towards a consensus definition in order to examine its development and role in the dynamics of innovation.

Darroch and McNaughton (2002) argue that knowledge management is a management function that focuses on creating and locating knowledge, managing its flow and ensuring it is effectively and efficiently used and applied for the long term benefit of the organisation. Their argument favours knowledge management as an executive function, initiated from the top tier of the organisation.

Although knowledge management is a fairly new management field, most of the solutions and ideas currently presented are old ones with a new label, according to Birkinshaw, (2001), who also argues that knowledge management often fails in organisations due to four major reasons:

1. Firms do not sufficiently recognise that they are already doing it.
2. Technology is often regarded as a substitute for social interaction.
3. Knowledge management typically focuses too much on recycling existing knowledge, rather than generating new knowledge.
4. Most knowledge management techniques look like traditional techniques.

Parlby and Taylor (2000) view knowledge management as a process or system intended to support the generation of new ideas, which involves capturing the ideas, insights and experiences of the individual members of an organisation and making these readily available when needed. When managed effectively, they argue, knowledge management should provide organisational-wide access to know-how and expertise explicitly or tacitly, and also allows for sharing, collaboration and continuous improvement.

Beckman (1991) views knowledge management as the focusing on processes and systems that will aid organisations in storing and sharing the collection of individual knowledge, experience and expertise, and as the encouragement of the utilisation of such important information for the benefit of the organisation. This, Beckmann believes, will aid in the creation of new capabilities that will enhance competitiveness, aid innovation and guarantee customer value creation.

In the view of this research, knowledge management can be presented as a structured approach to managing knowledge creation, together with its sharing and manipulation, in order to enhance organisational objectives.

2.6 Knowledge management strategy

Knowledge management strategy relates to the organisational structure and processes adopted to manage the creation, sharing and application of knowledge in organisations. Researchers sometimes view knowledge management strategy in relation to business strategy (Zack, 2002), organisational performance (Hansen et al., 1999) and innovation (Alhakim and Shahizan, 2013).

Organisational knowledge management strategy represents both the intention and the approach of the organisation with respect to its knowledge resources and the alignment of those resources to its operational situation in the fulfilment of its business objectives (Davenport et al., 1998). All the perspectives expressed above on the different approaches to knowledge management strategy allude to the organisational need to have a formal strategy in managing knowledge activities, although Garavelli et al. (2004) argue that most organisations often approach knowledge management strategy in an unconscious or informal way. There are a number of knowledge management strategies in management practice today,

such as those of Earl (2001), Sveiby (2004), Choi and Lee (2003) and Davenport and Völpel (2001). This research will review the seminal categorisation presented by Hansen et al. (1999), which was the most cited knowledge management strategy categorisation in the field of knowledge management in the ISI Web of Science (citation count October, 2013). Their categorisation of knowledge management strategies was made on the basis of tacit and explicit knowledge, and the role of technology in supporting this distinction.

Hansen et al. (1999) propose an important classification of knowledge management strategy along two distinct areas of knowledge: personalisation strategy and knowledge codification strategy. They describe organisations which focus on the use of technology and computers to carefully codify their knowledge, so that it can be made easily available to the wider organisation, as pursuing a knowledge management codification strategy. On the other hand, organisations that pursue a knowledge approach that has more emphasis on dialogues and interaction between people are said to focus on a knowledge management personalisation strategy.

Although it is the most cited classification, Hansen et al.'s (1999) work has been criticised due to its polarisation principle. It has been argued that organisations cannot attempt the two strategies at the same time successfully. Powell and Ambrossini (2012), in their argument for a pluralistic strategy in knowledge management, believe that organisations can adopt both knowledge management strategies and some organisations have done so successfully by adopting a complementary approach to the personalisation and codification strategies. However, Choi et al. (2008) have argued against the principle of the complementarity of these two strategies; their empirical study found a lack of evidence to support their adoption and organisational performance. This will continue to generate more debates as knowledge management becomes a key research area in management studies.

Knowledge management strategy is important to this research because it will enable an understanding of how the research organisation coordinates or facilitates its knowledge management activities. The research focus is on the management consulting sector, and it is interesting to note that both Hansen et al. (1999) and

Powell and Ambrossini (2012) have conducted enquiries into this sector. Knowledge management is important to all organisations, particularly management consulting ones, whose only resource and means of competitive advantage is knowledge.

2.6.1 Knowledge personalisation strategy

Knowledge management personalisation strategy is centred around people, with emphasis placed on person-to-person interaction. The use of technology is limited to communication and the facilitation of interaction, rather than for the storage and transfer of use of knowledge. Through interaction, knowledge workers develop insights and obtain the context to issues and solutions. In this approach people use databases to locate experts in different areas rather than as repository for knowledge, which equally helps in building networks (Hansen et al., 1999).

Individual interaction is critical to personalisation strategy; therefore, it is important that organisations understand the perspectives within which individual members make their decisions or take actions. Sparrow (1998) highlights three major types of thinking processes, autistic thinking, reasoning and mood, that organisations need to understand in order to enhance the level of personalisation among their individual members.

Autistic thinking was presented by Sparrow as a non-tested and less rigorous form of information processing, which influences the way individual members of the organisation intuitively perceive other people or situations, while reasoning is described as a thinking process that tends to go beyond the information given to internalise thinking in order to interrelate concepts and judge their appropriateness. It is often seen as synonymous with thinking itself.

Sparrow argues that mood is a thinking process in a "pervasive" state, which influences human interpretation of things, and how information is accessed and processed. This thinking process can affect knowledge creation in organisations, because if individuals are in a negative mood they are likely to respond negatively to any interaction, which will inhibit their capacity to participate or co-create in the process. It can also generate a negative environment, which may mean others will not participate optimally. Schulz and Jobe (2001, p. 144) also believe that a knowledge personalisation strategy must adapt to the tacit characteristics of

knowledge, that "Keeping knowledge tacit also means keeping it in a state of fluid gestation. Tacit knowledge (unlike codified knowledge, which tends to be exterior and "objective") depends on the sense making of participants".

Nonaka and Takeuchi (1995) present a model of social processes (SECI) in which personalisation strategy can be adopted to both create new knowledge in the organisation and convert existing knowledge from either tacit to explicit or vice versa. Through the socialisation process, organisations can facilitate the conversion of tacit knowledge into the explicit, a process that is defined by physical proximity and individual interaction. Nonaka at al. (2000) later extended the SECI model to include *Ba*, with interaction as the key concept in the new model. *Ba* represents the shared context within which knowledge can be created, shared and utilised.

Nonaka at al. (2000, p.15) advocate a personalised approach to knowledge strategy because they believe that

> Knowledge is created through the interactions amongst individuals or between individuals and their environments, rather than by an individual operating alone. Ba is the context shared by those who interact with each other, and through such interactions, those who participate in Ba and the context itself evolve through self-transcendence to create knowledge.

Organisations approach knowledge management strategies from different perspectives; the size of the organisation, for example, plays an important role (Sparrow, 2011). The needs of a small local firm may not be the same as those of a large multinational organisation. Cost and the competitive environment also play a role; as Kogut and Zander (1995) observe, an organisation might be disincentivised from codification due to the fear of involuntary transfer of strategic knowledge to competitors.

2.6.2 Knowledge codification strategy

Knowledge codification strategy has been identified as an important way for most organisations to effectively manage their knowledge flow (Schulz and Jobe, 2001). Organisations can be regarded as codification machines, whose competitive advantage is better enhanced through their ability to codify their tacit knowledge.

Schulz and Jobe also argue that codification offers organisations the opportunity to better facilitate knowledge storage, transfer and utilisation within the organisation and between subsidiaries in larger organisations.

At the centre of the knowledge codification strategy is the perspective that knowledge is something that can be extracted. Hansen et al. (1999, p. 2) argue that "Knowledge is codified using a "people-to-documents" approach: it is extracted from the person who developed it, made independent of that person, and reused for various purposes". There are also those who believe that the social context within which knowledge is created could be systematised, such as Fergus et al. (2003, p.161), who explain that

> Tacit knowledge is inherently communicated via face-to-face interactions; therefore we need to integrate these social activities within a technological environment. Merging the social with the technical allows us to develop knowledge extraction algorithms that attempt to gain a conceptual understanding of these interactions in order to extract tacit knowledge and codify it in a knowledge management system.

The two main issues explained above regarding the nature of knowledge and the context of its meaning are central to how different organisations adopt knowledge codification strategy and to whether they believe that knowledge within their context can be made explicit and the medium of engagement can be technically enhanced. Schulz and Jobe (2001) believe that companies that adopt varied forms of knowledge codification could enhance their competitive positioning in various ways. Some of these codification approaches are organisational databases, local intranet services, prototyping technologies and enterprise management reporting systems, which provide efficient and effective ways of integrating and providing access to organisational knowledge.

For larger corporate organisations it is argued that codification would not only facilitate more reliable and faster access to knowledge repositories to everyone in the organisation, but it could also potentially be a form of disaster recovery. There are several benefits attributed to the knowledge management codification strategy, the majority of which are centred on the re-use of knowledge. It has also

been argued that it can help organisations to respond better to competitive pressure and protect organisational knowledge from attrition (Blackler, 1995).

2.7 Drivers of knowledge management strategy

Organisations adopt either of the strategies listed above or a combination of both, depending on the nature of their business, their clients, business strategy and sometimes the composition or skill set requirements of their workforce (Scarborough, 2003). Sparrow (2011) argues that to a great extent the size of an organisation affects the flow of knowledge in that organisation; as such, many smaller firms manage knowledge via personalisation rather than codification. Knowledge management strategy adoption is tailored towards the sustainability of the organisation, its competitiveness and the creation of its core competence.

In the research conducted by Hansen et al. (1999), it was concluded that companies who choose to adopt codification strategy place much emphasis on the 'economics of re-use', a process in which if codifiable knowledge does not change substantially over time it can be used several times by different employees and at very low cost to the organisation, thus reducing the cost of communication, travel and time. An example of a call-in medical centre was cited in the study, where practitioners used the organisation's clinical decision architecture (a repository of over 500 illnesses and their symptoms) to recommend the ideal response to a customer's call for either a visit to the Emergency Room or home remedy. This saved patients' time and resources in making unnecessary hospital visits. They were also able to charge low fees and help increase their customer base.

Another rationale for the adoption of codification strategy is an organisation's talent management policy, particularly when it comes to recruitment. Some organisations recruit trainees who do not necessarily have the experience to synthesise new ideas but are trained and capable of adopting existing knowledge based on project implementation, and who are trained in scenario planning and the use of knowledge repositories in order to execute projects and improve business performance. These are companies that sign on many projects and recruit aggressively in order to maximise return on investment in IT infrastructure and codification platforms (Hansen et al., 1999).

Organisations that adopt personalisation as a knowledge management strategy largely do so based on the logic of 'expert economics', whose motivation is to enable person-to-person interaction in which tacit knowledge can be transferred. As a business they require an in-depth understanding of their clients' business in order to offer solutions which are usually highly personalised and sometimes co-created with the client. The recruitment philosophies of this type of organisation are also different; new employees are hired to be inventors who can apply analytical skills to deliver customised and sometimes unique solutions to a variety of businesses. The emphasis is more on relationships, on people who can do well in person-to-person knowledge creation and sharing opportunities and not only in the use and manipulation of codified knowledge (Hansen et al., 1999).

Immediacy of use and economies of re-use are some of the advantages put forward for codification, while on the other hand personalisation offers more dynamism and flexibility for organisations to react to the ever-changing business landscape in both depth and range. But the two strategies are not mutually exclusive; they can be adopted to complement each other, and not necessarily in the 80/20 ratio as certain authors recommend. For a management consulting organisation, a dominant personalisation strategy might give an organisation a more sustainable competitive advantage, but elements of codification might be equally important to bring about efficiency and standardisation. However, much is dependent on the strategic intent of the firm, the nature of its market, the regulatory environment and operational landscape.

A number of studies (for example, Powell and Ambrosini, 2012) suggest that organisations do not adopt a single dominant knowledge management strategy as advocated by Hansen et al. (1999). Powell and Ambrosini (2012), in their research investigation, studied the adoption of different knowledge management strategies in management consultancy organisations. They argue that organisations adopt more than one knowledge management strategy, with evidence of overlapping relationships between knowledge personalisation and knowledge codification strategies.

They also argue that some of the organisations they researched do not only practise the two knowledge management strategies of personalisation and codification, but

also rely on informal social networks. According to Powell and Ambrosini, the informal social network affords organisations the opportunity to access and manage knowledge that is both within and outside them. This approach is referred to as the pluralistic approach to knowledge management, with the informal social network in their model more aligned to Hansen et al.'s theory of knowledge personalisation, due to its consideration of the interpersonal approach to knowledge management.

2.8 Knowledge management processes

Knowledge management processes are sets of activities or approaches used in organising or managing knowledge. It is argued that they can occur naturally without the presence of any formal knowledge management strategy in an organisation (Supyuenyong et al., 2009). These processes are represented using different nomenclature by different researchers. Knowledge creation is often referred to as knowledge acquisition, while knowledge application is seen by some researchers as knowledge exploitation or knowledge use. Several of these processes have been identified in various studies (Nonaka and Takeuchi, 1995; Sparrow, 1998; Alavi and Leidner, 2001; Zack, 2002; Powell, 2008).

Alavi and Leidner (2001) argue that organisational knowledge management processes are dependent on the knowledge management approach or strategy adopted by the organisation. They classify these processes into four types: the knowledge creation process; the knowledge storage and retrieval process; the knowledge distribution process; and knowledge application. This research study will adopt this classification to explain knowledge management processes, due to its consideration of all the activities presented by other classifications. It will also review another important process that is often neglected in knowledge management research, knowledge elicitation, due to its relevance to the research in providing context to the state of knowledge in organisations.

2.8.1 Knowledge creation

Knowledge creation as a knowledge management process involves the development, enhancement or modification of existing content, or the creation of new content, within the organisation's body of knowledge (Pentland, 1995). There are a number of factors that influence knowledge creation in organisations, which

can include the presence of a formal organisational structure that can facilitate the process (Supyuenyong et al., 2009). Other factors such as staff attitude, competency, mood and experience (Sparrow, 1998) can also have a significant influence on organisational knowledge creation.

Knowledge can be created by individual members of the organisation via the cognitive process or as a result of a collaborative process within the organisation. Knowledge creation can also occur in a simple interaction between individuals or members of the organisation, which may trigger a moment of individual reflection or insight into the creation of new organisational knowledge. Nonaka and Takeuchi (1995) identify four different modes whereby knowledge can be created within an organisation. These are socialisation, externalisation, internalisation and a combination of these through a continual process of exchange between tacit and explicit dimensions of knowledge, which involves a flow of knowledge at different organisational levels of individuals, groups and inter-group. The four different modes describe how new knowledge is created and equally demonstrate the interplay between the tacit and explicit dimensions of it. The SECI model also explains how the knowledge creation process at the organisational level can be facilitated in a continuum flow by identifying knowledge at an individual level; through socialisation at the group stage, this can be synthesised up to the level of the organisation. The model is highly interdependent throughout the process, with each activity contributing and benefiting from a different activity.

2.8.2 Knowledge storage and retrieval

Research studies have argued that over time organisations tend to forget knowledge learnt or created, which is a typical human attribute of memory loss (Argyris and Schon, 1999). This is the reason why there are several approaches towards conserving, storing or managing an organisation's memory. Key among these approaches is the adoption of a knowledge management system in order to have effective management of organisational knowledge (Argyris and Schon, 1999) and a situation where information can be easily organised, stored and accessed for the benefit of the organisation. This includes the organisational processes, procedures, templates and sometimes information held by individuals captured on databases (Alavi and Leidner, 2001).

Knowledge stored in organisations is also classified into semantic and episodic. Semantic refers to reports, brochures and any general explicit knowledge, while episodic refers to content-specific knowledge, such as time-specific decisions (El Sawy et al., 1997; Sparrow, 1998). Technology infrastructure is also vital in the knowledge storage and retrieval process, because it facilitates both the storage and query processes, and also helps in regulating and securing organisational access.

Some research studies have also indicated that, in the case of small organisations, some employees or owner managers remain the key sources of organisational knowledge. They argue that in small organisations knowledge management systems are rarely available, or are only used lightly for document storage and correspondence (Sparrow, 2011; Zhang and Sundaresan, 2010).

2.8.3 Knowledge transfer

Knowledge transfer in organisations is the sharing of knowledge among employees in order for them to be able to apply that knowledge or contextualise it in a different setting (Supyuenyong et al., 2009). Knowledge transfer occurs at different levels of the organisation. Alavin and Leidner (2001) assert that it can occur between individuals, from individuals to teams, between teams, across teams and from teams to the organisation. Making knowledge or information available when and where it is required is the most critical objective of any knowledge management strategy, because knowledge transfer can be hampered by poor knowledge management storage or a weak access system (Huber, 1991). As Powell (2008) observes, it is possible for valuable knowledge to exist in one part of an organisation but for another part of the organisation or group to not know of its existence or not be able to access it.

Locating and accessing knowledge is therefore a critical aspect of the knowledge transfer process in an organisation. Gupta and Govindaranjan (2002) observe that there are factors that facilitate knowledge transfer in organisations, namely:

- The perceived value of the knowledge source
- The motivational disposition of the source
- The availability of efficient transfer channels

- The motivation of the receiver
- The absorptive capacity of the receiving entity

Powell and Ambrosini (2012) observe that knowledge transfer in organisations can be personal or impersonal and can be transferred through formal or informal transfer mechanisms. Knowledge transfer or sharing is also believed to be dependent on both the nature and complexity of the knowledge or information and the size of the group receiving or sharing the knowledge. As Sparrow (2011) argues, there is a distinction between the ways in which absorptive capacity manifests itself in different sizes of organisations.

2.8.4 Knowledge application

Knowledge application is a knowledge process that involves the use or reuse of knowledge that was captured or created and repackaged or stored to be used in a different context or application (Supyuenyong et al., 2009). It is also considered as the use of knowledge in an organisation's value chain to enhance organisational absorptive capacity (Zahra and George, 2002) and to synthesise organisational learning into the processes and the products of the organisation.

Some of the reasons why organisations focus on knowledge application as a knowledge management process can be attributed to the need for the promotion and use of valuable organisational insights or knowledge; to increase organisational performance and efficiency by adopting good practices from past experiences or projects; and to learn from past mistakes (Szulanski, 2003).

This process is very important for organisations. Alavin and Leidner (2001) argue that the source of organisational competitive advantage is knowledge application, not the knowledge itself, and that an organisation can only generate value out of knowledge that is applied or contextualised. Simply having the knowledge in the organisation is not enough. Although technology can support the process of knowledge application, by both streamlining some processes and routines, it does not offer sustainability by itself.

In addition to helping competitive advantage for organisations, effective knowledge application is also argued to enhance operational efficiency, to support

the identification of new opportunities for the organisation and to enhance organisational innovativeness (Choo, 2006).

2.8.5 Knowledge elicitation

Organisations often take for granted the complex process involved in eliciting knowledge. Researchers have made several attempts at understanding what happens when an individual has a perception of an idea that needs to be communicated to another person. Sparrow (1998) presents two key forms of physical representations that are used in eliciting knowledge: the propositional and the imagistic. He presents the propositional as the means of communicating, representing or expressing ideas, perception or messages that people have in their minds through words 'sententially' (Sparrow, 1998, p.51). The term was divided into three sub-areas by Wilson and Sperber (1988, p.134):

> The relationship between an utterance and the state of affairs it describes is analysable into three sub-relations: between an utterance and its linguistically encoded logical form, between the logical form of an utterance and its fully propositional form, and between the propositional form of an utterance and the state of affairs it describes.

Imagistic refers to the "use of forms of representation that are closely aligned to the physical senses that were used in the initial perception of an event" (Sparrow, 1998, p.33). The key features of the imagistic form of knowledge elicitation are visual thinking and mental imagery. Blackler (1995) presents five further classifications of imagistic presentation of knowledge, believing that it could be embrained, embodied, encultured, embedded or encoded knowledge.

All the knowledge management processes highlighted above are required in efficient knowledge management in organisations. Different organisations have different requirements and emphases; large organisations may require the adoption of an elaborate knowledge management system in order to manage the complexity and the variety of its knowledge resources (Supyuenyong et al., 2009). While the application of a scaled down version of larger organisational systems would not be an appropriate solution, small organisations would have a unique approach to their position (Sparrow, 2011).

2.9 Knowledge management development

The thesis will review work conducted on the area of knowledge management development in order to provide some structure or framework in the way organisations approach this. It will also provide more insight into organisational knowledge management and an understanding of the configurations of knowledge management development in organisations. Despite the increasing interest in knowledge management research, there have been few research studies conducted in the area. Some theories explain how knowledge management develops in organisations; these revolve around readiness (Kochikar, 2000; Pee et al., 2006; Lee and Kim, 2001), style (Choi and Lee, 2003), scope (Ehms and Langen, 2002; Sparrow, 2005); key antecedents (Lin, 2011; Janz & Prasarnphanich, 2003); and the social interaction perspective (Chen and Huang, 2007).

Maturity model

Pee and Kankanhalli (2006) observe that there is growing interest in organisations in knowledge management for the purpose of competitive advantage. They assert the importance of highlighting the process of knowledge management development as a key towards using it in enhancing organisational performance. They propose a general Knowledge Management (KM) Maturity Model, which has five maturity stages that relate to human resources, organisational processes and the information technology aspects of knowledge management: the initial stage, aware stage, defined stage, managed stage, and optimising stage.

The proposition from Pee and Kankanhalli's (2006) model is that knowledge management development in an organisation can be explained through the stages of their general KM Maturity Model, and that effective adoption of the model is likely to bring about efficient management of organisational knowledge and also enhance organisational performance.

Hsieh et al. (2009) also propose a five level maturity model of knowledge management development in organisations. Their model is centred on three management areas: organisational culture, the knowledge management process, and information technology. Their five maturity levels are the knowledge chaotic stage, knowledge conscientious stage, knowledge management stage, knowledge

advanced stage and knowledge integration stage. They argue that the development of knowledge management can be explained through these five stages, evidenced by their research study of 30 cases in Taiwan.

Both Pee and Kankanhalli's (2006) model and the model by Hsieh et al. (2009) seek to explain the development of knowledge management in organisations by the level of adoption of key knowledge management practices. This research will review other models of knowledge management development in order to fully explain the experience of the research organisation.

Stage model

Lee and Kim (2001) propose a stage model of organisational readiness in knowledge management development, working with a framework that consists of organisational knowledge, knowledge management processes, knowledge workers and information technology. Their stage model encompasses the knowledge management initiation stage, knowledge management propagation stage, knowledge management integration stage, and knowledge management networking stage.

They posit that these four stages of knowledge management development in organisations are distinctive and evident in all the organisations they studied. However, they confirm that there is not an exact time within which an organisation can pass through a particular stage of development. Yu et al. (2007) also confirm that the Lee and Kim (2001) stage model of knowledge management development has a significant effect on the development of knowledge management activities.

Lin (2007) makes another contribution to the theoretical development of the knowledge management stage model through the dimensions of the knowledge management process, knowledge management effectiveness, and socio-technical support. Lin argues that the three dimensions play a critical role in explaining the development of knowledge management, and instead of the four stage model of Lee and Kim (2001), she identifies three stages: the knowledge initiation stage, knowledge development stage, and knowledge maturity stage. She claims that the three stages developed in her model explain knowledge management development in organisations more appropriately that the Lee and Kim model.

KM styles

Choi and Lee (2003) identify four knowledge management styles, which they argue could be used to explain knowledge management development in organisations. These styles are dynamic, system oriented, human oriented, or passive. At the core of their model are the two perspectives of knowledge, tacit and explicit (Polanyi, 1962). They believe that tacit knowledge is difficult to communicate, and that sharing it will require interaction between people. However, explicit knowledge is easy to communicate, is formalised, and could be documented and shared using information technology.

There are companies that have no formalised structure or strategy to exploit their organisational knowledge, do not approach knowledge in an organised or systematic way and show little or no interest in knowledge management. These companies are said to be adopting a passive style of knowledge management (Choi and Lee, 2003), a style they argue could affect the effectiveness of such organisations over time.

The human-oriented style explains the development of companies that have more emphasis on creating and sharing tacit knowledge through informal structures and personal interactions. These are organisations whose practices are very focused on the human dimension; formal procedures and standard operating practices are sometimes ignored in order to enhance the way of doing business and company performance. The emphasis of the system-oriented style of companies is on documenting organisational knowledge and making it available for reuse within the organisation. These are organisations that invest in complex information technology systems, in an attempt to make codified knowledge more accessible and less complex throughout the organisation (Choi and Lee, 2003).

Choi and Lee (2003) propose a fourth style of dynamic style companies, which they believe are organisations that have an aggressive approach towards an integrated perspective of knowledge that includes both the tacit and explicit. They emphasise both the sharing of knowledge through the personal interactions of the employees and the appropriate application of information technology for knowledge reusability. They believe that knowledge management development in organisations can be explained through the evaluation of which style the

organisation adopts, which can also explain how the organisation prioritises and approaches different knowledge management practices.

Scope

Sparrow (2005) presents a knowledge management development theory from a scope perspective, which argues that effective knowledge management development will incorporate technological development, business process development and organisational development. The theory's central focus is on the holistic consideration of the organisation, on both its current thinking and its strategic priorities.

Sparrow's knowledge development theory has a multidimensional consideration of four key components of knowledge that are integrated into three considerations of knowledge. These components focus on the appreciation of individual and shared understanding, organisational knowledge bases and systems, integrated and contextualised knowledge project action, and effective learning processes. The three considerations of knowledge recognised in the model are operational considerations, long term strategic considerations and uncertainty management considerations of knowledge management (Sparrow, 2005). Using the multidimensional model to evaluate over 30 organisations in his research study, Sparrow identifies four different formations of practices.

These four distinct knowledge management practices represent how different organisations' knowledge management development was shaped. They include unengaged businesses, which have no structured or formal approach towards managing their knowledge and seem incapable of responding to any potential knowledge management related challenges. Comprehensive knowledge management practice businesses have a formalised and structured approach towards managing their knowledge and are believed to be capable of managing related knowledge management challenges. Knowledge-ownership oriented organisations have a comprehensive approach towards managing their knowledge, have the necessary knowledge management expertise indoctrinated within their organisational structure and are able to gain operational efficiency through their effective knowledge management practices. Finally, learning and co-production oriented organisations are flexible in their knowledge management

approach, have an understanding of their knowledge base, particularly within their operational management, and an open approach to learning from within their business network.

Sparrow's call for holistic consideration of organisational knowledge management practices in explaining knowledge management development is supported by the work of Ehms and Langen (2002), who argue that for effective and efficient knowledge management development, the organisation must be considered holistically in a cross sectional way.

Key antecedents

The research of Janz and Prasarnphanich (2003) posits that knowledge management development can be explained by using key antecedents. They adopt the perspective of organisational learning as evidence of knowledge to propose cooperative learning as a key antecedent to knowledge management development. They also claim that individual autonomy and the organisational climate have a significant influence on shaping cooperative learning in organisations.

The key antecedent theory of Janz and Prasarnphanich argues that cooperative learning behaviour among employees has the potential to enhance their work performance and, by extension, organisational performance. Consequently, organisations must invest in the facilitation of social process activities that can promote interactive behaviours at the team or group level for such cooperative learning to occur. Janz and Prasarnphanich conclude that that these key antecedents have an even wider implication for organisations, as they can enhance the quality of the staff work-life balance and increase employee retention. This "may translate to improved work products, higher levels of employee satisfaction, and the second-order benefits of increasing the number of inside experts and higher-knowledge worker retention" (p. 373). In the same light, Lin (2011) argues that the three contextual factors of individual, organisational and information technology are revealed in her research as the key antecedents of stage-based knowledge management development.

Social interaction perspective

The organisational climate is also identified in Chen and Huang's (2007) theory of the social interaction perspective of knowledge management development, along with organisational structure. The theory argues that the role of both the organisational climate and structure in enhancing knowledge creation, sharing and application is facilitated and achieved mainly as a consequence of social interaction; in addition, social interaction is both a mediating and a significant factor in shaping the development of knowledge management in organisations. They also argue that it is imperative that organisations provide the organisational climate and the platform for the enhancement of important relational and social exchanges among employees in order to have a higher degree of knowledge management engagement.

All the models and theories explained in this section attempt to provide an explanation of the development of knowledge management in organisations. This research will evaluate their application in the research organisation, along with innovation management development.

3.0 Literature review: innovation management

Until recently, the vast majority of the literature on innovation was primarily focused on innovation in the context of manufacturing or technology (Howell, 2006). However, there is now an increasing interest in understanding and explaining innovation in the service sector (Spohrer, 2008; Droege, et al., 2009).

Despite this recent interest, innovation in the service sector still remains one of the least researched topics in innovation literature (Storey and Hull, 2010). This research will now review the most relevant literature in the field of innovation, particularly in the service sector.

3.1 Definition of innovation

According to the UK government Department of Trade and Industry, innovation can be defined as "the successful exploitation of ideas" (DTI, 2004, p.5). The word 'innovation' derives from the Latin word meaning 'new', but Smith (2010) argues that being new does not quite capture the essence of innovation; it has to be different and possess a certain degree of novelty. Freeman and Soete (1997) consider innovation in the light of new products or processes that can be commercially exploited in the market place. Like that of Freeman and Soete, most early definitions of innovation have two implications: one of commercial value in the market and the other of physical properties.

More recent researchers are beginning to expand the scope of definitions of innovation in order to capture both its essence, antecedents and impact. This complexity was underlined in a high level definition by Kao (2008, p.19), who defines innovation as "*the ability of individuals, companies, and entire nations to continuously create their desired future*". He believes innovation can be demonstrated far beyond the current exemplification in just products and services, but that processes can also be a good example of innovative practice. He concluded by asserting that innovation "*is also about the middlemen who know how to realize value from ideas*" and "*about new ways of doing and seeing things as much as it is about the breakthrough idea*".

Many authors, as discussed earlier, consider commercialisation or profit creation as a necessary condition upon which innovation can be said to occur (Porter, 2001; Gloet and Taziovski, 2004). Burgelman and Sayles (1986, p.10) consider commercialisation to be a criterion for successful innovation, arguing that "Innovation refers to a company's efforts in instituting new methods of production and/or bringing new products or services to market. The criteria of success are 'technical' for invention, but 'commercial for innovation'. Innovation is also seen as a means for wealth creation by Drucker (1988, pp. 149-157): "Innovation is the specific function of entrepreneurship, whether in an existing business, a public service institution, or new venture started by a lone individual in the family kitchen. It is the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth".

Urabe (1988) presents innovation in a unique way, by proposing that commercialisation and economic growth are not a precondition to innovation, but rather a by-product of its process. He claims that innovation is "the generation of a new idea and its implementation into a new product, process or service, leading to the dynamic growth of the national economy and the increase of employment as well as to the creation of pure profit for the innovative business enterprise" (Urabe, 1988, p.3). Some authors have also assessed innovation from the perspective of knowledge creation (Cardinal et al., 2001; Herkema, 2003). Herkema presents innovation as knowledge-based activity, in which ideas or practices are adopted for the advancement of the organisation or the market in general, while Cardinal et al. see it as a knowledge-based process that involves both technical and physical activity in the creation of value. Innovation is also seen within the context of the institution; Poole and Van de Ven observe that while "innovation is defined as the introduction of a new idea, the process of innovation refers to the temporal sequence of events that occurs as people interact with others to develop and implement their innovation ideas within an institutional context" (Poole and Van de Ven, 1989, p. 32).

Rogers and Shoemaker (1971) believe that innovation is in the eye of the beholder, that individual subjective perception has a role to play in determining what innovation is.

> An innovation is an idea, practice, or object perceived as new by an individual. It matters little, so far as human behaviour is concerned, whether or not an idea is 'objectively' new as measured by the lapse of time since its first use or discovery. It is the perceived or subjective newness of the idea for the individual that determines his reaction to it. If the idea seems new to the individual, it is an innovation (Rogers and Shoemaker, 1971 p. 19).

However, Davenport (1993, p. 10) believes that innovation can simply be considered as "the introduction of something new".

This research considers innovation to be the introduction of new products or services, the enhancement of existing products or services and the ability to see things from a different perspective, in a way that will provide new insight or enhance someone's understanding. This definition is an extension of that of Lu and Sexton (2006, p. 1270), who view innovation as "an act of introducing and using new ideas, technologies, products and/or processes aimed at solving problems, viewing things differently, improving efficiency and effectiveness, or enhancing standards of living".

3.2 Classification of innovation

Due to the nature of innovation, it is important to first establish some form of classification before analysing it in depth. The research will focus on two major classifications adopted by Smith (2010) and the ESRC, which are forms of innovation (product innovation, service innovation, process innovation, organisation innovation and market innovation) and types of innovation (radical innovation, incremental innovation, modular innovation and architectural innovation).

3.2.1 Forms of innovation

This distinction of innovation is centred on its applications. While product innovation is focused on innovation in tangible items, service innovation, on the other hand, is focused on intangibles. Both can be delivered to consumers and corporations alike; however, process innovation is targeted at organisations rather than the individual consumer. It is focused on enhancing processes and improving the efficiency of the firm.

Process innovation

Of the three forms of innovation, this is certainly the most obscure in the psyche of the ordinary consumer, but without doubt the most important. It involves innovation or creating enhancements in the manufacturing process and is necessary in product innovation or the service delivery process in service innovation. With the advent of technology, this has become more evident across all sectors, and is sometimes referred to as automation or process re-engineering. Apart from technology and process, innovation can equally be driven by government policy or consumer demand. It is employed sometimes to remove bottlenecks, create compliance, enhance efficiency or even create new business lines. It happens in all sectors of the economy: private, public and voluntary.

Organisational innovation

According to the Oslo manual (OECD, 2005) the introduction or implementation of new methods in business practices or workplace management can be regarded as an organisational innovation. Armbuster et al. (2008) believe it is the ability of the firm to diffuse different sets of practices within the organisation for the enhancement of objectives.

Although most organisational innovative activities are coordinated through process review, enhancement or implementation, there are a number of differences between organisational innovation and process innovation. As with all types of innovation, both organisational and process innovation are focused on delivering a more efficient and effective organisation. The key distinguishing factor between them is the scope of their activities. While process innovation is aimed at enhancing organisational processes or techniques in the efficient delivery of products or services, organisational innovation is more focused on aligning the people, processes and the structure of the organisation in delivering its objective (Armbuster et al., 2008).

Product innovation

Smith (2010) argues that this form of innovation is the most visible in the public domain. People align easily with it because it is tangible and physical; they can sometimes look at it and feel it. It is also the one most attributable to

commercialisation and requires a higher degree of novelty than others to enjoy public acceptability.

Service innovation

Although not a popular form of innovation for consumers, service innovation is gradually taking centre stage, largely because of the changing dynamics of the global economy and the dissolution of physical barriers due to globalisation, the advent of the internet and new communication space. Service innovation is gradually becoming a driving force, even in the psyche of the average consumer. This form of innovation, although intangible, is having an impact which is now more evident in our everyday life, from banking to emergency services and education. It involves the provision of new services or significant improvements to existing ones.

3.2.2 Types of innovation

Another categorisation of innovation is in typology; the commonest way to distinguish this is by looking at novelty. How different is the innovation from the present state of things? But this is not an easy classification and certainly not all inclusive. When the innovation is new, the degree of novelty is expected to be very high, but when innovation is an enhancement of an existing concept, not so high. This led to the early classification by Freeman (1974) of radical and incremental innovation, based on the degree of change involved.

This classification by Freeman was considered very limiting, and consequently Henderson and Clark (1990) presented a more complex and sophisticated version. As is the case of most early research on innovation, Henderson and Clark's analytical framework is a classical product innovation classification.

The framework recognises that innovation is applied in a systematic way, made up of different components working together to deliver a certain function; as such, it requires two types of knowledge:

- Component Knowledge: this is the knowledge which Henderson and Clark (1990) refer to as the 'core design concept' and is the knowledge of all the different components that perform specific functions in the overall system (product).

- System Knowledge: this Henderson and Clark refer to as 'architectural knowledge' and is the knowledge of how individual components are integrated together to function as one system.

Henderson and Clark use the above distinction to create their analytical framework to categorise different types of innovation in a two dimensional matrix to show the default changes in the core concepts and the link between the components.

Radical innovation

As the name implies, radical innovation is something completely different, entailing a major breakthrough, a complete shift and something non-linear to what has preceded it. The degree of novelty is very high and involves the introduction of a completely new technological product or services. As Henderson and Clark (1990) observe, radical innovation establishes a new dominant design, embodied in components that are linked together in a new architecture. This type constitutes only about 10% of innovations.

Smith (2010) observes that this type of innovation sometimes has major consequences for the organisations that develop examples of it. It can involve the establishment of new processes, the design of new technology or training in new skill sets. As such, the reason why this type of innovation is sometimes more often attributed to new companies than existing organisations is due to the change composition involved. This type of innovation is closely associated with the concept of disruptive technologies. The disruption here, according to Christensen (1997), is due to the introduction of massive changes in the market that will require a competitive response and uncertainty. The degree to which an innovation is radical can lead to the complete withdrawal of an existing product line or the collapse of firms that are unable to respond in a timely and appropriate fashion.

Incremental innovation

Unlike radical innovation, the degree of novelty here is low, as it does not introduce a complete departure to an existing technology or design, but rather an enhancement, change or improvement. It is defined as a change that builds on a firm's expertise in component technology within an established architecture (Christensen, 1997).

Incremental innovation take place over time in a gradual process and is associated only with the enhancement of an existing product, process technology or service and not the introduction of a new one. It has been argued that "a firm that works very closely with its customers to develop enriched supply relationships is likely to be highly capable of pursuing incremental innovation" (Phillipsy et al., 2006, p.452). This is why the change requirement for the organisation is not dramatic and almost certainly involves an existing firm, unlike radical innovation, which new entrants can develop. In addition, impact on the market is relative, as some incremental innovation can have a significant market impact and help a firm's competiveness.

Modular innovation

This type of innovation, as presented in the Henderson and Clark framework, does not require change in the design system but instead in the component. Sometimes this innovation is the result of technological development or the requirement of additional services.

For the organisation, this does not involve any significant shift from current practice, as sometimes the components are acquired off the shelf, with no customisation needed. In the market too, the change is much less dramatic than in the case of radical innovation.

Architectural Innovation

In the Henderson and Clark framework, this is the type of innovation that has the lowest degree of novelty. They observe that "the essence of an architectural innovation is the reconfiguration of an established system to link together existing components in a new way". For the organisation, this can mean a review of existing processes, but the component will experience little or no change; neither will the market be disrupted, as the impact of this innovation is largely inward- rather than outward-looking.

3.3 Key perspectives on innovation

3.3.1 Dimensions of innovation

Morris (2013) believes that the existing literature has focused on two key dimensions in explaining innovation in business organisations: those of continuous innovation

and breakthrough innovation. He argues that there is a third dimension of business model innovation.

Morris's third dimension of business model innovation is defined as "a holistic description of a business and its relationship with the broader market". He describes a competitive market dynamic in which business model innovators analyse the market, identify the opportunities in it and develop solutions that others have overlooked. He argues that in his research, and also from the experience of the Japanese automobile industry, business model innovation is by far the most powerful dimension of innovation in defining the future of business organisations.

3.3.2 The process of innovation

There are various activities involved with innovation in both product and service development. Some researchers have presented these activities in a sequential and linear model, for example Smith (2010). This research believes it is very difficult to validate such a claim, particularly as it affects service innovation, and because of the sequencing order and the linearity of the model. However, this study will explore the different models of the innovation process in order to reflect on the different approaches available. Smith (2010) adopted the five Innovation Process models of Rothwall (1994), which serve as a platform upon which most of the recent models are designed. This research will explore these models, namely the technology push model, demand pull model, coupling model, integrated model, and network model.

Technology push model

This model of innovation process is the traditional NPD (New Product Development) perspective, which is effectively driven by development in the technology sector. Because it is research-led, the assumption is that intensive R&D will inevitably lead to innovation. The technology push model presents stages or process steps in a linear and sequential order, which have a mandatory processing flow. As Smith (2010) observes, this model does not take the marketplace into consideration; technology takes the lead role, while the market is passive and takes whatever is created. The adoption of this model in an innovation process can be somewhat problematic, even for science/research-intensive sectors such as pharmaceuticals, and it is certainly not applicable to the service sector, which is dynamic and people-led.

Demand pull model

In complete contrast to the technology push model, this model is market-led. It was developed in the early 1970s after the realisation of the lack of application to some sectors of the technology push model and consideration of the dynamic and changing requirements of both consumers and the market. The major shift here is in the source of the new idea in the traditional generic model, which is often led purely by technology. In the demand pull model, however, the source is the consumer or market needs; the market here is active, not passive, as presented in the initial development process.

Coupling model

This model is a more recent perspective in the innovation process; it is essentially designed to address key flaws in the other models with respect to feedback in the innovation process. In the other models the emphasis is on linearity, with flow moving only one way, without the benefit of a feedback loop. In this model, the different functions interact with each other and are interdependent in their production or development, and each stage is coupled to the needs of the marketplace and technology.

Integrated model

The integrated model process of innovation is primarily a product-based perspective, brought about by the changing business environment. Due to development in technology and the intense competitive environment, companies are forced to finds ways to improve efficiency, reduce the product life cycle and enhance manufacturing management. All the five models explained earlier have the problem of a strict sequencing order, apart from linearity of process, which runs a concurrent or parallel development process. In this model, different functions can work on their streams concurrently and later be integrated due to regular interactions between the different functions which run as project teams. The company therefore avoids the problem of misalignment.

Network model

This is fairly a new concept of innovation process and only tenable within the product innovation perspective, particularly in high-tech industries such as

aerospace. In this model, companies sign agreements or partnerships with other, often more specialist firms, in order to buy certain components required for the product. This model can only operate in some industries and is therefore not universal.

3.4 Service innovation

Increasingly, researchers are looking beyond the strict model of innovation in technology to service innovation as well, evident in the rise of new literature on service innovation, new service development and the service-dominant logic perspective (Hertog et al., 2010; Michel et al., 2008; Droege and Hildebrand, 2009). This rise in interest continues to demonstrate many of the challenges involved in understanding service innovation, the important and continuing role of people, the lack of clear standardisation and the intangibility characteristics.

This section of the research will attempt to provide some understanding in two areas: the schools of thought in service innovation and the possible dimensions of service innovation.

3.4.1 Schools of thought in service innovation

Like most academic fields, there exist different assumptions in service innovation. In this section, the research will present the different schools of thoughts in this area. However, there also exist different opinions on this categorisation. Combs and Miles (2000) and Devriess (2006) present three different schools of thought in service innovation research, while Bryson and Monnoyer (2004) and Droege and Hildebrand (2009) discuss four schools.

In this research, however, we adopt the Droege and Hildebrand (2009) categorisation of technologist, assimilation, demarcation and synthesis research streams because of its robustness and consideration of earlier segmentation.

Technologist stream

This school of thought focuses on service innovation within the context of technology; it was pioneered by Barras (1986) in his earlier work on the reverse product cycle model. Barras's model relates services innovation to technological

advancement with a very simplistic cycle that starts with process innovation and ends with the development of new services. Due to its consideration of technology as the only proxy to innovation and the lack of a clear distinction between different types of services, this school of thought has been criticised by many researchers (Devriess, 2006; Droege and Hildebrand, 2009).

Assimilation stream

This school of thought has its foundation in research on manufacturing and work on the assumption that both theoretically and in concept there is no significant difference between innovation in the manufacturing and the service sectors; as such, the principles can be transferred across. Some of the key works conducted in this area assert that there exist even more differences within the manufacturing and the service sectors than there are across them (Hughes and Wood, 2000). As such, it is therefore possible to assimilate the theories and concepts developed for manufacturing into innovation in services. There are obvious problems in this assumption, as highlighted by Akamavi (2005); key among these is the application of a manufacturing framework to evaluate service innovation which does not take into account the intangible characteristics of services and their other idiosyncrasies.

Demarcation stream

This school of thought recognises the distinctive nature of innovation in services, which makes it very difficult, if not impossible, to assimilate or adopt concepts or theories directly from manufacturing. As Nijssen et al. (2006, p.242) state, "These differences pertain mainly to the specific characteristics of services i.e. their intangibility, co-production with customers, simultaneity, heterogeneity and perishability, that affect the development process of services and make them to a certain degree unique".

Researchers on this stream, such as Den Hertog (2010) and Djellal and Gallouj (2001), focus on highlighting the distinctiveness and the uniqueness of service innovation activities in contrast to the classical linear models of the innovation process, long adopted for traditional manufacturing/technological systems.

Synthesis stream

The concept of this school of thought is that it is more beneficial to study and theorise on both sectors than to research them separately, and to aim to create an innovation model that would be valid for both.

Devriess (2006) presents an integrated model for the theory and classification of products collectively, for both manufacturing and services, and asserts the viability of a synthesis approach to the study of innovation in both the manufacturing and service sectors.

Many of the arguments around assimilation and synthesis are gradually fading due to growing interest in the study of service innovation as a distinctive and unique research area.

Most of the service innovation literature is still anchored to the technologist perspective. Some argue that innovation in the service sector is different from that of manufacturing or technology (demarcation), while others argue that although it is different to manufacturing, the principle is the same. As such, innovation can be explained in a synthesised way by studying innovation in the service sector together with innovation in manufacturing (Droege et al., 2009). This is a slight departure from the past era, when there was an abundance of assimilation claims, arguing that innovation principles in technology or manufacturing could be applied to the service sector to achieve the same result (Smith, 2010).

3.5 Dimensions in service innovation

There are several dimensions within which service innovation can take place within an organisation.

Avlonitis et al. (2001) introduce six dimensions of service innovations: new-to-the-market service; new-to-the-company service; new delivery process; service modifications; service line extensions; and service repositioning. Gadrey et al. (1995) propose four dimensions of service innovation, from the perspective of product innovation and process innovation. These dimensions are innovations in service products, architectural innovations, modifications of service products, and innovations in processes and organizations. Hsieh et al. (2013) include the

practitioner perspective and develop three dimensions of service innovation: the new service concept, new service process, and new service business model.

Den Hertog et al. (2010) propose six dimensions, building on several contributions made by different scholars. This research will adopt these, due to the fact that the six dimensions maintain the context of service innovation and extend it to include the key drivers of the service sector, the external parties of customers and partners.

- New Service Concept: This dimension describes the value co-created by the firm and other clients, usually presented either as a solution to an existing problem or as innovation to address a need.
- New Customer Interaction: This dimension describes the value created by the customers of the firm due to its interaction in the service development process. This firm-client interface interaction is critical in the service sector, as the nature and characteristics of the innovation requirements of the sector often need to be customised.
- New Business Partner: This dimension describes the value created by a collaborating business partner, although this is very often used in the manufacturing sector. But even in the service sector now, some solutions that involve multiple sectors, such as complex social issues, can require collaboration across different or similar professional fields in order to fully synthesise and deliver real value.
- New Revenue Model: This dimension describes the need to comprehensively design a model to analyse both the cost and revenue (whenever necessary) of the solution. If there is a mismatch, particularly in a commercial scenario, it can lead to the service solution failing to see the light of the day. Designing a revenue model can sometimes be a difficult task, especially when business partnership is involved, so there is a need to standardise multiple cost models in order to distribute both cost and revenue appropriately.
- New Delivery System: This dimension describes the value of having the right fit in terms of personnel, organisation and culture. The delivery of certain innovation in a service may require entirely new skill sets and team structures to succeed, so it is critical to have the right fit in terms of the personnel resources required, the organisational structure needed and the right culture.

The absence or degradation of any one of these soft elements can have a huge consequential impact on the firm's ability to deliver a service solution.

- New Service Delivery System: This dimension describes the value of having the appropriate relevant technological support when needed. Even though it is not a product innovation, technological support might be needed in order to deliver some service solutions, either to facilitate the execution of service innovation or to serve as a platform for the delivery of the service.

3.6 Scope of innovation in service innovation

The scope of innovation in the service sector is believed to be on the continuum of radical to incremental innovation, according to Salomo et al. (2007). Both are different in how they come about, their risk levels and business performance in the organisation. Salomo et al. believe that radical innovation, which is the creation of a very distinct or unique solution, is very difficult to create in an organisation, and is also high risk and more challenging to commercialise.

For radical innovation to occur successfully in large organisations, Salomo et al. believe that a combined interplay of three key actors must be present in them. They describe these actors as idea generators (these are individuals who have both the capacity and the drive to generate unique and distinct products or services); idea hunters (comprising individuals who actively pursue and identify distinctive ideas and exploit them); and idea gatherers (these consist of individuals who receive these distinct ideas and have the expertise to respond to them). It is the successful interplay of these principal actors in organisations that ensures the efficient generation and exploitation of radical innovation.

On the other hand, incremental innovation, according to Morris (2013), is an enhancement to or modification of an existing product or service; the enhancement does not have to be significantly different. Despite this, it is equally critical in enhancing organisational performance and delivering sustainable business growth.

3.7 Innovation activities in the service sector

Innovation activities in the service sector are different to those in the manufacturing or industrial sectors of the economy, according to authors and researchers on demarcation theories of innovation such as Den Hertog (2010) and Djellal and Gallorj (2001). Tether and Hipp (2002) believe that these unique differences are a result of the core characteristics of the sector, due to its intangibility, variability, ephemerality and its simultaneous state of creation and consumption. Den Hertog (2010) and Djellal and Gallorj (2001) all argue that it is these distinctive characteristics of the service sector that make the simplistic appropriation of management practices and processes of innovation from the manufacturing sector inadequate and improper. The service sector needs to be looked at differently, particularly when it comes to innovation and its management.

There is now an increased interest in trying to understand innovation in the service sector (Miles, 2000), how different it is from the manufacturing sector (Den Hertog, 2010), how it can be managed better (Bessant, 2007) and how it develops (Ortt and Duin, 2008). This increased interest continues to highlight the presence of some form of innovation outside the mainstream manufacturing innovation perspective, which has dominated the studies of innovation for several decades.

According to the Oslo manual (OECD, 2005), within the service sector there are key forms of innovation that are believed to be more prominent than others. These are product or service innovation, process innovation, market innovation and organisational innovation. Morris (2013) argues that these forms of innovation are an outcome of the entrepreneurial innovative capability of the organisation, a capability that differs from one organisation to the other, and is largely influenced by a complex interplay of several factors that may or may not be within their full control. Moreover, the dependability of the innovation process on these factors could facilitate and/or challenge the entrepreneurial innovative capability of the organisation. These factors range from challenges related to the innovation activities themselves, to the size of the organisation, the location and the sector of its operations.

Abernathy and Utterback (1978), as cited by Morris (2013), argue that the type of innovation organisations focus on and their orientation to the different dimensions of innovation evolve over time. In most cases, product innovation precedes process innovation, and is usually introduced at end of a product lifecycle to revive or enhance a successful or dominant product in the market. Morris (2013) argues that this situation does not apply in all cases, as there are examples of when process innovation becomes the medium within which the product innovation is delivered.

3.8 Innovation types and practices in the service sector

A major contribution to research on innovation in the service sector was drawn from the body of literature on new product development in the manufacturing sector (Lievens and Moenaert, 2001). This has led to a new stream of work in the area of new service development and there is now a growing debate about how different the two are. Avlonitis et al. (2001) review the innovativeness of the service sector in comparison to the manufacturing sector and their research reveals a number of similarities between the two.

Oke (2004) observes that although innovation in the service sector is interchangeably referred to as either service product innovation or service innovation, it is different from product innovation in the manufacturing sector due to its intangibility. In the service sector, as in financial or insurance companies, product innovation is always demonstrated in services such as mortgages, credit cards and travel insurance. The core characteristics of innovation in the service sector remain distinctively different to those of the manufacturing sector. This consideration and philosophy of service as unique has been a recurring debate among researchers; for example, Gadrey et al. (1995) argue that apart from the intangibility of innovation in the service sector, innovation within it is often shaped through interaction with stakeholders and in most cases is translated into incremental rather than radical innovation. They argue that organisations must then ensure that they appropriately facilitate this stakeholder interaction in a way that will enhance the customer experience.

The relationship between different types of innovation in the manufacturing sector has been investigated in a number of studies (Lynn et al., 1996; Griffin, 1997). It has

been consistently argued that radical innovation seems to have a much higher impact on organisational performance, but only in the short term. Cooper and de Brentani (1991) have identified incremental innovation as the type of innovation that has the most impact on organisational performance in the long term. Most of these studies on the impact of innovation on organisational performance were based on the manufacturing sector and on the performance of tangible products.

Oke (2007), in his studies on the role of innovation types and performance, argues that organisations can only adequately account for the performance of innovation and its contribution to organisational performance if management is able to effectively develop and communicate an innovation strategy. This strategy must define the contribution of innovation to the organisation and the areas where those contributions are expected to come from. They must also ensure that they secure the buy-in of their employees and stakeholders and clarify the development process of their innovation activities. Oke also observes that most organisations do not fully appreciate the role of effective people management practices in the development and management of innovation in organisations. He believes that effective people management and the provision of favourable organisational conditions are critical in ensuring that employees make optimal contributions to the development of innovation and to enhancing innovation performance.

3.9 Open innovation

For most of twentieth century industrial innovation, the vertical integration model has been dominant, in which an organisation's internal research and development department provides the platform for its innovation (Duarte and Sarkar, 2011). More recently, the concept of open innovation has been proposed for organisations to pursue. The model, which is completely different to traditional vertical integration, was pioneered by Chesbrough, who argues that "firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology" (Chesbrough, 2003, p. XXIV). Bessant and Phillips (2013) consider innovation in this era as a multiplayer activity, calling for collaboration among parties and sometimes even competitors, in order for firms/organisations to successfully manage innovation.

This dramatic paradigm shift was largely brought about by a combination of many factors, ranging from the social, for example the increased mobility of skilled workers (Duarte and Sarkar, 2011); corporate strategies, such as the increased specialisation of research departments (Lang, 2003); and economic factors, such as access to capital (Chesbrough, 2003). The concept of open innovation, although initially centred on the high-tech industries of ICT and pharmaceuticals, is now also established in the service industry (Chesbrough, 2011). There is still an argument, however, that there is not enough empirical evidence that can validate its application as a substitute for vertical integration and the closed model of innovation.

As presented by Chesbrough (2003), openness in innovation generally refers to two notions. The first is 'outside in', when an organisation creates processes and practices that allow it to use external ideas and knowledge in its production process. The second is 'inside out', when an organisation takes the next step by providing the necessary environment for its own ideas, processes and internal knowledge to be accessed and utilised by other organisations. Chesbrough (2011) argues that due to the role of customers in the co-creation process of service innovation and its intangible characteristics, open innovation works differently in the service environment than in the traditional technological and product development environment.

3.10 Innovation management development

Innovation management development has been linked to technological development in several studies (Bienaymé, 1986; Malecki, 1997). This relationship originates from the perspective of product innovation and largely in the manufacturing sector.

Bienaymé (1986) views innovation from its different uses in the organisation and makes the following description of its relevance. He states that innovation is needed in solving technical challenges in manufacturing services; in delivering operational efficiency and automation; and for the enhancement of the working conditions in the organisation.

Morris (2013) believes that the linear model of innovation development, which was assumed to follow a time sequence, was not adequate in properly explaining innovation management development in most organisations. The second generation models attempted to integrate market demand into the linear model, but even those completely neglected an important component of innovation management development: its interactive and dynamic state and integration into knowledge processes. Morris further argues that this has now forced a broader and more dynamic explanation of innovation and its management in organisations, through an interactive process. He proposes an emerging view of innovation theory that recognises the role of dynamic interaction in capturing the role of other firms, technology and organisational knowledge management. In an interactive process that ensures that knowledge management and innovation management are actively facilitated in a dynamic process of value creation, and innovation is seen as a dynamic social process entrenched in the structure of the institution.

3.11 Management of innovation in service firms

Oke (2007) believes that within the service sector different organisations aim for different levels of novelty in their innovation pursuit; as such, they tend to have different levels of investment commitment to innovation. Organisations that want to aim for a higher level of novelty in their innovation development are more likely to commit resources to innovation activities than those focusing on generating incremental or lower levels of novelty.

Cainelli et al. (2004) and Elche and González (2008) also conclude in their research that organisations with a higher level of commitment to innovation outperform those with a lower level or lack of commitment to innovation management and investment when it comes to productivity and business performance.

3.11.1 Formalising the innovation process

There is growing interest among researchers in the service sector in understanding whether formalisation of the management and the processes of innovation is necessary in enhancing organisational innovativeness in the sector. Several studies have argued for the need for a formalised approach to innovation management in the service sector (for example Crevani et al. 2011). Froehle et al. (2000) consider

formalisation to be the presence of a formal process in an organisation that can aid in the development of innovative services or products. This could vary from a product or service development guide or plan, to a quality control check that will ensure compliance. They believe that organisations with formalised innovation processes need to identify and appropriately invest in the necessary organisational structures that will aid innovation at different stages across the organisation.

According to Oke (2007), a formalised process of innovation management in organisations should include the facilitation of idea generation and the sharing of it, good people management practices and an effective reward system that would support innovation activities.

Cooper and de Brentani (2001) and Froehle et al. (2000) have proven the effectiveness and benefits of a formalised process of innovation management. They believe it provides the organisation with the opportunity to plan and manage innovation in a more predictable way.

On the other hand, Kelly and Storey (2000) believe that a formalised or systematic approach to managing the innovation process is not common in the service sector, particularly in comparison to the manufacturing one. Instead, they found that organisations in the service sector approach innovation in a more ad hoc way and that it is embedded in the normal organisational practices.

3.11.2 Collaborating for innovation

Collaboration with stakeholders and partners has become a key component of innovation in the service sector, and is major departure from earlier consideration of innovation as purely an outcome of ideas within the organisation. den Hertog (2000) believes that organisations must now consider themselves as part of a much wider community when it comes to innovation. They need to be willing to interact and collaborate with their clients, partners and internal stakeholders in order to achieve a meaningful innovation performance.

Gadrey and Gallouj (1998) argue that collaboration with customers is especially important in the innovation process, and that there is a special value in delivery interaction between the organisation and its clients. This is because the experience

driven from the interaction with customers forms part of the value of the product or service and in most cases may facilitate the development of a product or service.

Magnusson et al. (2003) found that the value of co-creating products or services with clients transcends their perception of the value of the product or service; it is perceived to represent a higher quality, to be more original and to offer better value for money than if those products or services had been developed in-house by the organisation.

3.11.3 Comparing research and practice

Crevani et al. (2011) believe that there are a number of gaps between what researchers in innovation are theorising on and what the practitioners on the ground are experiencing. Practitioners understand the need to facilitate innovation by investing in time to allow for quality engagement and creative thinking, but they are more worried by the challenges of the immediate competitive pressures. And although organisations believe in the value of co-creation with their customers, they are more comfortable with in-house development where possible, due to concerns over quality and control. The literature seems to suggest a different process for innovation in organisations, aggregated at the company level. What organisations experience in practice is characterised more by situating innovation first at the individual level and is also evident in everyday organisational operations.

3.11.4 Micro-level studies of innovation processes and practice

Several studies have been conducted on innovation management, the majority of which focus on the macro level of the organisation, i.e. leadership, strategy, and the role of customers and partners. Most fail to account for the micro-dynamics and the context of the organisational processes within which innovation and creativity are delivered (Crevani et al., 2011).

4.0 Relationship between knowledge management and innovation

4.1 Introduction

In this chapter the research will explore the relationship between knowledge management and innovation in organisations. Organisations are increasingly faced with competitive business pressure due to the unprecedented pace of globalisation and the changing global economy, all of which affects innovation and sustainability (Corso and Pellegrini, 2007). Organisations are under enormous pressure to continue to innovate in order to remain competitive, and there is greater reliance on the ability to properly exploit knowledge in order to innovate. Bessant and Phillips (2013, p.2) argue that "at its heart innovation is about knowledge and in particular, combining a wide range of knowledge elements to create something new".

Innovation and knowledge management are becoming imperative to organisational sustainability and performance, and the relationship between the two phenomena is equally becoming very important and critical for researchers to understand. Some key contributions linking knowledge management and innovation can be linked back to the work of Drucker (1969), who argued that innovation management comprises the introduction and proper use of know-how by professional knowledge workers within the context of their work. The changing dynamics of the market economy, from a resource focus to being knowledge-driven, has now made innovation be seen by organisations beyond the outcome of an individual genius, to a more dynamic process involving more than one person in a continuous interaction and exchange of codified knowledge and tacit knowing (Patel and Pavitt, 1994).

Nonaka and Takeuchi (1995) argue that this engaging process of tacit and codified knowledge conversion does not only require the continuous interaction of people, but also requires organisational support. In their theory of organisational knowledge creation they present a four-phased (SECI) model, in which they claim that tacit knowledge can be converted to codified and vice versa through socialisation, externalisation, combination and internationalisation. They argue that the

organisations that are able to support these interactions successfully are more likely to foster a culture of innovation and achieve innovation performance through continuous organisational leaning.

Chesbrough (2003) also argues that for organisations to sustain innovative performance they must support not only the exploitation of their organisational knowledge but also need to support the exploitation of knowledge outside of the organisation. He believes that knowledge is now widely distributed; organisations that rely solely on their internal knowledge would be limiting their innovative capability. In his open innovation proposal, Chesbrough encourages organisations to be open and willing to cooperate, even with their competitors where necessary, and also be willing to acquire licences and intellectual properties in order to enhance their innovativeness. By openness, he generally refers to two things, the first being outside in, where an organisation creates processes and practices that allow it to use external ideas and knowledge in its production and processes. The second is the inside out approach, by which an organisation makes greater effort to allow some of its own ideas, processes, and internal knowledge to be accessed and used by other firms. In his more recent work, Chesbrough (2011) further argues that open innovation may have a different effect and outcome in the service sector than in manufacturing, due to the intangible characteristics of service and continuous influence of customers in service creation.

Santos-Vijande et al. (2013) discuss a new paradigm that is emerging in the role of customers in the organisational value and service creation: service-dominant logic. They argue that service-dominant logic means "that companies are no more than facilitators of value, which is basically created by customers in usage and value-generating processes". This is a position that they believe "weakens the notion of exchange – between two parties – in favour of interaction, but also involves the recognition of the importance of the role played by customers in the innovation process as co-designers and co-producers" (Santos-Vijande et al. 2013 p. 94). Bessant and Phillips (2013) agree on the need to forge greater alliance with customers and suppliers, to understand their needs and requirements in order to deliver a more meaningful solution that will meet market and societal demand.

4.2 Knowledge management practices and innovation

Using the degree of novelty suggested by Henderson and Clark (1990) to categorise the different types of innovation into radical, incremental, modular and architectural, the research will analyse how different types of knowledge management practices affect different types of innovation. Darock and Mc Naughton (2001) conducted research into over 400 medium-sized firms and discovered a positive correlation between knowledge acquisition and incremental innovation. They argue that this correlation can be attributed to the effect of the knowledge management strategies of codification and personalisation in making market information available throughout the organisations.

Tushman and Anderson (1986) argue that a positive relationship exists between radical innovation and knowledge management practices of knowledge creation and applications. They believe that the nature of radical innovation and its high degree of novelty would require a distinguished level of research to create new knowledge that may stimulate the cognitive development required to create radical innovation. They further observe that incremental innovation is largely driven by the external business environment (the market or customer demand), with organisations' only role being that of facilitation. On the other hand, they believe that radical innovation is more often driven by the organisations' internal capability, and in most cases in contrast to the expectation or influence of the external business environment.

According to Tushman and Anderson (1986), some of the key knowledge management practices that have enhanced radical innovation in organisations include the ability to understand the voice of the customer; enhanced organisational marketing; and flexibility and dynamism in understanding and adapting to the changing business environment, including the influence of technological evolution. Out of these, the factor of flexibility and dynamism to adapt to change was identified as the most significant factor that influences radical innovation. The relationship between radical innovation and the knowledge management process of creation in Tushman and Anderson's research was further linked to the distinctive nature of radical innovation due to its reliance on knowledge, research and development. Although radical innovation has a more

significant level of novelty than incremental innovation, it is argued to be more challenging to commercialise than incremental innovation. It also challenges the organisation more, due to its need for unique support and operationalisation in some instances. Overall, there seems to be consensus on the positive correlations between the different knowledge management practices and processes with both radical innovation and incremental innovation.

4.3 Knowledge management strategies and innovation

There seems to be consensus on the relationship between knowledge management and innovation among researchers; any variance is in the impact and the dimension of such a relationship. In the case of knowledge management strategies of knowledge codification and knowledge personalisation, there are a number of studies which show a positive correlation on their impact on innovation in organisations (Zack, 1999; Hansen et al., 1999; Carneiro, 2000; Darroch and McNaughton, 2002; Du Plessis, 2007).

The knowledge codification strategy helps make information and data readily available throughout the organisation, which facilitates the internalisation of knowledge and may stimulate individual creativity. Depending on individual employees' situations and the organisational dynamics, the availability of relevant information is a key step to idea generation, if that information is appropriately interpreted, internalised, and contextualised. This is something that could significantly enhance the innovation process, and make it open to the organisation for much wider adoption and innovativeness (Du Plessis, 2007). Du Plessis also observes that further investigation and research will be required in order to properly understand the real impact and value of knowledge management strategies to innovation, especially in order to ensure an optimal and efficient innovation process.

Darroch and McNaughton (2002) conclude from their research that organisations need to strike a good balance in their adoption of the different knowledge management strategies of personalisation and codification; they believe that at different stages of development, innovation requires different knowledge management support. The ability to support and facilitate the innovation process with the appropriate knowledge strategy by the organisation in most cases

determines the pace and the impact of the eventual outcome. For an effective innovation process, there is also the need for a clear and uniform understanding across the organisation, in terms of its direction and vision. Different departments or teams must understand what is expected of them in the delivery of the set organisational goals or objectives, facilitated by clear communication and leadership. Knowledge personalisation strategy is often the best approach in both managing and facilitating effective personal interaction and communication that can create that sort of organisational and situational awareness. Santos-Vijande et al. (2013) believe that such a strategy should extend to the facilitation of similar awareness among the customers of the organisation, because increasingly they are becoming partners and co-creators of innovation in organisations. For them, the process of innovation is complex and organisations would need to integrate their knowledge management approaches appropriately in order to achieve an efficient innovation process.

The knowledge management strategy of personalisation is very much aligned to the process of idea generation, aiding creativity at the beginning of the innovation process. Idea generation can be initiated at an individual or team level, as a result of internal cognition, experience or interaction, usually through a formal or informal group effort by stimulating ideas that can eventually lead to the creation of an innovative solution or product. Knowledge codification strategy supports the later stage of the innovation process in organisations, by aiding the systemic classification, storage and support access of relevant information or data that the organisation will need in order to create or co-create innovative solutions or products.

Either of these two strategies of knowledge management, discussed independently or complementarily, can support the innovation process at the organisational level, to lead to either a radical form of innovation (a completely new product or service with a high degree of novelty) or an incremental one (improvement or enhancement of an existing product or process with a low degree of novelty).

4.4 Knowledge-intensive business services (KIBS)

Knowledge-intensive business services (KIBS) are now one of the fastest growing business sectors in the developed economies; their growth, more than anything else, is driven by the continued demand for their services by other organisations. KIBS support other organisations in the provision of knowledge-intensive inputs to enable them to reduce wastage, improve on quality or enhance competitiveness.

There are different sets of organisations providing different services to many industries that fall under the umbrella of KIBS, such as accounting, law, management consulting and software development. All these firms have one common denominator, which is their knowledge intensiveness, knowledge being the core of their business services. Rather than become involved in the primary production of tangible products, KIBS are only involved in supporting other organisations in the value chain.

As Hansen et al. (1999) observe, the driver of the industrial economies has shifted completely to intellectual assets from natural resources. Their position is echoed by Alvesson (2004), who argues that knowledge is gradually taking over the focal position previously occupied by real capital.

Businesses today have changed dramatically in the way they generate, apply and use both internally-generated knowledge and the knowledge coming in from outside the company, prompting Alvesson (2004, p.5) to refer to a business as a "knowledge system".

The majority of employees of KIBS have formalised higher education qualifications, as intellectual skills are a core requirement in that sector and formal education is believed to indicate the availability of an intellectual skill set. Some authors have argued that formal education is not the only route to jobs in KIBS, (Ibid), but have admitted its very important role in confirming an expert status, competence and peer recognition (Alvesson, 2004).

Apart from the nature of the composition of its workforce, there are a number of other key, if not unique, characteristics that distinguish KIBS from other types of

organisations. Several authors have listed a number of these characteristics; four of these are summarised below as being critical and relevant to this research.

- Knowledge is the key competence for its workforce and is considered as the most significant characteristic.
- From the standpoint of business management, KIBS are managed in a unique and different way from many organisations; management is usually more flexible and personalised.
- In KIBS, solutions are delivered to clients in a customised way and in most cases co-created with the clients.
- Professional independence; in KIBS considerable independence is given to professionals to exercise independence in making professional judgments.

4.4.1 Classification of KIBS

KIBS have been classified differently by several authors; we will focus here on some key relevant classifications. Miles (2008) classifies KIBS into two types: i) T-KIBS, involved in technology and ii) P-KIBS, involved purely in professional services. Miles' classification was based on the output of production.

Von Nordenflycht (2010) classifies KIBS into four types, basing his classification on his three key characteristics of knowledge intensity, low capital intensity and professionalised workforce. The first of these classifications is Technology Drivers, with examples such as biotech and R&D Labs. He argues that they have very high knowledge intensity, require high capital intensity, but do not require a professionalised workforce. Second, Neo-PSFs include examples such as management consulting and advertising. Von Nordenflycht asserts that although the neo-PSFs have high knowledge intensity, their employees are not categorised under his classification of professionalised workforce. The third type is professional campuses, such as hospitals and schools. He describes this class of organisation as highly knowledge-intensive, with a professionalised workforce, but capital intensive. Finally, there are classical, or regulated, PSFs, with law and accounting firms as examples. They meet all his three key characteristics, are low capital-intensive, highly knowledge-intensive and have a professionalised workforce.

Lowendahl (2005) presents another classification of KIBS based on the characteristics of services delivered. He classifies KIBS into professional services, with consulting and law firms as examples; non-professional services, such as schools and hospitals; and product firms, exemplified by computer software companies. Using the simplified classification of KIBS by output according to Miles (2008), the research will provide additional insight into the P-KIBS of KIBS services.

4.4.2 KIBS services

The service sector has been very active in the last few decades, increasing its share of GDP contribution to the global economy, particularly in the developed world, and is increasing its role in both employment and international trade. The sector now directly accounts for a very large portion of economic activity and indirectly affects the quality of output in the non-service sector (manufacturing and technology) through its support services (HR, PR, accounting, legal etc.). Services are difficult to define; Lowendahl (2005) groups them according to three fundamental characteristics: i) intangibility, ii) being instantaneous and iii) co-creation with clients /customers. This characterisation alone does not provide the platform for a generalised definition or description of service firms. Both in research and in practice, much attention has been paid to manufacturing over time, which now calls for a renewed interest in service due to its changing role in society as another source of value creation.

Lowendahl (2005) argues that rather than focus attention on trying to distinguish between goods and services, much more can be learnt from a segment analysis of different aspects of service. This research is also focused on one distinct type of service firm, which is involved in the provision of professional services to other organisations. These firms deliver their services in an interactive way through highly educated human resources that engage with their customers, in what Lowendahl (2005) refers to as service encounters. Their services range from helping other firms in defining or identifying their problems, to supporting others in the process of solution development and implementation, and to the highly technical aspect of risk management and continuous improvement.

Despite the attempt to try to segment KIBS services away from the general service sector, there are several characteristics that are still common to firms in this sector.

The following is a summary of the main characteristics of KIBS service firms (adapted from Lowendahl, 2005):

- They are vastly knowledge intensive, the knowledge delivered through employees with advanced levels of education.
- They are defined by a higher level of customisation to their clients.
- They rely on their experts' judgement and knowledge in the delivery of their service.
- They normally would require considerable engagement with their clients.
- Their services are often delivered within the constrictions of professionalism and ethics.

Despite the above characterisation of service firms, it is still inappropriate to put them all together. This research will try to further establish the uniqueness and distinctions within this class of business organisations.

Lowendahl (2005) introduces a unique categorisation based on the firm's strategy; he argues that whatever strategy a firm chooses to adopt, it will to a great extent dictate the type of business environment it plays in and its resource requirement, both in terms of resources and professionals. He identifies three dominant strategies and claims that all service firms can be grouped within this categorisation, namely;

- Client Relation-Based Strategies.
- Solution or Output-Based Strategies.
- Problem Solving or Creativity-Based Strategies.

Another important consideration in service firms' categorisation is their size and maturity, although Lowendahl (2005) asserts that these characteristics cannot by themselves explain the differences that exist within the sector. He does, however, allude to the fact that they can explain some of the heterogeneity that exists among them. This position is further supported by Sparrow (2011), that in the area of management, size plays an important role in business management and that the experience of smaller firms cannot be simply considered as a "scaled down replica of large company experiences" (2011, p.3).

Research in the service sector can be traced back to the 1950s and 60s, with interest from management and sociology researchers in the relationship between

organisations and the knowledge workers they employ. Researchers such as Gouldener, in his 1958 article 'Cosmopolitan and Local', tried to characterise the different types of professionals that organisations employ. In the 1980s and 90s researchers such as Porter and Alvesson began to look at the unique characteristics of the challenges of service organisations. More recently, due to the significant contribution of the sector to the overall economy, particularly in developed countries, where services account for as much as two-thirds of GDP, we are beginning to see a surge in research in this sector from both individual academic perspectives and now a more formal institutional interest. Some universities now have dedicated centres researching services and service management. At the national level, countries are beginning to take an interest in having dedicated research and resource centres supporting both research activities and service-related policy formulation; for example, the UK has the Service Policy Unit and the Professional Service Group. More recently, research in service organisations has moved from a broad view of strategic management of services organisations (Lowendahl, 2005) to more specific and specialist perspectives. Researchers are now looking at service organisations from all dimensions, by investigating the management of human resources in service organisations (Coff, 1997), mergers and acquisitions in the sector (Empson, 2001) and the relationship with other organisations across the sector as drivers of knowledge dynamics in organisations (Stramback, 2008).

One area of research that has not been assessed in detail is that of firm size; this research will therefore briefly examine whether size matters in the management of knowledge or innovation in service organisations. Sparrow (2011) argues that size plays an important role in business management, but considerations on organisational theory and practice of knowledge management have been derived largely from the perspective of the large business environment. Small firms have unique features and do not necessarily share the same ideals and characteristics of large businesses (Wong and Aspinwall, 2004); as such, a scaled down model of large company solutions cannot simply be considered as a solution for smaller firms (Sparrow, 2011).

Defining an organisation as small, medium or large can be done using different references; the European Union defines a small or medium sized organisation as a

firm with fewer than 250 employees and a turnover not exceeding €50 million. This same definition is shared by the UK Department of Trade and Industry (DTI, 1999) and the Small Business Service. There are alternative definitions or classifications used by other countries, such as the US, whose definition is based on fewer than 500 employees and a turnover not exceeding US$31 million (SBA, 2003). It is worth noting that small firms are not necessarily 'small' in terms of their significance or relevance to the economy. SMEs in general constitute over 99% of all enterprises in the EU, US and Japan, and contribute significantly to their economic growth. Small firms are as influential as large businesses in the economic prosperity of a nation; they complement each other in both business and development. Recently, several studies have been conducted to attempt to explain knowledge management in small firms, in order to understand the uniqueness of knowledge management in SMEs. Sparrow (2011) argues that it is imperative to distinguish between the knowledge processes and the knowledge management approaches in the small firm environment.

4.4.3 Knowledge management approaches in small firms

Knowledge is created and acquired differently in small firms, compared to large organisations that have big R&D departments and systemic processes of knowledge capture among a diverse team of specialised employees. Small firms most often rely on the critical role of the owner manager and often through strategic alliances. The owner manager in most cases sets the strategic direction and becomes the main source of new knowledge in the organisation; when necessary, small firms hire resources to close a required knowledge gap.

However, small firms have a distinct advantage when it comes to acquiring knowledge from their customers because they tend to have more direct and close contact with their clients than is the case in larger organisations (Haksever, 1996). Knowledge is stored and organised differently in small firms because they do not have the same capacity and resources as large organisations for an appropriate knowledge repository. Knowledge is usually shared in an informal way and not documented for re-use; however, Wong and Aspinwall (2004) argue that although small firms lack the resources to store their explicit knowledge, they do have more advantages in organising and sharing tacit knowledge than large organisations.

Sparrow (2011) argues that in order to properly discuss the management of knowledge in small firms, this should be done through the lens of the organisational "knowledge intentions", which he broadly considers in the context of strategy, structure, systems and culture. Small firms adopt a more dominant personalisation strategy of knowledge management, partly due to their culture of engagement, but more to the resource-intensive nature of codification. Systems, processes and procedures are overall more flexible and simplified in small firms than in large organisations, and as such activities are more likely to be managed by informal roles with a low degree of standardisation. The knowledge management approach of small firms in relation to structure is very flat and human resource critical. Knowledge and information flow easily, with many employees multitasking, leading to a low degree of specialisation and a more generalist knowledge base. Organisational culture affects knowledge management in small firms just as is the case in large ones, although it is largely influenced in the former by the owner manager.

4.5 Conceptual framework

4.5.1 Introduction

The research project started with an initial conceptual model to understand the dynamic relationship of knowledge management and innovation management. The conceptual model was developed from empirical analysis of existing research in knowledge-intensive business services (KIBS), and the experience of the researcher.

Existing research has outlined three key processes of knowledge management; creation, sharing and application, sometimes presented as generation, transformation and exploitation, while the innovation process can be phased into three distinct stages of drivers, process and levels, presented sometimes in process terms as idea generation, conversion and diffusion.

The research adopted an emerging structure to demonstrate the relationship between knowledge and innovation in a management consulting setting, which is a departure from the dominant school of thought of a linear and modular structure of independent knowledge and innovation processes. The research is positioned on the argument that the interplay between knowledge and innovation practices is not

clear cut, and has adopted an evolving and linked model of knowledge and innovation dynamics; referred to here as the Conceptual Model.

4.5.2 Phase 1

The conceptual model adopted the idea that knowledge creation can be an internally-led activity or externally driven; internally-led by employees of the firm or the board, and externally driven by the process of co-creation with the client or in collaboration with other organisations. The model does not place one above the other, as the two can independently drive innovation and lead to knowledge creation or complement each other in the process. In most cases the two can go hand in hand but neither is a pre-requisite for the other, as such firms do not have to choose one or the other.

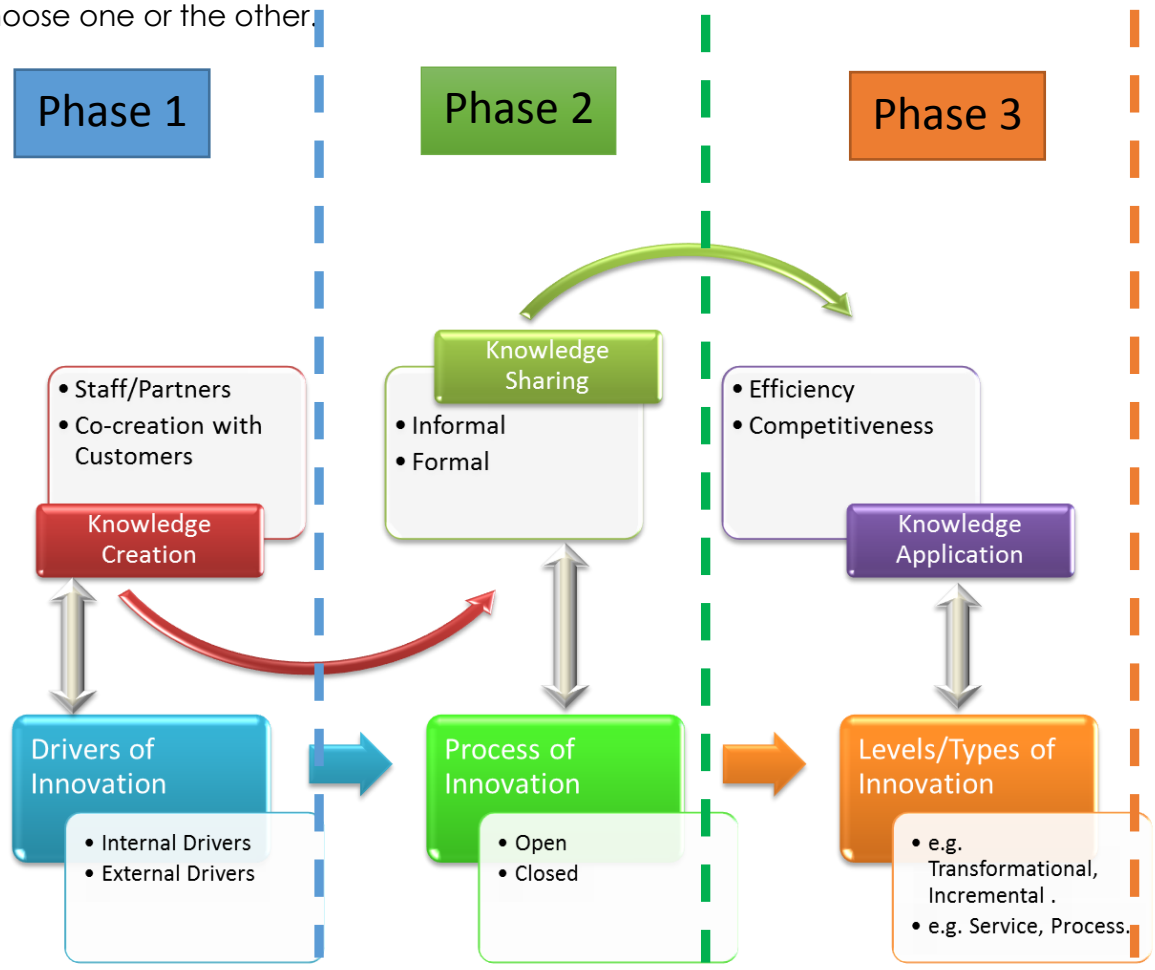

Figure 1: Conceptual Model of Knowledge and Innovation Dynamics

4.5.3 Phase 2

This phase of the model is critical; it is when the knowledge that is generated can be transformed. This can happen purely within the firm in an innovation process called closed innovation, or in collaboration with external participants as open innovation. The practice that kick starts this process is knowledge sharing, and this is where most organisations struggle.

Organisations are challenged in the art of knowledge sharing due to key contradictions in the understanding of the nature of knowledge and of organisations. Knowledge is a complex phenomenon, the lack of common understanding in its form, elicitation and value in organisations adds to that complexity, which further challenges an organisation's ability to support or facilitate a meaningful sharing process.

The organisational characteristics of being a collection of individual employees is often neglected by management, a fact that needs addressing in order to achieve meaningful knowledge sharing, particularly in a management consulting setting (due to the nature of knowledge workers). Management consulting organisations must provide the enabling environment that will address the varied requirements in addressing employees' fear of being different; challenging known practices; consequence of failure; internal competition; and recognition and aspirations.

4.5.4 Phase 3

The third and the final phase of the conceptual model is focussed on output. The assumption here is that knowledge is generated in the firm or co-created with external parties by the firm; it is then translated and exploited by the firm to be applied within it or in a client environment. This can lead to improved efficiency for the firm or the client, and possibly bring about an enhancement in the firm's competitiveness.

The model argues that the level of efficiency or competitiveness gained can be incremental or transformational. This is counter to some innovation theories that state that management consulting organisations do not have the characteristics to produce transformational innovation in the market.

In conclusion, the major shift proposed by the conceptual model is in the areas of linearity and commercialisation. The interplay of knowledge and innovation processes, at least in the substantive area of research, is not as linearly structured as represented by many, and there is an overlapping and continuous spiral of practices within the key concepts.

Moreover, important as it is, commercialisation of ideas cannot be a core characteristic of innovation, due to the fundamental requirement of organisational sustainability. The model argues that there is growing evidence of innovation taking place in the knowledge-intensive business sector (KIBS) that does not have commercial value at the primary application, but could bring about enhancement that may or may not eventually lead to some form of commercialisation.

5.0 Chapter Five: Research methodology. Investigating the development of knowledge management and innovation management in a management consulting firm

5.1 Overview of the chapter

The main objective of this research project is to investigate how knowledge and innovation management develop in a management consulting firm. At the heart of the investigation, a fundamental consideration of the meaning of knowledge and innovation is made. Any meaning attributed to knowledge must include the individual context, reflection, interpretation and experience; innovation should not be limited to physical and commercial characteristics. These considerations were built on subjectivist ontology and social constructivist epistemology, the philosophical standpoints adopted for the research.

The research design was constructed with the view to generating a theory that would explain the development of two dynamic and contingent phenomena, knowledge and innovation. The design would aid the research in making sense of these phenomena in relation to the time and context in the social system within which the research would be conducted. This would include the construction of meaning from both the experience and perspectives of the researcher and the research participants.

The research methodology is based on a qualitative approach and an in-depth investigation. Due to the nature and the complexity of the research investigation, this methodology was justified, in order to reach an in-depth description and rich insight into the development of the phenomena.

This chapter will present an account of the iterative process of data collection and analysis adopted in the research, from pilot to theoretical saturation. It also highlights some of the challenges in conducting the research, including key ethical considerations.

5.2 Research philosophy

In the field of knowledge and innovation management, there are no single dominant philosophical standpoints. This may be due to the fact that knowledge and innovation management as an emerging research area can be traced back to management or business studies, philosophy, as well as the research area of organisational behaviour.

5.2.1 Epistemology and ontology of knowledge in organisations

According to Easterby-Smith et al. (2012), there are two contrasting philosophical traditions in the field of management research: positivist and social constructionist. They are separated on the basis of their belief in the nature of reality, and pose diverse implications in research, particularly with respect to its independence , the relevance of human interest and the quest for causality.

The core difference in the belief in the nature of reality can be broadly viewed from two key philosophical assumptions: objectivist and subjectivist ontology (Johnson and Duberly, 2000). Objectivist ontology is fundamentally of the view that "our sensory experience of objects or reality provides the only secure foundation for social scientific knowledge" (Johnson and Duberly, 2000, p.181). On the other hand, subjectivist ontology believes that our understanding of both social and natural reality is presumed to be a projection of human experience and the cognitive process. This research believes that it is not possible to investigate a social system like an organisation in an objective way; that our view of reality is the outcome of our personal reflexivity and interpretation. This position fully aligns with subjectivist ontology, as described above by Johnson and Duberley. This ontological standpoint will be at the core of this research.

Several epistemic standpoints have been taken by researchers in the fields of knowledge and innovation management. These include positivism, which posits that with expert privileged knowledge universal laws can be applied to predict human action (Holsapple and Joshi, 2004); interpretivism, with a focus on discovering the socially constructed meaning of reality from the perspectives of an individual or group (Orlikowski, 2004); and critical pluralism, whose concerns are the

deconstruction of contradictions in order to empower people to bring about change to their world (Pozzebon and Pinsonneault, 2012).

In broader management and organisational studies, a number of epistemological classifications have been made by several researchers, such as Burrell and Morgan (1994), von Krogh and Roos (1995) and Patriotta (2003). Burrell and Morgan's (1994) classification is categorised into the objective and subjective, and the radical and conservative. That of von Krogh and Roos (1995) focuses on the two key approaches of cognitivist and connectionist epistemology. Patriotta (2003) focuses on a wide spectrum of theoretical considerations and integrates the key assumptions of the previous classifications. This research will use the Patriotta classification, as presented below.

5.2.1.1 Knowledge as representation: the cognitive approach

This is an approach which focuses "entirely upon the processing structures of the brain and the symbolic representations of the mind" (Patriotta, 2003, p.17). This view of knowledge as a representational phenomenon is based on the working of the human mind, with the key assumption that all human actions have some cognitive basis. This seems to neglect the semantic dimension and the unconscious working of the human mind in knowledge processing. As Sparrow (1998) points out, we sometimes process information at a non-conscious level, in a process he refers to as an "unconscious interpretation" (p.30).

5.2.1.2 Knowledge as commodity: the knowledge-based view of the firm

This epistemological position is characterised by the general idea of knowledge as a commodity that can be objectified and made transferable within an organisation.

The perspective posits that knowledge can be processed into static sets and is open to economies of scale, which can be made available at low cost. It also has a key consideration of knowledge as an organisational commodity, with a functional and causal link to organisational performance.

Both the cognitive and substantialist positions on knowledge are not compatible with the core objective of this study, which is the investigation of development, in

which time and context are critical to meaning and knowledge is generated through dynamic human interaction.

5.2.1.3 The situated approach

This approach focuses on the importance of organisational practice and the consideration of knowledge beyond a 'disembodied cognitive structure' and 'objectified commodity' towards a relational perspective, in which "knowledge is situated, in the sense that it is highly contingent upon the interaction among people, resources and routines present in a given situation" (Patriotta, 2003, p.39). According to Patriotta, there are methodological implications in this approach, namely: a) an in-depth relational engagement with a research setting will be required in order to appropriately study knowledge, due to the consideration of knowledge being embodied in practice; and b) organisational situations will be the most appropriate level for organisational analysis and not just individual employees.

The situated approach is a social construction process that believes people make sense of what is happening by sharing with others their interpretation and views on reality. The approach equally considers the crucial role of space, time and context in the construction of meaning. Johnson and Duberly (2000) present social constructivist epistemology as an epistemological standpoint that holds the view that "there can be no 'pure' data as all data are mediated by our own reasoning as well as that of the participants" (p. 59). This means that reality is determined by the interpretation and/or perception of people rather than by other objective factors. Therefore, social science researchers should focus on understanding the different experiences of people and why some of these differences in experience exist, rather than expecting it to be an outcome of external influence (Easterby-Smith et al., 2012).

This research aims to explain the developments in knowledge and innovation management, with the objective of taking an all-encompassing approach. The research approach aims to consider development as an evolving and dynamic process in an organisation in a holistic way, not by considering individual areas such as behaviour, management or information technology. It will investigate and identify the different conditions in the research organisation that can explain the development of both knowledge and innovation management, and will also offer

some possibilities for wider implications. This explains the approach of adopting a social constructivist research paradigm, where new knowledge is created from individual experience through the processes of assimilation and accommodation, and not just imposed through some abstract means (Piaget, 2013).

Social constructivism, however, focuses on the dimension that human experience and perception play an important role in how we see and explain phenomena or events. This leads to the possibility of having different conclusions from the same event if the understandings or perceptions are different. Some considerations for the research were made based on this philosophical standpoint; that knowledge and innovation are both an outcome of the active and often deliberate interpersonal engagement of people and that an organisation is a representative social or human system with all its inherent characteristics. The strength of this philosophical position in relation to the research is that it offers the potential to advance our understanding of how and why phenomena actually interact and develop, to observe and evaluate changes that occur and to understand the social processes involved in answering the research questions.

5.3 Research design and methods

This phase will build on the decisions and assumptions made in section 3.2 with respect to the research question, and uses social constructivism as the philosophical standpoint to develop a detailed research approach. The appropriate methods and methodology to access, collect and analyse the data will also be decided.

It is important to first highlight the necessary conditions critical to this research in order to properly identify the relevant methodological approach that will help in executing it.

The main objective of the research is to investigate and possibly explain the experiences and conditions, but not to explore causality. It is also important to the research that the meanings attributed to the experiences and conditions come from the research participants themselves. The study will be conducted within the participants' organisational settings, to enable the researcher to observe their continuous interaction, to investigate developing conditions and to make inquiries about personal experiences and understanding.

The research requirement of quality of experience and meaning and its aim of theory generation makes the qualitative research approach the most suitable option to adopt; this methodology is widely referred to in the literature as appropriate in helping researchers to provide meaningful insights into understanding complex research phenomena (Pettigrew, 1990; Eisenhardt, 1989; Yin, 2012).

The researcher is also aware of the presence of both personal and epistemological reflexivity in the construction of meanings during the research process. This awareness will help in thinking through possible implications of contributions to the research and its findings.

5.4 Data collection and analysis

Data collection in this research will be guided by the principle of constructivist grounded theory (CGT). This section will present critical issues of the role of the researcher, and the process of data collection and analysis. But before discussing the data collection approach, the role of the researcher will be explained. Simon (2010) argues that the researcher has to identify a role before setting out to the field. This includes the perspective from which the case will be viewed (as historian, story teller, impartial observer, interpreter of events or collaborator). With the aim of inductively generating its theory from a reflexive reconstruction of the researcher's experience and meaning, this research will be approached from the point of view of an *observing facilitator.*

As Guo & Sheffield (2008, p.674) rightly observe, "Unfortunately it appears that knowledge is often formed from bonds that are hard to understand from the outside looking in and difficult to explain from inside looking out". The researcher filled the gap by taking an observing facilitator role in the research organisation.

Based on the foregoing analysis, which posits that the research data will be generated through an action-oriented approach, the research will use a theory generation investigation approach and then adopt the iterative principles of social constructivist grounded theory in data collection, analysis and theory generation. As Charmaz (2006) explains,

> Like any container into which different content can be poured, researchers can use basic grounded theory guidelines such as coding, memo-writing, and sampling for theory development, and comparative methods are in many ways neutral. Grounded theory guidelines describe the steps of the research process and provide a path through it. Researchers can adopt and adapt them to conduct diverse studies (p.9)

The process of data collection and analysis will be guided by the concurrent process of coding and sampling based on the principle of constructivist grounded theory. This is a process that involves open and axial coding and theoretical conceptualisation and sampling. The process will start by identifying constructs direct from the participant's responses (open coding); these constructs will later be related to create axial codes. The axial codes will further be explored and interpreted from the context of the research environment in order to create some theoretical concepts that will eventually lead to theory or the research preposition.

5.4.1 Constructivist grounded theory

Grounded theory as a method or methodology was formalised by the seminal work of Glaser and Strauss (1967). It is defined as an inductive and comparative approach of inquiry that seeks to construct theory via the process of iterative data collection grounded in reality (Charmaz, 2010). In the last 40 years it has become the most cited research approach in social sciences.

There are now three main branches of grounded theory, divided along the lines of approach to data: the objectivist approach (Glaser, 2008), the pragmatist approach (Strauss and Corbin, 2008) and the constructivist approach (Charmaz, 2009). Although all are very much similar in their constant comparison of data collection and analysis using coding and memoing, their difference is very evident in theorising.

Glazer's (2008) view is that data should not be forced on pre-existing knowledge, but rather that research should start with a clean slate. Charmaz's (2009) opinion, however, is that theorising is an outcome of co-construction of the meaning and experiences of the researcher and that the researcher's reflective thinking will shape the theory generation process. Strauss and Corbin (2008) maintain a more balanced

position, acknowledging that theorising includes the construction and interpretations of the researcher, but stressing the minimisation of the researcher's influence in shaping the data.

Although the classical or objectivist grounded theory of Strauss and Glazer (1967) discourages the researcher's involvement, Charmaz (2009) acknowledges the role of the researcher in becoming involved with both the data and the research participants. In her view, the researcher constructs meanings through interaction with the research participants.

Glaser and Strauss (1967) define grounded theory methodology as an inductive methodology that seeks to generate theories through the simultaneous process of data collection and analysis. Charmaz (2003, p.5) identifies the following as the defining components of grounded theory practice:

- Analytical codes and category generation should not be from preconceived logically deduced hypotheses, but be constructed from research data.
- There should be a constant comparison throughout the process at each stage of the analysis.
- Theory development should be advanced at each iterative step of the data collection and analysis.
- Memos should be written in order to elaborate on categories, and identify their relationships and gaps.
- Sampling should be conducted in order to construct theory, but not for population representation.
- The literature review should be made after the research has developed an independent analysis.

Some of the above fundamental components of grounded theory methodology combine to make it one of the most widely used methodologies among management researchers (Charmaz, 2003), and also create some divergence in its adoption. The divergence of views in the application of grounded theory methodology was later to become very pronounced, even among its founders, as Strauss in 1989 developed an extension of the work and a set of techniques with Corbin (Strauss and Corbin, 1990). These sets of procedures moved the methodology towards verification, rather than its initial emphasis on the comparative method.

Major challenges to original grounded theory also extend to its treatment of the literature, the discovery of theory and the role of the researcher in the interpretation of data and meaning. Charmaz (2000, 2003) introduces a further development of the grounded theory approach in order to address some of these challenges from a constructivist perspective.

Classical grounded theory methodology, as presented by Glaser and Strauss (1967) and even the later development by Strauss and Corbin (1990), is fundamentally based on the discovery of theory independent of the researcher. In contrast, in the constructivist approach to grounded theory by Charmaz (2006, p. 10), one should "Assume that neither data nor theories are discovered. Rather we are a part of the world we study and the data we collect. We construct our grounded theories though our past and present involvements and interactions with people, perspectives and research practices". She argues that her approach to grounded theory "assumes that any theoretical rendering offers an interpretive portrayal of the studied world, not an exact picture" (Charmaz 2006, p.10). It is this pragmatic approach to grounded theory methodology from the constructivist perspective, along with the flexibility on sensitive engagement with prior literature and the consideration of the researcher's interpretation of the studied phenomenon as part of the construction of reality that led this research towards adopting constructivist grounded theory to analyse and interpret the research data.

> A constructivist grounded theory recognizes that the viewer creates the data and ensuing analysis through interaction with the viewed. Data do not provide a window on reality. Rather, the 'discovered' reality arises from the interactive process and its temporal, cultural, and structural contexts. Researcher and subjects frame that interaction and confer meaning upon it. The viewer then is part of what is viewed rather than separate from it. (Charmaz, 2000, p.523)

The different positions expressed by Glaser, Strauss and Corbin and Charmaz are all underpinned by their views on the nature of reality (ontology) and the way of knowing (epistemology). Strauss and Corbin posit that researchers should avoid imposing their personal influence when representing the data, while Charmaz recognises that the researcher's construction of reality cannot be eliminated in

theorising. But both are aligned to the subjectivist or interpretivist schools of thought and do not believe in one true reality of nature (Charmaz and Bryant, 2007). Glazer, on the other hand, believes in the explanation of one true reality and aligns himself with the realist and objectivist school of thought, holding that theory should emerge purely from data (Glazer, 2008).

This research will adopt a subjectivist view, in which reality is assumed to be a projection of human experience with no independent status; a social constructivist way of knowing from individual experience through the processes of assimilation and accommodation, and a position that is aligned to Charmaz's constructivist grounded theory. As Mills et al. (2005) illustrate, a constructivist grounded theory approach involves:

- A reciprocal relationship between the researcher and the participant, in which the researcher generates theory grounded in the experience co-created by both.
- A balanced relationship that must be created between the researcher and the participants in order to mediate inherent power in balances.
- Clarity by the researcher from the onset of the study with respect to his role in the research, the literature review and the process of theory development.

Charmaz (2010) argues that despite all the differences in the main grounded theory approaches, the constant comparative method of data analysis and theory building in a recurring process of data collection continues to be the core of this approach. This ability to iteratively collect and analyse data makes constructivist grounded theory a more suitable approach for this research, and enables the researcher to take adequate advantage of the access to the research organisation through to theoretical saturation.

5.4.2 Sensitive engagement with relevant literature

The research will briefly highlight the approach to be adopted in this research with respect to the role of the literature review, as Bryant and Charmaz observe that there is a growing concern "regarding how researchers should approach and use the existing literature relevant to their research topic" when it comes to using the grounded theory approach (Bryant and Charmaz, 2007, p.19).

The early principle of grounded theory, according to its founders Barney Glazer and Anselm Strauss (Glazer and Strauss, 1967) was predicated upon its warning against an early literature review or minimal acknowledgement of pre-understanding in the substantive area of research.

The 'clean slate' or 'purist' argument, which was later prominently championed by Glaser (1998), was based on several reasons, key among which is the need to empower the researcher and set him free to generate theory without being skewed by the work already conducted in the substantive area of research. This position has been supported by other researchers such as Holton (2007) and Heath (2006), who argue for the need to delay the literature review until completion of the analysis to ensure that the generated theory is grounded in data.

Several researchers (Charmaz, 2006; Dunne, 2011; Eisenherdt, 2002), including Glazer's partner in the discovery of grounded theory, Strauss (Strauss and Corbin, 1994), have argued for the impracticability of the 'clean slate' approach, that it is disproportionate to take such an extreme position in trying to ensure researchers' neutrality, despite the enormous benefit of exposing the researcher to understanding the work conducted in the area and deciding appropriately where and how to participate in the theoretical debate and make meaningful contribution.

From the debate it is clear that despite the need for researchers to have some appreciation of existing work in their research area, it is important to ensure they remain open and free, to allow new and even contradictory findings to emerge from the data. As Urquhart (2007, p.351) argues, "There is no reason why a researcher cannot be self-aware and be able to appreciate other theories without imposing them on the data".

In the case of this research, there has been sensitive exposure to the literature prior to data collection and analysis. This was to facilitate familiarity with the research area and build an informed justification for embarking upon the research.

This position of having sensitive exposure to the literature is in line with the theoretical position of constructivist grounded theory (Charmaz, 2009). Thornberg (2012) provides a broader argument, by stating that the analytical relationship between

the literature and research data can help in challenging, extending or even refining the current knowledge base. In his informed grounded theory, however, he warns against forcing data into existing theories, but emphasises the benefit of sensitive literature engagement and data analysis.

5.5 Conclusion

This chapter set out to explain the methodological process that would be adopted for the research project, starting from the understanding that there is no one approach that can be used universally to research every issue. The approach adopted in this study was first based on what the research sought to achieve, then on how it hoped to achieve it. This was done with an appreciation of approaches used in past studies conducted in similar areas.

Although a fundamental position was taken on an ontological standpoint, this too was linked to the context of the research. It would be methodologically difficult, if not impossible, to investigate the development of knowledge and innovation management from an objectivist ontological position, as temporality and context are essential to development; thus, subjectivist ontology would provide a fitting methodological foundation.

The quality of data that would be required to provide a rich description in the understanding of the research area also justified the research approach of the constructivist grounded theory in explaining the research and aiding theory generation. The research was planned to undertake interviews with key players, explore parallel documentary evidence and observe practices. The precise scale and focus of this data collection was not specified, since the research sought to use a grounded theory based approach cycling through data gathering and analysis as understanding evolved.

6.0 Chapter Six: Research setting and organisation

In this chapter the research will provide an insight into its engagement with the research environment. This will start by highlighting the uniqueness of the specific sector of knowledge-intensive business services (KIBS). It will provide the foundation as to why management consulting, as an example of KIBS, is an important focus area for the research. The section will also introduce the research organisation, and the research ethical considerations. It will conclude by analysing the research documentation and interviewing approach, highlighting who was interviewed and how.

6.1 Knowledge-intensive business services (KIBS)

KIBS are business services that work with other organisations to provide knowledge-intensive business support and processes. These services range from the professional (e.g. legal, medical, accountancy) to the technological (e.g. engineers, scientists). Miles et al. (1995) characterise them as follows:

- They rely heavily upon professional knowledge.
- They are either primary sources of information and knowledge themselves or they use knowledge to produce intermediate services for their clients' production processes.
- They are of competitive importance and are supplied primarily to business.

Although these is no single acceptable definition of KIBS (Woods, 2002), there is some consensus around the firms that belong to the sector. Both the European NACE (Classification of Economic Activities in European Communities) and the United Nations' ISIC (International Standard Industrial Classification of All Economic Activities) group their activities as professional, scientific and technical in their classifications. These are widely used by KIBS researchers (Santos-Vijande et al., 2013; Miles and Vinogradov, 2013), with the core groupings as:

- Legal and accounting services.
- Management consultancy.
- Architectural and engineering, technical testing and analysis services.
- Scientific research and development services.

- Advertising and market research.
- Computer and related activities.

This research is concerned with investigating the research phenomenon within management consulting services as an example of KIBS.

6.2 Management consulting as KIBS

The global market for management consulting has continued to grow in the last two decades, particularly in the developed economies of Western Europe and North America. In Europe, the activities of the sector have grown by almost 600% from 1996 to reach around £100 billion; this is significant for a sector that started fairly recently, accounting for 1% of continental GDP. Within the European management consulting market, the United Kingdom and Germany account for more than 50% of business, and they continue to dominate. The sector accounts for 1.14% and 1.15% of GDP in the UK and Germany respectively, with an annual growth rate above GDP. There is a massive growth opportunity for the UK sector internationally, as only 2% of its services are delivered outside Europe and 8% within Europe. Almost 90% of all service delivery is done locally with the UK market (Feaco, 2012).

The management consulting sector employs about 50,000 people in the UK, and has the highest efficiency rate in comparison to other European countries (efficiency here is total number of employees by turnover). Although consulting accounts for about 70% of the service offering of the management consulting sector, audit, training and now outsourcing have great potential. Within the consulting services, IT consulting accounts for 20% of the turnover, while more than 50% is from business consulting; this includes services such as strategy, operations management, project management, change management and HR consulting. The sector provides its services in a proportion of 70/30 to the private and public sectors respectively, with banking and insurance being the largest categories in this sector (Feaco, 2012).

6.3 The research organisation

The clientele of management consulting firms are becoming more sophisticated with regards to why and how they engage with the sector; more emphasis now is focused on value for money, impact and differentiation. The sector is becoming very

competitive. Firms are continuously looking at ways of competitive differentiation; with knowledge and innovation management taking centre stage in this development.

The research organisation has been an active member of the sector; it is a mid-size firm in the top 20 bracket in the UK. Its development is consistent with the sector, with several mergers and acquisitions, and strategic and operational re-positioning. The difference, however, is that the firm is one of a few in the UK to identify process development and integration as key components of their offerings and they are focused on this. They did not put the service line under IT consulting, as most other consulting firms have done or are still doing, as they have a dedicated partner and made it a product line in its own right. This perhaps explains why there is much focus in the organisation on understanding the dynamics of innovation in their operating environment. They aspire to be distinctively different in the sector, remain relevant and still maintain transformative portfolios that will not be easily commoditised or at least have a longer product lifecycle.

The firm enjoys a good rate of growth, both in terms of market share and financial performance. In some years their growth rate even exceeds that of the overall sector. This growth began to create some growing challenges. Key among these is the changing customer demand, including the fact that some of their clients have expanded internationally, managing its knowledge processes and enhancing its innovative capacity. It is the need to provide some explanations around this development and the ability of the research to demonstrate the potential value of engaging in the study that provided the necessary access to investigate the organisation. It is a mid-size consulting organisation, thus more representative of the sector and a strategic fit in terms of the knowledge and innovation management focus among key management consulting firms in the UK. The focus on mid-size organisations is based on the fact that they are more representative of the sector, offer a unique perspective due to their industry position and do not enjoy as much research attention as the big four firms and the small ones.

In the final analysis, the research based the selection of the case organisation on the fact that of all the options available, it was the organisation that offered the research the best data to investigate the research phenomena. Yin (2012, p.91)

advises to "choose the case that is likely, all other things being equal, to yield the best data".

6.4 Document analysis and interviews

A number of documents were given to the researcher for analysis at different stages of the research. These included management reports, bid documents, project reports, strategic planning documentation and performance management evaluation reports. The analysis of these documents helped set the stage for the research and in some cases was used to shed more light on certain suppositions from the research. Copies of some of these documents were given to the researcher, but a few were given on restricted terms for review only in the organisation and not to be taken away, due to sensitivity and confidentiality concerns.

6.4.1 Interview themes

The research Interviews were conducted around themes at the initial stage, these themes being generated from the overall research objective and aims. The interview themes and questions were around the following areas;

Drivers of knowledge and innovation management

- Where do the key inputs into the company strategic direction come from?
- What are the key drivers of product and service development?
- What are the key influencers of talent management approaches in the organisation?
- How do company product management, relationship management and market competition affect company performance?

Process of knowledge and innovation management

- How do multi-site operations and team integration interplay?
- What are the most commonly used means of knowledge and information sharing?
    - at the management level

    - management to staff
- What do you find to be the most effective means of knowledge and information sharing?
    - at the management level
    - with staff members

Challenges of knowledge and innovation management

- What do you think will be a challenge in achieving your future plans in the area of:
    - Taking a long-term business view (any disruption internally or from the stakeholder environment).
    - Building a sustainable product portfolio.
    - Managing your talent pool and eliminating regrettable turnover.
    - Effective knowledge and innovation management.

The second stage interviews for some of the participants were conducted as a follow-up to some of the ideas developed from the first round of interviews. Generally, the interviews were semi-structured and lasted between 30 to 90 minutes. The 33 interviews conducted were divided as follows:

- Directors/Partners 8
- Senior Managers/Managers 9
- Senior Consultants/Consultants 10
- Analysts 6

One interview was conducted over the telephone and one other off site, but all the remainder were conducted at the premises of the organisation across six different locations in the UK.

In addition to the interviews, the researcher had several engagement sessions with the participants in the cause of the research. These sessions ranged from sitting in project meetings, client sessions, review meetings or one-to-one in order to learn something from their work. These engagement sessions all contributed to the research context in making sense of the data and its interpretation.

6.5 Research ethical considerations

The research adopted the university's ethical research framework, as it affects the responsibilities of the researcher towards both the participants and the research organisation. This section will present the framework, comprising the preparatory stage, field study stage and reporting stage. At the preparatory stage, access to the organisation was of key concern. This was negotiated through a structured process of engagement with key stakeholders, explaining the objectives of the research and the structure of the research investigation. At this pre-engagement stage the research had to manage the expectations of the firm in terms of the research outcome and also agree the rules of engagement in line with the university's ethical research guidelines.

The next ethical considerations concerned the field study investigation. These presented themselves in the form of dilemmas, the balance between managing the time pressure of a PhD research and deliberating and responding to the actual requirements of the research environment, as highlighted by Yin (2012). Key among these is the need to show sensitivity when applying research techniques, such as interview questions, requesting and reviewing sensitive documentation and also respecting participants' privacy in observation.

Another ethical dilemma faced during the field study was in using recording devices during interviews and also the selection of the interview participants. The research also had to be mindful of the business requirements of the research organisation and take measures not to overburden the participants in a way that would affect the discharge of their primary responsibilities.

As Simon (2010) observes, some ethical considerations arise when reporting the research findings; these include:

- Deciding the lifespan of the collected data, recordings etc. gathered during the field study.
- Maintaining the confidentiality and anonymity of the research participants and the research organisation in reporting the research.
- Guaranteeing a level of fairness in the interpretation of events.

Another very important ethical consideration for the research is in managing the tension relating to different sections or individuals within the organisation, and in trying to be as open as possible to them in order to gain their trust. This is important due to the iterative nature of the research data collection and analysis; there might be interest in understanding how the research discovers some facts or reaches a given conclusion. As Easterby-Smith et al. (2012) point out, researchers should act as thinking and reflective practitioners and be ready to respond to the ethical requirements of their research context with considerable judgement.

In general, there is no established protocol for managing every conceivable ethical dilemma that a researcher will encounter. The key, as Simon (2010, p. 97) concludes, is to be "guided by the ethical principles we have adopted and the ethical theory or theories we appeal to concerning how we relate to people in social and professional life."

The researcher therefore ensured that all the above considerations were managed, with permission sought before recordings were made. The confidentiality and anonymity of the participants and the organisation were paramount in order to reduce any inhibitions that they might have had.

7.0 Chapter Four: Data collection, analysis and interpretation

7.1 Introduction

The main focus of the research is to provide an explanation of how knowledge and innovation management develop in a management consulting firm. This is achieved by investigating related activities in the research organisation, analysing employee practices and views on the dynamics of innovation; and evaluating the role of customers and the scope of their relationship with the organisation's knowledge and innovation practices.

The research investigation (data collection, analysis and interpretation) was approached using the constructivist grounded theory approach of constant data comparison through an iterative process of data coding (open, axial and theoretical), leading to the emergence of theory (Charmaz, 2006). The full detail of the methodology used was presented in the previous chapter, including an explanation of the iterative process of theory generation.

The analysis chapter will be presented in four sections. The first section will highlight the data collection process adopted in the research. The second section will provide some explanations of the knowledge and innovation management activities of the research organisation, using the data generated from the investigation in the form of open and axial codes. The codes used here were created from what was revealed in the data, without any preconceived categorisation. As Charmaz (2006) advises, "initial coding should stick closely with the data, try to see actions in each segment of data rather than applying pre-existing categories to data" (p.47).

The third section will present the conceptualisation of the data grounded from the research investigation, and in the fourth section the theoretical factors of the research findings will be presented to enable the researcher to conceptualise on the developments of knowledge and innovation management in the research organisation.

Table 1 further highlights the structure of the analysis chapter. Section 7.3 presents the axial and open codes, Section 7.4 the theoretical codes and section 7.5 integrates the theoretical codes into theoretical factors. These theoretical factors combined together provide the explanation of how knowledge and innovation management have developed within the research organisation.

Section 7.3 **Axial Codes**	**Section 7.4** **Theoretical Codes**	**Section 7.5** **Theoretical Factors**
Acquisition	*Competitive Environment*	**Environmental Responsiveness**
Leadership		
Market Intelligence		
Strategy		
Client or Market Stimulation	*Client Expectation*	
Customisation		
Relationship Management		
Trust		
Innovation Management	*Changing Industry Dynamics*	
Knowledge Management		
Market Leadership		
People Management		
Market Leading Products	*Innovation as a Product*	**Conflicted Understandings**
Need Based Products		
Service Renewal		
Collaboration	*Innovation as a Process*	
Project Delivery		
Market Engagement		
Financial Performance	*Client Engagement as a Means to Value Delivery*	**Relational Engagement**
Knowledge Creation		
Product Development		
Business Performance	*Client Engagement as a Value Proposition*	
Knowledge Sharing		
Innovation		
Trust		

Table 1: Structure of the research analysis

7.2 Data collection: fieldwork

The data collection from the research organisation was guided by the principle of constructivist grounded theory of the iterative process of data collection, analysis, interpretation and theory generation. In line with the approach, a non-linear process of inquiry with constant comparison of data was adopted for the emergence of the theory. The fieldwork was conducted in three key phases: pilot, in-depth research investigation and theory saturation. These phases will be explained in more detail in this section. Table 2 shows the detailed research activities from phases 1 to 3.

Phase	Phase 1: Pilot	Phase 2: In-depth Research Investigation	Phase 3: Seeking Theoretical Saturation
Research Activities	1. Initial literature review 2. Case selection 3. One month case appraisal 4. Three interviews 5. Document analysis	1. 25 Interviews 2. Several site visits and event participation 3. One year case evaluation 4. Analysis and interpretation	1. Five interviews 2. Two months of case and theory appraisals
Research Outcome	1. Initial category development	1. Axial coding and conceptual development 2. Emerging theory	1. Selective coding and synthesis 2. Theoretical saturation 3. Identifying the grounded theory within the existing literature

Table 2: Research Iteration Process

7.2.1 Phase 1: Pilot

In Table 2, both the research activities and outcomes are detailed. The process started with a sensitive literature review in the broad area of knowledge and innovation management, to familiarise the researcher with the key concepts in the field of research. The outcome was used to design a conceptual model to guide engagement with the case organisation.

The research organisation was identified from a range of options based on a) appreciation of the general research interest; b) ease of access by the researcher in terms of location and protocol; and c) willingness by the organisation to commit to the study for the period of the research.

After the first engagement briefing, document analysis was undertaken, along with three interviews in a month of engagement during the pilot. At the end of this, a key theme began to emerge in the areas of knowledge management and innovation management development, areas that need further investigation in the organisation.

This area was also later identified to offer a unique academic insight, as no work has been conducted on knowledge and innovation management developments within management consulting services. This is despite several studies having been carried out on management consulting firms, such as strategies for managing knowledge (Hansen et al., 1999); evolution of knowledge management practices (Powell, 2008); innovation through informal knowledge sharing (Taminiau et al., 2009); a dynamic approach to knowledge management practices (Powell and Ambrossini, 2012); and the emergence and dynamics of the management consulting industry (Engwall and Matthias, 2013).

In addition to the identification of the area of substantive research, initial category development was also conducted at the pilot stage from the data generated from the field using the computer–assisted analysis software Nvivo.

The case boundary was sensitively defined at this stage, highlighting the units that would participate in the study. This included the locations that would be visited and the role of the researcher; as highlighted earlier, this would be as a facilitating

observer. It was sensitively defined because there was the understanding in the organisation that it may change as the research progressed, or that something may have been uncovered that may have warranted a review of the research boundary.

7.2.2 Phase 2: In-depth research investigation

In the subsequent phase, the research engaged in an in-depth research investigation to analyse the conditions that shape the development of both knowledge and innovation management in the research organisation.

This phase was the core of the field study. It involved intensive document analysis, by reviewing several bid documents, project reports and evaluation documents. The researcher was also given access to some employee appraisal documentation, policy documents and strategy presentations. Some of the documents were only given for sighting as evidence of their existence due to their sensitivity, i.e. acquisition agreements. Strategic plan documentation that was confidential was only released to be studied onsite and not to be taken away.

25 in-depth interviews were conducted, 20 of which were over one hour long. These interviews were conducted within the organisational premises, apart from one telephone interview and one conducted on a client's site. The employees interviewed comprised three directors, four partners, four managers/senior managers, ten consultants and four analysts from five different units of the organisation. These interviews were complemented by several sessions with the staff, engaging with them as they went about their normal work at different locations of the firm over a period of one year.

The category development of the data was fine-tuned at this stage, after initial analysis, and axial coding was carried out in Nvivo. Through the process of constant comparison of the data, some conceptual development was made and an initial theory generated.

7.2.3 Phase 3: Seeking theoretical saturation

During the third phase, the researcher theoretically sampled the findings from the previous phase, in order to explore possible variations in meaning of the generated categories or to further elaborate on them.

The researcher returned to the organisation for another round of investigation; at this stage the process was selective. The process continued until no new dimension emerged from the case data; the exercise produced a level of conceptual density from which it became evident that the research had gained theoretical saturation.

7.3 Open and axial coding; an explanation of knowledge and innovation management activities in the research organisation

7.3.1 Overview

In this section an analysis of the research data will be presented, using recurring themes generated from interviews, as well as the observations and field notes of the researcher. These themes were recorded in Nvivo, using a contextual open coding approach, and later grouped into related axial codes. All the nodes discussed in the following section were grounded in the case data apart from the notion of trust, which, although evident in the research, was adopted from existing theoretical work by Sparrow et al. (2009).

The key reason for analysing the open and axial codes together was to provide the reader with more contexts for the research and also to explain knowledge and innovation management activities in the research organisation. The axial coding presented in the following section explored the relationships between the open nodes by linking some of the basic concepts in the case data and further developing them into a more contextual node (Strauss and Corbin, 1990).

7.3.2 Strategy

This section on strategy was constructed from the conversations and the activities in the research organisation, in response to how they felt the organisation was positioned in the sector both in terms of past, current and planned activities. The organisation has evolved around the development in the industry, and managed to adapt to the changing competitive environment at different times.

Strategic planning

There was a belief in the firm from some of the directors that the organisation needed to do more in the area of strategic planning, particularly to position itself relative to the pressure from the big four players, PwC, KPMG, Deloitte, and E&Y. A more detailed review of the 'big four' will be made in section 7.3.9 on market leadership.

There were a number of strategic changes in the organisation, but these changes needed integration. An example would be the new service structure for aligning products and services, which was implemented in order to enhance innovation at the service lines, and also to integrate market understanding for the benefit of the broader client base.

Another area of concern in the organisation related to strategic planning was manpower development, which lacked strategic direction. As one of the senior partners pointed out:

> *We carry a big weakness. So, I think if any one of us left at this moment in time, I think there would be a real problem, I really do. We should be encouraging the people down the ladder to take up more responsibilities, and then senior management can be freed up to think more strategically*.

A number of practices were introduced in order to manage this challenge; these will be discussed in more detail in section 7.3.6, concerning people management.

Acquisition strategy

In the last 10 years the organisation has been involved in a number of acquisitions. These were geared towards making the business more innovative and also to help them acquire expertise that was missing in the firm's experience with clients and services that it wanted to pursue or develop.

Integrating acquisition

Acquisitions for the organisation came with a unique challenge, which was that of integration. The first challenge of integration was around branding, because over time some of the acquired firms had stronger brands than the organisation. The challenge of assimilating these changes began to show in the way different employees dealt with the brand, which sometimes had a negative effect on short-term business performance.

Problem of control between regions and London

Another key challenge of integration was around the organisational structure and regional autonomy. Some of the organisations acquired operated an autonomous regional structure, while the research organisation had an operational structure that was coordinated from the headquarters in London. As such, some of the regional directors from the old structure were left without corresponding accountability.

The problem of control between the regions and London began to manifest itself in staff not being able to go for training organised by the headquarters in London or London staff not being able to effectively become involved with regional accounts and service renewal processes. This then leads to the issue of leadership.

The combination of these nodes helped the research to understand how the organisation has evolved in the sector and highlighted some of the strategic decisions that have helped shape its position.

7.3.3 Leadership

The research organisation has enjoyed a good level of stability in its leadership team; in the last 10 years they have only had two executive changes. They have a very

stable organisational design, with few changes as a result of acquisitions and changes in business line. Within the leadership coding there are a number of open codes, such as leadership visibility, leadership buy-in, impact of leadership on innovation, and leveraging current opportunities. All these codes were generated directly from the research engagement with the organisation.

Leadership buy-in

In the organisation, all engagements with clients were streamlined through product or service lines. The heads of the product lines also had the final say on all client engagement processes and services; consultants worked as hard to procure leadership buy-in into their service offerings as they would have done to secure jobs from clients. According to a consultant:

> *This then added extra difficulty to us, because sometimes what the client wants is not what the team leadership would perceive as having value. And because we have to engage with the client in line with our brief, we sometimes miss out on key opportunities.*

Leadership buy-in was an important part of the consultants' consideration in most engagement with clients, and had a significant impact on the activities of the delivery teams in the organisation. The organisation started a management project participatory plan, when at different times senior partners followed the consultants into delivery sessions with clients. This was both for executive support, and also in order to understand better the changing dynamics of the client-consultant relations.

Leadership visibility

The management project participatory plan made the leadership team more visible to the team members, in addition to providing additional credibility and value for money to the clients, as a consultant observed:

> *Because we know the importance of this visibility that the clients don't just see junior resources carry out an audit. They needed this added value experience advice from the directors, because our job sometimes involves experience-based work. You build up experience and credibility and if you are present at*

a higher end and are visible, they like it, because they think they're interacting with someone senior rather than just getting an output.

Leveraging current opportunities

The research organisation believed it was not leveraging enough of its current opportunities, particularly in the public sector division. They are among the 20 largest audit firms in the world, but still needed to be more market- and client-focused. This was a concern, as they seem to be losing ground in most of their key markets, to new entrants and the big four organisations.

A partner pointed out that

We are not doing enough with the existing client base. So forget the others that are not even our clients. We have around 700 public sector clients; we should be really accelerating what we're out to do. So we probably don't need to find any newer clients. We probably need to just look at the clients we've got and work through them.

The large-scale activity around the public sector has had an effect on the organisation's innovativeness, because it sees sufficient opportunities without having to do too much in terms of innovation. There is also a belief in the organisation that the public sector business unit was at the end of its maturity spectrum, which was why they were not seeing business growth.

A partner from the corporate side of the organisation believes that

One of the reasons they have stagnated, without doubt, is because they're not offering their clients anything different. Offering them exactly the same thing with the exactly the same people at exactly the same rates, if not cheaper.

On the challenge of value addition from the public section unit and how the organisation could mitigate the situation, he had this to say:

They're not adding value to those clients. But the corporate sector is now actively engaged in trying to help them manage these challenges, by identifying new opportunities which can be pushed into the public sector market.

This has therefore further highlighted the role of knowledge management in the organisation and also the significant influence that leadership can have in both knowledge management and innovation management in an organisation.

7.3.4 Knowledge management

Knowledge management as a strategic area was one of the core focuses of the research organisation; several open codes encapsulate their thinking as well as their practice of knowledge management. These themes are classified under the following open codes: knowledge creation, knowledge sharing, knowledge exploitation and knowledge management system.

Knowledge creation

Knowledge creation practices in the organisation were driven from both internal and external sources. Internal sources were based on employee capacity and experience, external ones from inputs and co-creation activities with clients and partner organisations.

Some of the key breakthroughs in the organisation came from experience with clients. One of the partners observed that

> *It's really important that somehow we always keep a good eye on the market to ensure we're looking at not just our competitors but what's happening out there and thinking, right, that's something we can go talk to our clients about and stimulate their thinking. A lot of what we do today is built on our knowledge and experience of both the market and our clients.*

There was also evidence of significant co-creation in the organisation, although there was no formal process and understanding of this as a philosophy. However, many of the products and services were either originally conceived from a client engagement or developed with clients in order to address certain needs.

Some parts of the organisation were not very comfortable with the idea of co-creation, because of lack of control in dictating the outcome. They had an approach they referred to as silent development, where portfolio development happened exclusively in-house. This they believed would not only ensure that the organisation was very much in control of the final shape of the product or service, but would equally ensure some level of confidentiality which they considered would not otherwise be possible in a co-creation process.

Knowledge sharing

Knowledge sharing was another key practice area in the organisation. Within units, knowledge sharing was largely informal, mainly due to the frequency of engagement, even when the teams were not working from the same location. Among the wider organisation it was something of a challenge, as the systems or mechanisms were not in place to facilitate knowledge sharing. As one of the managers observed

> *The biggest problem we have, because we are not a massively resourced, rich business, is that we don't allow enough time for people to get together and exchange ideas. You have this very rich, high-quality knowledge-base but then that doesn't get shared. On the rare occasions when the forum is provided for employees to exchange ideas, we do it in a rush and it's very problematic, I think. We should do it really in a more constructive manner.*

On the use of technology to facilitate knowledge sharing in an organisation that was spread across the entire country, from Aberdeen to Southampton, a consultant explained that

> *We have to accept nowadays that is how people work, we probably need to look at more innovative ways of using technology to address that. I'm conscious that we don't use, or don't have, any kind of mechanism for using some kind of video conferencing and things like that. I still believe getting people in a room even if it's once a month can be beneficial*.

Much of what has happened in the organisation in terms of knowledge sharing and understanding client engagement has come from the consultants' reports, which

according to some of the consultants do not explain half of what transpired in the engagements. The quality of the reports was affected by the fact that most of the consultants do not see the value of writing them, as evidenced by this comment: "*to be honest you get to a point where you are just writing it because you've been told to write it*". They all insist that the best way of sharing knowledge about a client's engagement is talking to the people, rather than just reading their report, because having the right information could help simplify other tasks and may enhance performance level.

Industry networking

This was identified as a key source of information sharing and was an effective knowledge-sharing avenue. Employees sometimes refer to their industry contacts in order to gain some perspectives on issues. If their contacts do not have that information, as this analyst explained, they

> *Might know someone directly or know someone who knows someone. But we'll get to that person who will answer my query. It is about asking and networking, but sooner or later you will know the key people who you need to know to carry out your job.*

A director recently recruited from one of the big four firms admitted that the organisation was not alone in lack of effective knowledge sharing. The management consulting sector as a whole was not doing as well as it should in sharing successful practical examples. This was attributed to fast growth in business size and employees, and also the fact that they worked across multi-site operations. Management consulting firms prefer to have offices in locations clustered around their key clients. This culminated in having offices in different locations, and he believed that operating from multiple sites affects their ability to share knowledge optimally.

Knowledge sharing also faced a challenge of **competency level trust.** Some employees were of the view that what they know is too technical and complicated for other employees to make sense of. They did not trust their colleagues, particularly those from other units, to have the competency to understand and make use of their data, even if they were to make it available. A senior manager from the

technology division explained that *"there are some things that are very specific to our own disciplines, which obviously doesn't really lend itself to knowledge sharing."* She believed that there was some discipline-specific knowledge that should not be shared with anyone outside the discipline, both because of lack of context and the need for confidentiality.

A key initiative in the organisation in managing the challenge of lack of knowledge sharing was around the introduction of a shared area on the network, an area where key projects, ideas, marketing materials, new portfolios under development and interesting information gathered from clients could be displayed so that everybody could have access to them.

Another initiative was to encourage the individual consultants to write case studies after big projects, by building the research activity into their key performance activities. The case studies were compiled into a portfolio of different knowledge areas for future reference.

Social networking also aided knowledge sharing in the firm. It is also a key practice in the sector. Many networking activities occur in the management consulting sector, because most of the experienced employees have worked for more than one firm. When professionals move from one firm to another, in most cases they service similar business lines to those in their previous organisation. If consultants or partners have had a good track record in consulting for the financial sector, they are most likely to be assigned to the same sector if they have been offered a new role in another firm. This means relating to the same circle of clients and contacts. Social networking was identified as a key area of knowledge sharing in the organisation.

Knowledge exploitation

Knowledge exploitation in the organisation was considered to be its ability to exploit or use the knowledge available. The only formalised approach in the use or re-use of its knowledge was in the area of pipeline management, a concept of managing its current and potential opportunities via a pipeline tool. The tool had a dashboard which showed both the current and potential value of project works, giving senior management the information they needed to decide on budget allocation and future portfolio developments. Previously this was done by individual teams outside

the system, with no overall organisational visibility. But now the information was on an integrated system, where it provided the organisation with a general overview.

Taking full advantage of its knowledge base, the organisation believed much needs to be done, despite current improvements. As a consultant from the corporate division observed

> *We are more commercial than the rest of the firm, but even at that we would've talked through lots of different ideas. Completely different ways of doing things for different clients, and not do much in actually implementing the ideas. We are thinking about many innovative solutions to enhance our practice but don't manage to concretise and implement those ideas.*

Knowledge management system

Another challenge faced by the organisation in the area of knowledge management was to have a working knowledge management system, due to the very relational nature of the transactions the firm was involved in.

There were questions asked as to whether any system could be good enough for a consultancy business to take knowledge sharing to the level it needed to be across the organisation. This was pointed out passionately by one of the senior partners:

> *I think coming back to the whole opportunity for client discussion, exploration of opportunity, I think there's not enough of that going on and I don't think a system would necessarily, an electronic system, would make much difference, but again it comes back to actually working with our clients, you know, what issues are coming up, are there opportunities, within your business lines, or in other business lines? I don't think we use enough of that combined intelligence and this is what we really need to be doing.*

Codification of the organisational knowledge, according to one of the IT consultants, needed to be looked at again at firm level, because much of what was going on was more focused towards addressing concerns from some key units, and that it was believed the existing system was good for purpose at the moment. As one of the custodians of the existing system, he believed the system was as good as

the information put into it. Consultants should focus more on building their database and using the system properly, rather than focusing on how bad the current system was. Even though they were open to enhancing the system, enhancement alone would not solve the problem.

The centralised knowledge management system was not used frequently by the employees. When they did, it was largely used to record transactional data and pipeline information, and in a way that many others believed did not make much sense to them. One of delivery team members admitted he did not use the system because

> *For me I'd almost say, well we know what we need to do with our client engagement information, but it's very difficult to put that in some kind of central repository where everybody can access it. You know we do still seem to be just emailing things around a lot and you know that's not how it should be. We sell technology services to our clients you know. We're always telling them about making improvements, so we should almost be sort of doing a bit of practice what we preach I think.*

Although the organisation had a knowledge management system for information sharing, there was also the question of sensitivity. One of the consultants asked "*what client data do you share and with whom?"* The research identified this issue as key, and on the mind of most consultants as they began to put down their thoughts on their clients. A matrix system was later designed and introduced in the organisation for recording sensitive information. Staff access was not restricted, but cautioned and tracked. Employees accessing high level sensitive data, therefore, would have to agree to the risk matrix and confidentiality agreement, and the system would capture their details and what the information was required for.

Consultants often complained about the challenge of obtaining specialist support for some of their projects, and the system was not helping. The challenge was that they had to search for this by calling people, and in most cases the wrong people. This was due to the lack of a process that could direct employees to the right people, with the right skill sets, who would provide the needed support for a given task. The search process could sometimes affect performance by taking considerable time, which was why many employees admitted usually working on

their own on client projects. The key here was that the knowledge management system was viewed to not only represent a repository of data, but equally a database that could provide access to identify people with different skill sets and experiences in order to enable the organisation to enhance productivity and innovativeness.

7.3.5 Innovation Management

Innovation management was a very important area for the research organisation. A considerable number of activities within the research context were identified under it. Some will be discussed in sections 7.3.11 and 7.3.12, which deal with market engagement and product development respectively. In this section, the research will focus on the organisation's approach to innovation management, innovation performance and the impact of technology.

Innovation

The central issue identified around innovation in the organisation was the role of commercialisation. One consultant believed that *"As long as it doesn't have a commercial value, it can't be said to be an innovation. And so I suppose commercialisation and innovation come along together*".

The challenge of commercialisation as a core characteristic of innovation is both a theoretical and practical one. In the academic literature there are arguments on both sides as to whether commercialisation is just a component or a pre-requisite in the innovation value chain (Hansen and Birkinshaw, 2007). Apart from the theoretical implication, this perspective also has a practical one for business managers. Some organisations struggle with the idea of referring to anything as innovation when it does not have an impact on commercial value.

A key consideration of the research here was the need for a system-thinking approach when it comes to innovation and its performance, by evaluating performance from the overall activity flow and not just focusing on the end product, in which commercialisation and financial performance are not a precondition to innovation, but rather a by-product of its value chain. In the research organisation,

there was the same polarisation in evaluating how important commercialisation is in innovation and its performance.

Another key issue in the organisation's innovation debate was the challenge of trying to balance the workload and the ability to innovate. One of the partners explained that

> *I think we sometimes lose our ability to be innovative because we get tied into projects. And we've carried that problem I think since I joined in 2004. And whilst we're not getting off the hamster wheel, we lose our ability to be as innovative to our clients as we should.*

But the organisation continued to believe that effective management of its innovation activities could help in delivering better ideas in services to clients and also the potential for organisational efficiency.

Need for an innovation strategy

Considering all the challenges relating to the organisation's innovation performance, it was focused on evaluating its innovation strategy in order to guarantee its long-term sustainability, although views were divided as to how innovative the organisation was, and what in the organisation could or should be considered as innovative. But it was not divided on the overall need for an innovation strategy. One of the directors believed that

> *We still have to innovate; the propensities to innovate are different. My point is there are different needs to innovate in different parts of our business. We need to coordinate that because it is so different. And that tells me almost that, you know, I do need somebody that can take all those differences and say, "Right, for this unit what you need to do is spend a bit more time here, less time here. But you need to do it and I'm going to monitor what you're doing and we need to agree what that looks like.*

One of the units was charged with identifying areas where enhancement could be introduced within the organisation, by diagnosing the innovation activities within it, and by positioning the organisation to be able to leverage the opportunities within

each business division for the rest of the organisation. This was seen by some in the unit to be a problem, as expressed by this consultant:

> *We are innovating and pushing that innovation into another unit. Probably because they're not doing it themselves, but you know, which is an issue. But we are doing it and to some extent that's keeping us away from our own innovation and our own market*.

Need for accountability in innovation performance

The need for accountability in innovation performance was echoed in the organisation, which made it advocate stronger accountability in the process from its employees. This was by focusing on innovation performance as a combination of several activities, including the process of project execution.

Because of variation in both their service portfolio and clientele, different parts of the organisation innovated differently. This put pressure on it to coordinate these activities, in order to share practices and enhance the client experience. In doing this, the organisation has committed some resources to monitoring what different divisions are doing, against what they should be doing and how different this is. The challenge, however, is that the monitoring is more of an idea than actual practice.

The research investigation revealed that although monitoring was taking place, there was no accountability for the overall process, in terms of ensuring that good practices were shared across different areas, and documenting project learning. There was a consensus in the organisation over the need to have some form of structure to manage accountability in terms of organisational innovation. The organisation's view, according to this director, was that they

> *Need to appoint somebody that is accountable for innovation and focusing innovation across all our parts of business. There is a lack of internal mechanisms that will enable us to innovate. All the tools just don't exist very well. So it will be nice, we all recognise that, some of that, a lot of that needs to be improved.*

Impact of technological change upon the innovation plan

Another key development in the sector that affects innovation is that of technology. In the research organisation there was consensus that technological changes inside and outside of the sector had significantly affected the types and the level of innovation for them. Some of the changes can be linked to the wider changes happening within the information technology sector, such as the shift towards having an open platform, where software solutions from the organisation could be easily integrated with other systems applications. This was not possible in the last few years, as some of the services were not web-based. Even their traditional knowledge exchange forums were likely to change, as one of the partners responsible for the forum was considering using online forums instead. *"I'd like us to be able to do webinars rather than our clients having to come into London maybe for a seminar"*. This is in order for the organisation to be optimal in its adoption of technology in enhancing both their client relations and people management, as part of its overall innovation management approach.

7.3.6 People management

This section focuses on the different people management practices in the organisation, developing insights from open codes such as human resource management, succession planning, and team relationship. There were divergent views on the organisation's people management practices from their employees, and in comparison to the sector they are performing fairly well. In terms of its approach to recruitment, the organisation can be said to be in continuous improvement. In the sector there were several examples of firms that would not recruit for senior positions from outside their organisations, and of firms that did not provide rotation opportunities for their employees. The research organisation did both; new hires could enter even at director level, and several employees had opportunities to change roles within the firm. Examples of these practices are explained in more detail below.

Human resource management

The organisation's approach to human resource management was a reflection of their overall strategy, that of continued transformation in practices. Starting with recruitment, the general approach in the organisation had been around the three key practices of internal promotion, external recruitment, and a few examples of

using acquisition as a talent management opportunity. Acquisitions have been discussed in section 7.3.2, under strategy.

Internal promotion in the firm was conducted through a very informal process, as this partner pointed out: *"There is no internal process of talent identification and recognition in the firm. We have through some informal process and been able to identify some talent within the firm that we would like to have in our team"*. This internal promotion practice has presented some challenges to the organisation. As some employees explained, they felt unappreciated, unfairly treated or denied opportunities, because they could not understand how others were identified and promoted. Another challenge was that the organisation was not able to clearly establish its available skill sets, and sometimes ended up recruiting externally for a talent they already had internally.

This has led to external recruitment being the default source for the organisation, as explained by one of the partners:

> *We got team members and some of them have certain attributes, but at the moment not all of them show enough of the attributes to be at a level where we want them to be. So, I think our difficulty, and this is where we have a weakness at the moment, is we have got to find some other individuals to come in.*

External recruitment was carried out from within the management consulting sector by the human resources department. Over 95% of external recruits selected in the last two years have been people from within the sector. In management consulting services there is significant value attached to industry experience; people with a significant amount are easily head hunted and offered positions within the sector. In addition to an expected enriched capacity and professionalism from practical experience, there is also the value of having client contacts. It is expected that some of the past contacts the newly recruited person has made in the industry will be of some value to the new organisation.

Another key area within human resource practices was performance management and employee development. Although there was the practice of holding an annual performance review process in the organisation, there was no effective

performance feedback process linked to the review process in place. Very bad performers were told of their inefficiencies and on a few occasions were sanctioned, whilst average performers did not get the help they need in identifying and developing their performance gaps, as observed by this consultant:

> *Last year a colleague of ours struggled a lot with his reporting, and that had been identified in two previous performance reviews according to him. But at no time did any one approach him with any development intervention; you only get to see human resources when they think your performance is not up to par and they are thinking of letting you go. That should not be the case.*

Moreover, the very good performers did not always get the recognition they deserved, as one of the partners confirmed:

> *One of the talents we identified said to me no one had ever told him that he was good. We have to pay more attention to recognising our star performers, because good staff moves to other places, where they will be more valued and challenged.*

There were few people-development processes in the organisation, as noted by the research. However, employee development was more about learning on the job, rather than any systematic or organised development process. Some of the directors believed senior management were responsible for developing their staff and the reason it was not happening was that

> *Some people don't develop their staff because they haven't been developed themselves. This shouldn't be the case. We just introduced a mentoring program to manage our talent pool with trackers, to ensure we have a view of what is going on and prove to managers this is important.*

Along with the new mentoring programme, the organisation started a staff satisfaction survey. This they believed would help identify the issues that matter the most to the employees and also help in identifying where they had the most problems. Although there were few policies around people management, as evidenced during the investigation, some management staff ensured the best possible working environment for their people within the circumstances. As one

manager from the corporate section argued, "*We are probably better at people management than most parts of the organisation*". The survey was also targeted at identifying this variation in management approaches to people development and management.

A new induction process was introduced in the organisation. This was in order to engage with new employees at a corporate level concerning the direction of the organisation. This helped sensitise the new employees to what to expect from their respective units, and helped them to identify and to manage non-compliant managers or circumstances. One of the new employees interviewed believed the induction process in the organisation was among the very best in the industry:

> *I think the induction process is really good. Directors from different departments come and speak on what they do and what services they offer. So if you were completely new, you would have an overview of the services the organisation offers. And I think in a way that's quite better than other places. I haven't seen this kind of detailed approach before; I think that was a positive when I joined*.

The challenge in people management and development, from the research perspective, came down to the execution. Most of these important frameworks and strategies were not delivered effectively. Organisational enhancement projects were sometimes relegated to the background, instead of striking a good balance between them and client projects. In striking this balance, the organisation had to resource its internal support services functions adequately, as one of the support staff noted:

> *So it became a balance between the capacities here. The desire was there but the capacity was not there to produce more than we already have done. Our numbers have not increased for a while and our responsibilities have more than doubled in the last three years.*

Succession planning

There was a problem of succession in the organisation, with no clear succession protocol for identifying replacements for key positions. This was particularly important

for some of the very critical roles, as some positions had been identified in the organisation as high risk. This was due to the exposure of the firm should people choose to leave, because of the nature of business engagements that was built around them.

There were different views in the organisation on how to deal with this. Some believed that key external recruitment should be made to secure the future sustainability of the organisation; this was pointed out by a director:

> *I believe what we need to do is to bring in new people who are very good, with the potential to be as good as we are or even better. It doesn't need to be someone who is 100% ready to step into a partner role. It could be somebody who shows 60% to 70% of the requirement and the rest they can pick up, to be honest. It's not sufficient for us to be able to grow and be completely resilient and continue the growth of the market or our growth, I should say, within the market. Without having that second tier of individuals across the organisation, this is our real big problem, I think.*

Another perspective in the organisation was around developing internal staff so they could form the succession pool. As this director explained, this is industry best practice:

> *It's about developing the people below us at the moment; I don't think that plan necessarily, completely exists. The organisation must have a development plan that will ensure every director has one or two people identified as his possible replacement, the same for all key positions. Succession planning should be in place across the firm and should form part of a key performance indicator. I know people might be uncomfortable about this, but it is a good industry practice. We had something like that at KPMG.*

Looking after staff

Different people had different approaches to people management within the organisation, as a director pointed out:

We have to create development opportunities in the business for people to grow. I am a great believer in putting people in roles, and then you make them accountable for it and that'll spell the difference. Not everybody believes the same, but this should be our guiding principle.

The organisation introduced a directors' conference in order to align the entire organisation along the line of the 'world class people management approach'. At the conference all the directors gather annually to discuss strategic business performance, including people management and development issues.

Team relationships

There was strong evidence of team relationships and culture within some units in the organisation, which could be linked to the nature of the services they delivered. These were services that required constant interaction with clients and also with delivery teams. The key challenge for a number of units was the geographical spread of their operations, which sometimes meant that they had employees working from all over the country. The research observed that workspace proximity in the organisation did help to engender good team relationships, even for employees in different units, as a result of constant interaction and through both formal and informal mediums. The research also observed shared common spaces such as canteens and lounges in all the offices visited, apart from the London one.

One of the locations, which was a very big regional office during the old structure of regional autonomy, held on to its old practice of organising a freshers' evening to help new employees in settling down well in the organisation. The evening also served as a forum to share ideas, according to one of the partners:

We have new people in all the time. And obviously I think that's important because we want them to bring new ideas. You know we do want them to bring new ideas in terms of ways of doing things, maybe how we interact as a team, maybe how we share information, maybe what we provide to our clients.

New organisational structure to be introduced

A new organisational structure was introduced into the organisation to correspond to the change in the newly introduced product and service lines. The new product and service units had some level of autonomy in evaluating staff performance, reward and recognition, and development. This was to enable them to focus on enhancing the skills and attributes that are the most important to their operation, as they were expected to deliver on services and products on the basis of their market demands, and also to enable them offer more robust client relationship management. This also meant focusing on the people who were expected to deliver the service, by having an effective people management strategy.

7.3.7 Relationship management

This node encapsulates some of the views from across the organisation with respect to how client relationships were managed. As a management consulting firm, they had direct contact with their clients and engaged with them on different levels. The nature of their business did not enable them to deliver their services either remotely or via any proxy process or services. This meant considerable relationship management was needed in order to sustain the business, as explained below.

Account management

The research revealed that account management was not co-ordinated in the organisation. There was no overall organisational visibility to the contact and content of engagements with clients. This is not the expected practice in the sector; good industry practice requires an integrated strategy in managing client engagements. That was why there were some concerns in the business about client contact strategy, due to the lack of integration between client servicing and marketing services. Different parts of the organisation contacted clients and in most cases the content and context of the contact was not recorded and integrated into the organisation's knowledge base.

The research observed a distinct difference between how different accounts or service lines were managed in the organisation. This was reported back to management by the researcher with key recommendations for review. A partner commented that:

We don't spend enough time looking, talking to them about what they do on the ground and understanding what challenges exist. But you know, how can we maximise the potential opportunity we have, talking to the client, if we don't know what we last said to them and what someone else is saying about them, what they've said to us that we don't know. It means we are not ready for business, regardless of how much money we spent on marketing.

Client focus

Client focus was an important part of business operations in the sector, because no two clients were exactly the same. Clients had different demands, so the organisation needed to understand individual clients and tailor their approach correspondingly, because it was a client-driven environment.

The organisation had distinct demonstrable examples of client engagement, such as their regular knowledge exchange forums. These forums were theme-led, such as IT security, risk management or revenue assurance. Clients were specially invited to forums related to their sector or requirements. This was not marketed as a sales pitch, but more of an engagement session and an addition to the normal account management service.

Another benefit of these forums was that it positioned the firm as forward looking in the eyes of other clients. As one of the directors explained, their clients expected them to help them with industry insight and changing dynamics:

Our clients expect us to have a view on changes that are likely to affect their operating environment; we need to sensitise our clients with regulatory changes, and how it can affect them. And we should be able to anticipate and communicate to our clients the impact of evolving technology to their operation.

The firm had a practice of focusing on clients, not only when they had on-going projects with them, but even when there was no project running. In some instances, a number of clients invited to some of the knowledge exchange forums had never done any business with them.

Client relationship management

The research revealed that client relationship management in the research organisation was centred on three different approaches. The most prominent approach was via the consulting practitioners, who regularly engaged with clients for consultations, requirement gathering or product marketing.

Another approach was through the account relationship managers. Each client account was allocated to a member of the account management team. They were responsible for conducting what was referred to as 'health checks', which checked how the client account was being managed by the practitioners. They were equally responsible for the service renewal if it was a current project, and served as an escalation point for unresolved problems.

The third client relationship approach was via a help desk facility. The organisation gave its clients a help desk number they could call. The help desk assisted in recording all clients' concerns and passed them over to the appropriate unit or employee. They were also responsible for managing some service and technical queries, depending on the nature of the project.

All these approaches were dependent upon the type of project engagement a client had with the organisation. Some engagements, such as advisory services, were strictly managed by the consulting practitioners. Advisory services required personalised relationship management, and were usually managed by a team of around three to five consultants. On the other hand, a client outsourcing engagement was typically managed in the organisation by both the consulting professionals and account managers, because outsourcing projects usually involved the use of resources from different units and often required back office support from within the organisation. This was where the account managers supported the internal delivery mechanisms and also worked with the clients to ensure they were obtaining value from the engagements. However, a project that had some component of software deployment would require all three key support apparatuses of the organisation. This meant that clients could relate with consulting practitioners on their requirements, negotiate the project time frame and delivery process with the account managers, and report faults to the help desk.

The challenge for the organisation, however, was in integrating this support framework. There was no integration framework to guide client activity handover or takeover between advisory staff, account managers and the software support help desk. This was important in order to synchronise client feedback, and be able to support clients in a coherent and comprehensive manner for a sustainable client relationship based on trust. This further reinforces the need for effective management of client relationships in the organisation and in the management consulting sector in general.

7.3.8 Trust

The business environment within which the research organisation operated critically required clients' trust, as all major relationships were built on that basis. Trust has been identified "as a critical component of social interaction" (Clark and Payne, 1997, p. 206). To strengthen this argument, the Sales Director confirmed that the majority of the advisory projects in the market were not put out to tender. They were offered on the basis of relationships and were a signal of competence.

Apart from the client relation part of the business, the level of trust also featured as a key issue in knowledge sharing among employees. The research found two important forms of trust that played a key role in knowledge sharing within the organization: competency-based and benevolence-based trust. This categorisation of the notion of trust was adopted from Sparrow et al. (2009). The analysis of trust from the open nodes, as it related to clients and then employees, will now be explained.

Building trust with clients

Building trust with clients is key to business performance in the management consulting sector, and the organisation understood this very well. They required their consultants to build good relationships with their clients by earning their trust, even if it meant obtaining less financial value out of a project. A partner described the following encounter with one of their clients:

> *He once said to me "You know, we hire and fire consultants quicker than anybody. We're a very consultancy-orientated business. We use a lot of*

consultants and they come and go very quickly and yet you've managed to stand the test of time". And he said, we're talking about the reasons why your firm has managed to stand the test of time, he said, "Because you don't push us too hard. You know what our limits are but equally you will push us to be innovative within what we can do." Not all consultants do that; some are so focused on the fees that they forget about the value of a good relationship.

Competence-based trust

In management consulting, brand and reputation are largely built around the perception of competence. The market and clients need to believe that consultants have the capacity and the capability to deliver on what they are offering. Anything short of that, and a firm would not be taken seriously by either its clients or competitors. It is a signal of competence because it is based more on the perception of value than anything else. As this partner observed, the focus sometimes shifted from the consultants to what they represented:

If you move all the consultants of KPMG to say Smith and Co., clients wouldn't take it that they can deliver as good a solution as when they were KPMG, even if everything else is the same. But I am not saying there is no value in the brand, there is, because they benefit from accumulated experience and know-how. I am just saying that perception is more powerful in this market, than the real thing. I cannot charge my clients now what I used to charge them when I was at KPMG, and I am still the same person.

The organisation approached both these issues of trust from the perspective of consistency. They believed that if they continued to exceed the expectations of their clients they would continue to enjoy the patronage of their services. The market might not consider them as a big brand, but they would continue to earn the respect of their clients, which had more impact on sustainable business performance.

The organisation also managed client expectations with respect to the outcome of any engagement, as many clients were not very good at detailing their requirements within the job briefs or bid documents. If the delivery did not meet up to the client's expectation, it led to problems of trust and capacity. As one partner

put it: "*sometimes what you end up with is something that is not what you planned for, where you described at the beginning a perfect diamond and they might end up with an imperfect cubic zirconia*" (a cubic zirconia is a synthesised material that looks like a diamond, and could easily be taken as a diamond to the ordinary eye). The role of the partners in this was to ensure a balance, in which the organisation did not undersell itself or overcommit. This was why senior partners reviewed client engagement documents to ensure that consultants did not overstate a bid or overcommit the organisation to the client in order to expand their portfolios. The organisation believed that striking a good balance between their commitments to clients and the ability to deliver on those commitments would gain their clients' trust and ensure the sustainability of their relationship with them.

Competency-based trust (Sparrow et al., 2009) among employees in the organisation features in the research in terms of the perceived intellectual capacity of fellow employees. Some of the reasons presented by employees about not sharing knowledge with others were attributed to the perception that the 'other' employees would not be able to "*comprehend the complexity of the information*". This perception was mostly held by employees who considered themselves "very technical", and who came from different parts of the organisation, including audit, risk management, and also from technology. They often only shared knowledge with people they perceived to have the level of competence that would make sense of that knowledge, or those with formal authority over them.

Benevolence-based trust

In the organisation, benevolence-based trust featured among staff who had concerns that sharing what they knew with other employees might have an adverse effect on their performance or career, particularly when a perception of competition or a promotion was at stake. The majority of those who shared benevolence as a concern for knowledge sharing were more worried about whether the 'other' employee could harm them, given the opportunity to do so, in whatever form or means. Although this was revealed in the research investigation, no one was open to the issue being discussed with their team. Establishing trust has been clearly identified as a business imperative, both with clients and in the workplace.

7.3.9 Market leadership

The sector is led by the big four operators PwC, Deloitte, E&Y and KPMG, and most other smaller organisations operate by accepting their influence. This is because overall market size and organisational revenue play an important role in the sector (Kipping and Clark, 2012). The research organisation, which is a mid-size management consulting firm, is no different. Although the position of the big four was perceived differently in the organisation, there was a strong reference, and sometimes unconscious orientation, towards the practices and standards set by them. In the research this was found at all levels in the organisation and in all units.

The big four

Reference to the activities and influence of the big four management consulting organisations in the sector sometimes came from different perspectives. Some employees wanted the research organisation to operate like the big four, while others stressed the difference between them. There was a view, particularly among non-management staff, that the organisation and all mid-size management consulting firms were a client's second option when it came to allocating projects: "*Some clients talk to you only if they can't afford the big four*".

However, one director in the firm did not agree. He argued that

> *At the beginning there was a clear intent not to engage in the top four, because a lot has been done there. Because our market is different to the big four market. We're looking at the medium SMEs, not the big companies. So we see, their needs and spends are different.*

But this view was not a complete representation of the facts on the ground, as the organisation had many world-class brands, and some of the largest corporations in the world within its portfolio. Although the bulk of their client list represented small and medium organisations, there was a growing shift towards winning contracts from big corporations. The research identified four failed bids in the previous year, which were aimed at FTSE 250 organisations.

Creating brand awareness

The research organisation, in trying to respond to the challenge of the big four organisations, has tried to create a strong presence in the market, by recruiting people with significant industry experience, most from the big four organisations. One of the new partners, recruited specifically for this reason, stated the following:

> *We've got a lot to say, but we haven't got really the best mechanisms of saying it here, and we haven't got the brand name associated with it to ensure that people will listen to us when we get it out there. When we do it, we don't get enough kudos from it because our brand isn't strong enough to carry what we're saying. If we did that and we were KPMG, people would be delighted; people would be probably more prepared to read what we send out.*

Market leadership is an important business consideration in the management consulting sector, which needs to be sustained by having the right brand and perception in the industry.

7.3.10 Market intelligence

Market intelligence was highlighted in the study, due to the organisation's need to understand its competitive environment, the potential of its market and the need to obtain market insights. These would enable it to have long term and sustainable business performance.

Market potential

There was a concern in the organisation that they were not taking full advantage of their market potential, because "*the opportunities in the market are huge*". This concern turned to criticism from some employees, who believed the organisation was "*thinking small when the opportunities are big*". The research engagement shows that the organisation had adopted new approaches to evaluating its market potential. A new market analysis matrix was adopted to replace the current pipeline management process. The matrix enabled the organisation to have an integrated view of its entire market and an overview of where they operated within it. It also identified new business areas for possible expansion and developed breakthrough products and services for markets that did not yet exist.

Market insight

The market analysis matrix explained above would only be of value and benefit to the organisation if its people were able to generate good market insights, which would enable it to create different possible scenarios of outcomes in the market. As one partner confirmed:

> *I think you have to have some knowledge of what your clients are thinking and experiencing and what the market wants, in order to do this. You have to present your thoughts about the potential problems or challenges they're facing, or opportunities, and then go back with a bit of a solution to them.*

Need to be more market-focused

The need for the research organisation to be more market-focused featured in the research as a point of worry for some employees, together with the lack of internal capability to synthesise the insight. This was identified as something that was lacking in the organisation and was echoed by this consultant: "*We are constrained by lack of time to integrate our activities and synthesise the market needs or new ways of doing things*".

The organisation was, however, making efforts to address some of the most obvious requirements of the market and its clients. They had identified financial services as an area of potential expansion, and had started working on that from within their existing structure. Their response to the market required careful evaluation; one of the directors explained that "*if you sometimes read the market wrongly, the consequences could be very damaging reputation-wise and/or financial.*"

Need to understand the competitive landscape

The organisation believed that focusing on the market had to go along with constant reflection on the competitive environment, because ultimately the firm did not exist in isolation. As one employee argued, there was always going to be a relativity argument in the sector, where organisations would be judged not only on what they had achieved alone, but also in relation to how other organisations in the

sector had done: "*whatever we do in our sector and I think in most other sectors, honestly, on how good you are as a firm, that judgement will still be made in relation to your competitors*".

The organisation did not have a formal framework for evaluating its competitive environment. Most of what came in was usually from units in the form of a SWOT analysis. There was no overall understanding of what their competitors were doing. The depth of the challenge was best described by the views of this manager:

> *We can't make a justifiable assessment about our market future because we don't spend enough time reflecting about it. We had to present papers from our competitors, like from PWC, on the future of audit as an example to discuss the future. If they can spend time and money to do that why can't we?*

And on the impact of the organisation's current opportunities vis-à-vis future potential, he stated that "*The market has been on cruise control before now, some directors have just enough business to keep going, not thinking about the future of the market. That is why the business has somewhat stagnated*". Most people in the organisation believed that this stagnation could best be addressed through effective market leadership and properly managed market engagement and collaboration.

7.3.11 Collaboration and market engagement

The research organisation believed in strong collaboration and market engagement to engender sustainable client relations, loyalty and a good industry reputation. This belief helped it in the cross-fertilisation of ideas and it was also how ideas were transferred from within the organisation and between business units for the overall benefit of the firm.

Client or market stimulation

The client or market stimulation approach is based around the belief that even if organisations have an idea or a product, as long as they do not stimulate the need for it from the market or their clients it will remain just an idea. An organisation needs to engage with the market and its clients in order to position its products or services

in line with client requirements for them to have any meaningful value, social or commercial. One example of this client and market stimulation in the research organisation was the knowledge exchange forums explained in section 7.3.7. These forums were targeted at debating current issues in the sector, and in the process positioning the organisation as being capable of providing the necessary advisory support in that area. The hope was that this would trigger the necessary debate in the sector. Occasionally, they proved successful, as clients were stimulated to ask for assistance after a number of the forums.

Another way of stimulating their clients' needs was during the project delivery process, where the consultants would evaluate how one project might potentially lead to another within the client environment. A recent project in which this engagement strategy worked well for the organisation was with a client who was in some distress, after failing a compliance inspection. The organisation was engaged by the client to identify the failure points, work out an action plan to ensure that compliance was achieved and put in place the necessary safeguards to ensure continuous improvement. It identified the failure points, and worked through them with the client to ensure the problems identified during the diagnostics were corrected or managed. When the client was re-inspected, they passed. This was very important, because a second failure would have jeopardised their business. Equally important was the fact that as a result of this compliance, the client organisation saved a large amount of money.

As a result of this initial successful engagement, the research organisation identified a key area of the compliance arrangement that the client did not use and offered to help the client by doubling their savings and enhancing their status. As a partner put it:

> *Well, that was just the basic level you achieved. We think there's an opportunity here to move forward to a governance arrangement and achieve level two inspection status. If we do that, you can save double your initial savings. The client, bearing in mind, they're on the high of the getting through the inspection and getting a major break.*

The proposal was accepted by the client, who then offered the organisation a new service contract. In the words of the organisation, if a consulting firm delivered a job

to a client and just "moved on", there might be a downside to that approach, by not ensuring that any possible auxiliary service that could affect the performance of the concluded project was highlighted to the client. Whether they chose to follow through with the additional project or not, it was important that the client understood the value or risk that may be associated with any product or service that had been delivered.

This could perhaps be seen from two perspectives. The first is that of the client, to ensure they had an overall understanding of how the service delivered fitted into their general ecosystem. The second is that of the consulting organisation, to ensure there were no missed opportunities left unexplored. This was seen as a proactive way of building relationships with clients in a changing business environment, and not having to wait for them to identify problems, particularly for existing clients.

According to the organisation, these levels of engagement led to innovation performance in many ways, because this was where they tried to solidify their conceptual thinking into something that would work in practice. As a firm of business advisors working in both the public and the private sectors, client stimulation, although needed in both sectors, was more often applied in supporting the public sector. In this case, consultants have to go out to clients, engage with them, build a relationship and be able to make them begin to appreciate some of the services the organisation was offering.

This was where the organisation believed that client engagement and stimulation as a process was an example of innovative performance, and in order to have the necessary industry recognition it needed to offer services that clients and the market by extension connected with. Furthermore, as the market was dominated by the big players, the midsize firms, such as the research organisation, needed more than their brands to survive. They had to offer something uniquely positioned in the heart of the clients that was timely, relevant and cost effective. As one of the consultants put it:

> *We can't just go out to the market and shout our name or brand; people are going to go "so what?"*

He argued that they should say

> *"We're talking to you about the NHS and what's changing now at local government, or the very fact that government's arrangements are changing in the corporate sector, and we've got a view on this". People will start to recognise and listen.*

Product board as an innovation tactic to drive collaboration

The organisation set up a product champions programme to provide employees with a sense of ownership in product development. This was complemented by a product board in order to drive collaboration among employees. The product board was comprised of employees from different units. Its role was to critique the products, and review and sign any user acceptance test documentation before the product was launched or delivered to the client. The user acceptance test documentation was a list of all attributes or features that the product or service set out to address, which needed to be addressed appropriately before a product could be said to be good for delivery. Where the project was a service-based, consultation or diagnostic review, then a partner had to review the project delivery plan. These were forms of safeguards put in place by the organisation in order to drive collaborative behaviour in its product and service development, because collaboration and market engagement is a fundamental part of business expectation in the industry.

7.3.12 Product development

The research investigation revealed that product development in the organisation was conducted with three core principles:

- That products had to be customised to the clients' environment or need.
- That insight from prior development or delivery of similar products or services and/or experience from working with that client needed to be incorporated into the project.
- That the client should be carried along in the development of the solution.

The details of the framework will be explained in more detail in the open node explanations below.

Ability to offer customised offerings to clients

Customisation is of central importance in client services in the management consulting sector. Firms do not just present clients with generic offerings, particularly in advisory services. As a sales manager observed, "*Often, you know, if you turn up with something in a box and drop it on the table, that's not always what clients need nowadays or want*". The ability to offer customised offerings to clients is seen as a very basic capability in the management consulting sector at the moment. The research organisation was able to adapt to this through a combination of two key practices: first by using insight from client data, and second through collaborative development with clients as part of the core principles of product development. It applied insights generated from its engagements with clients and feedback from service delivery to enhancing its current portfolio and developing future products and services to clients.

Working with clients to develop solutions

The next approach was by collaborating with clients in the development process, and working with them as partners in facilitating service and product development. The majority of products or service offerings in the organisation were developed using this approach, which worked well for them over time. The technology division or software solutions part of the business sometimes required a distinct approach in its product development process, in which client collaboration and engagement occurred before the development stage. Overall, the organisational objective was to continue to exceed their clients' expectations by developing market leading solutions.

7.3.13 Market leading products

The organisation believed in developing market leading solutions or products, as a demonstration of its innovation performance in the sector. There were a number of examples and attempts at developing market leading products, which will be explained in this section. Important amongst them was the idea of software solutions being developed to complement their advisory services, both as a signal or competence in the sector and as a demonstration of the direction the organisation believed the sector would eventually move in.

Software suite

An example of market leading products was the software suite, a portfolio of technology-enabled services such as risk management, performance evaluation, and staff surveys. These were developed from the organisation's understanding of the market, its client requirements and the availability of technical know-how as a result of an acquisition.

According to the Technical Director, the development process of the suite was organic, but they persisted through the process in order to launch a product portfolio that was at the time an industry first. Part of the key challenges faced by the organisation in developing the suite was the skill set needed for such an endeavour. It started by outsourcing some key areas of the development process, such as software coding and platform design, but later realised the difficulty of such an arrangement in delivering a unique portfolio guaranteeing a high level of quality and confidentiality. This led the organisation to eventually acquire a firm that had the needed technical expertise to complement the process. The suite was later redesigned, developed and launched completely in-house.

The organisation faced a number of challenges even after the solution was developed and deployed in the market. These challenges were particularly centred around divergent client needs. Some clients wanted part of the suite of programmes and not the entire portfolio, while other clients required an extension of some services or programmes within the portfolio. They also realized that there was a gap in the market understanding of the product, as many clients did not fully appreciate its benefits and potential. The organisation had to embark upon aggressive marketing and information sessions through the professional journals, business exhibitions and trade fairs of the targeted clients.

The portfolio was something that was quite unique in the management consulting sector. The organisation supported it with an advisory practice unit due to its potential commercial value as a portfolio that could complement a whole range of other services.

Software solutions as a value proposition

Some in the organisation did not believe in the idea of having a software component to a consulting or advisory business as good practice. That view led to the perception in the technology division that most people in the organisation did not value what they did, and did not see "*software enhancement as core to the business*".

A director in the software division believed that "*although it is unusual to find a management consulting firm with a software division, it is still where the future is heading. We are fortunate to be in a leading position; eventually the organisation will realise how fortunate we are*".

Audit mapping framework

Another example of a market-leading product the organisation developed was the Audit Mapping Framework. The concept was based around the model that not all audit assurance practices could be delivered, or necessarily need to be delivered, by an internal audit function. According to the lead partner responsible for this service:

> *For any organisation to be able to cover end to end assurance mapping by its internal audit function, they would have a very large internal function and that's exhausting. The framework was about thinking of the end to end internal audit function and the third line of defence around business functions and management responsibilities, on the basis of trying to draw together to see whether there are gaps, overlaps and duplications, and whether the quantity or the quality of the audit assurance work is appropriate.*

The framework as a product was a commercial success; the firm believed it was products like this that could define its position in the industry.

Product alignment in the market

The research investigated the organisational response to the varying client demands in the delivery of some of the market-leading products in the organisation. One example was in the case of the software solutions, where rather than having one

version of the suite on the market, which could be customised for relevant clients, the organisation had something in the range of twenty to thirty versions of it, which were all different in some way.

Customisation is necessary and important, particularly in management consulting services, but supporting different versions of the same technology solution by the same support staff was challenging for the support team. The research discovered a high level of dissatisfaction in the support section of the organisation, as a response to the lack of standardisation or protocol in supporting clients. This frustration was passed on to the clients in most cases; the research discovered that many clients were less than satisfied in the way and manner their issues were managed.

The organisation responded to the research discovery and adopted a more aligned approach towards their product portfolio in the market. In the same vein, the client support framework was reviewed with the help of the research, in ensuring more coordinated and engaging client experience management.

Customisation of a client's software was an additional service and not the core module of the solution, making it easy for support engineers to make programmed scheduled software update releases rather than taking an unstructured approach. This also gave some structure to the portfolio, with a clear product or service deliverable in order to avoid potential product cannibalisation and enhance the overall project experience of their clients. Overall, the organisation believed that having market leading products would help sustain its competitive advantage in the sector and overall competitiveness.

7.3.14 Project delivery

Every client solution delivery was made following project management protocols. The research investigation revealed that some of the project deliveries were well managed, while others were not. This discovery was shared with the organisation, and they responded with an enhancement plan that was based on a continuous improvement principle.

Need to enhance execution capacity

There was a real worry that the current level of execution capacity in the organisation was not sustainable, and in trying to address this concern it embarked upon an enterprise-wide competency evaluation. From the exercise, and based on the need to address the gaps identified, a competency framework was designed, which presented an overview of the skill sets required for project execution excellence. Capacity building sessions were rolled out throughout the organisation to address the gaps identified. The organisation believed this was the future for all management consulting services, because execution excellence mattered in order to maximise the potential of any client engagement.

Continuous Improvement in project execution

There was also the challenge of continuous improvement in project execution, an issue that was approached differently by the two key divisions in the firm. These divisions were spread along broad client classification (public and private sector). The public sector team contributed about 60% of the organisation's revenue, and constituted about 85% of its workforce. The private sector division was relatively new, created out of the changing operating environment in the sector. They offered services such as outsourcing, risk advice and IT consulting.

Overall, in terms of size, impact and financial performance, the division with responsibility for the private sector was not as advanced as the public sector division, but they were more innovative in their approach to project execution, due to the intense nature of the competition in their part of the business. The private sector team had to continuously find ways to improve on their client delivery and satisfaction, in order to remain competitive.

For their part, the public sector division had a record of successful performance, largely due to the lock-in advantage of early market entry. In the past, the public sector clients did not often review advisory relationships, and consulting contracts were almost always renewed without many challenges. But all that had now changed, due to the financial pressure faced by public sector clients. This past practice of contract auto-renewal had a significant influence on the public sector team, with respect to the need for excellent project execution. It made them less

ambitious in perfecting their delivery processes and project management capability.

Excellence in project execution was an area in which the private sector division had a great capacity, because they had to consistently impress their clients in terms of both delivery and value-added in order to secure new projects or renewals. As one of the public sector consultants put it, "*there is a growing pressure now on us and an absolute need to innovate more in our bit of the business. We have to do things differently and have to innovate more if we are to survive the financial squeeze.*" Through the process of continuous improvement, the private sector division was supporting the public sector one in enhancing their project execution capability, by sharing examples of good practices and providing guidance. The organisation was able to identify performance gaps in the delivery of past projects and put in place appropriate measures to address these.

7.3.15 Business and financial performance

Business and financial performance in the organisation, like in most firms in the sector, was largely an outcome of new products and service projects, and renewal of existing engagements. This process was bedevilled by some key challenges in the research organisation, particularly concerning the renewal of existing services and the ability to engage new clients.

Service renewal

The research organisation had many key accounts, particularly in the public sector, as discussed earlier, and there had not been much pressure on those accounts to ensure annual service renewal. As one of the consultants observed:

> *I think we see enough opportunity without having to do too much innovation. So again, that's another thing that's pulling us back a little bit. It is just like if we just leant down and picked up the cash up off the floor, we would be doing fantastically. We don't need to innovate much because there's so much low-hanging stuff we can go for. So the whole thing about knowledge sharing and innovation, just isn't top of the page for us. And it needs to be.*

More recently, service renewal had been identified as a key issue in the organisation, as they had experienced intense competition, even for those clients who had been traditionally considered as safe accounts.

The lack of a proactive strategy to facilitate service renewal was identified as a problem in the organisation by most partners, and according to most of them they had no end-to-end view on the clients' service renewal cycle. In most accounts, they only realised this if there were problems with the process, and they all agreed it would be beneficial for them to have a view on renewal cycles and any possible tension in the accounts well in advance of contract renewals.

Efficiency (billable hours) and work pressure on staff-affected innovativeness

Another challenge that affected business and financial performance was the issue of work pressure on staff, something that was fuelled by the firm's efficiency model. This model was driven by billable hours and chargeability, which assumed that any time spent either with a client or at work had to be accounted for, and possibly billed. Some units adopted this with some flexibility, others did not. A director in the organisation believed the model was counterproductive:

> *We still operate – even though we think we don't – we operate under a business model which is focused on chargeability. And that absolutely comes at the expense of innovation. And it all works down. Because when you tell someone that it has got to be 100% chargeable to the client, where on earth are they going to innovate or share knowledge or do what? They just can't. So unless we accept that and move back away from that somehow or slightly or whatever it looks like, then we won't ever get to the point where we want to get to.*

The effect of this efficiency model and work pressure on staff was echoed by many in the organisation, as evidenced by the following view:

> *100% chargeability increases margins for the business short term, but drains the staff from engaging in any futuristic thinking. Staff are squeezed and moved from project to project to increase time chargeability, with no time allocated for innovation and analytics.*

Another person remarked on its effect on market evaluation: "*We should have about 50% time for partners/directors spent on market analysis and innovation. We can't make justifiable assessment about the market future because we don't spend enough time synthesizing about it*". Another stated that there was a need for a balanced approach: "*(We) need a balance between chargeable time and time spent on understanding and analysing the market; we are overwhelmed by client engagement at the moment*". Another consultant declared that there was a lack of strategic thinking: "*We are constrained by lack of time to integrate our activities and synthesise market needs or new way of doing things. The current model of 100% chargeable time is not strategic, and will hurt the firm's potential to innovate and play into the future space*".

Both the open and axial coding explained in section 7.3 will be synthesised and developed further into theoretical coding in section 7.4.

7.4 Theoretical coding: theorising the development of knowledge management and innovation management in the research organisation.

7.4.1 Overview

This section is developed from the open and axial codes highlighted in section 7.3. It aggregates and collates themes earlier identified into theoretical codes and adds context to the data. Issues regarding knowledge and innovation management in the firm could be said to revolve around these key areas, which will be explained in the following section. Understanding them will enable a more comprehensive understanding of the development of innovation and knowledge management in the research organisation.

The theoretical codes were derived by integrating the different concepts identified from the explanation in the axial coding in order to highlight the propositions that could possibly explain the research data and context. The theoretical coding, just like the initial coding process, emerged from the process of constant data comparison, observation and interpretation of the research data and field memos. From the theoretical codes below, the research will develop a theoretical

proposition that will give further insights into the research phenomena within the research organisation. This will have potential implications for the wider management consultancy sector in the UK vis-à-vis medium to large firms.

7.4.2 Competitive environment

The competitive environment within which the research organisation operates is very dynamic, making it one of the key elements that affects the development of both knowledge and innovation management.

The dynamism of the management consulting sector revolves around several issues identified during the research investigation, ranging from strategy to leadership and market orientation. The management consulting sector in the UK can be stratified into three levels. The first level comprises the big organisations - the big four global consulting firms and the other leading global players. The second level comprises the larger UK organisations and European mid-level specialist consulting firms. The third level comprises more than 80% of the market, and is the small to medium-sized consulting firms.

The level one organisations leverage their market position, brand and size to work with big corporate and government organisations, particularly those needing multinational support. Level two organisations leverage expert services, operating on projects that require specialist skills, while the small to medium organisations leverage access and localisation, as most operate within their local environments or on projects won on the strengths of their local relationships or pricing.

There are no major barriers to entry into the management consulting sector, as there are no statutory compliance requirements. The key requirements are market insight, employee resourcefulness, capability and relationship, rather than compliance with professional standards. The challenge for a management consulting business is to achieve sustainability in the sector, because many fail and end up either being taken over, or going out of business (Kipping and Clark, 2012).

In order for organisations in the sector to survive this pressure from the external environment they have to adopt several practices and strategies. In the research organisation, three key focus areas were observed: a) strategy, b) acquisition, and

c) leadership. These factors directly affected the way knowledge and innovation management developed in the organisation and will be discussed in turn.

a) The research organisation had a dynamic strategy towards both its knowledge and innovation management. It adopted several approaches over time that best suited its circumstances and the competitive environment. At the early stage of the firm it had a more personalised approach to knowledge management, in which knowledge was created and shared mainly through interaction and relationships. As the firm began to expand and grow, it adopted a more codified approach, with corresponding investments in knowledge management systems. Similarly, the firm's strategy had also been dynamic when it came to innovation management practices, with a level of openness on some projects and a closed approach to others.

b) The research observed how the organisation used acquisition as a response to the competitive environment, in an attempt to both solidify its position and bring about some differentiation in the sector. Acquisition was used as a strategy for both knowledge and innovation management. As a knowledge management approach, for example, the company acquired a smaller audit firm in order to solidify its position in the market. The audit firm acquired had many clients and also an established protocol for doing business, which were all seen as providing access to new knowledge and practice. By using acquisition as an innovation management approach, there was an example of when the organisation acquired a software company in order to differentiate its position in the sector by offering a unique product portfolio. The software company and the research organisation initially partnered on a propriety solution, and then when the latter realised it would require the full control of the solution in order to be able to apply it to its different service lines. The acquisition gave the organisation a unique platform for product and service differentiation in the sector, and an important leverage at the time.

   Acquisition is widely used in the sector as a positioning strategy, to acquire other firms because of shared interests, product or service requirements and in a few organisations due to assessment of future value. For the research organisation, all the acquisitions reviewed by the research delivered returned

value except one. The one that did not meet up to its commercial expectation was of an organisation almost the same size as the research one. The research found that this was its largest acquisition and by far the most complicated, revealing a lack of integration and proper reflection of the value of organisational intangible assets such as relationships and employee know-how. These factors were identified to be the key reasons why the acquisition did not make a positive net contribution, to either the knowledge or the innovation assets of the organisation and to the overall organisational performance.

c) The ability of any organisation to successfully navigate its way through the competitive environment is largely attributed to organisational leadership. Von Krogh et al. (2012) conclude that this has a significant impact on the knowledge creation, sharing and exploitation of organisations. For the research organisation, and with respect to the acquisitions and their challenges, the leadership played a decisive role. It adopted several strategies in an attempt to position itself in the sector for long term and sustainable business growth. These strategies ended up shaping the development of knowledge management in the organisation and the dynamics of its innovation management. They also affected the culture of the organisation, people management, client engagement and market analytics.

7.4.3 Client expectation

Client expectation in the research organisation was identified as another important factor that shaped knowledge and innovation management developments. There was a very active client engagement practice in the sector due to the context of the services offered to clients. These engagements provided collaborative opportunities between the consulting organisation and the client. In the case of the research organisation, the research identified key examples of how a client's engagement had contributed significantly to the capacity of the organisation and its innovativeness.

Although every client was not necessarily unique in terms of industry or service requirements, all were unique in terms of expectations and needs specificity. This was why the sector placed high levels of emphasis on client service and product customisation, a practice that was well adopted in the research organisation as a key part of its business activity. Customisation for the client, whether in services or product modification, entailed the organisation approaching both knowledge and innovation in a unique way. For them, it was the art of giving in to the client without actually losing. In a way, this would make the service or product very personal to the client in terms of requirements and needs and also ensure the offering was within the operational framework of the organisation.

In the research organisation, customisation of client services was approached in a dynamic way, as both a medium for knowledge creation and sharing and also as an opportunity to synthesise ideas from both within itself and the client environment. It understood that innovation or creative differentiation does not always have to present itself as an outcome in the form of a product, as the most innovative part of the delivery might be in the enhancement of working practices rather than in the eventual client delivery.

Differentiation in the offering to clients sometimes calls for variation in managing relationships. In the research organisation, the research identified several approaches adopted in relation to different client types, sometimes based on project type or transaction. For example, an audit outsourcing engagement project would enjoy close and more regular client interaction than a technology solution project. These client relationship approaches impacted on the knowledge management activities of the organisation. Even when the client relationship approaches were not integrated into the research organisation, the act of client engagement was a great source of knowledge and market insight for it.

As identified in the research, client relationship management in management consulting is a key factor in shaping the development of knowledge and innovation management as well as being an important part of business transactions. It was needed for both sustainable business development and reputation management in the market. A great part of business development and transactions came from repeat business. Establishing loyalty with clients was an important part of business

practice in the organisation, which was achieved through competent project delivery, and professional relationship management.

Trust in the organisation was identified as having a significant role in knowledge sharing and relationship management, both between the organisation and the clients and also within the organisation, among its employees. The research identified how building trust with clients had helped the organisation to secure repeat business based on referrals, and for projects that were not even put up for public bidding. A clear example was in a public-private partnership project, for which the organisation was specially invited to submit a proposal by one of the local councils involved, due to their experience with a similar project in the past.

The research revealed two important notions of trust that clients expected from the organisation. The first was trust related to competency, whilst the other related to fairness and confidence in project pricing practices. Client organisations, regardless of their size or sector, expected to deal with a consulting firm that was capable and competent. They wanted to believe the firm they were dealing with had the capability to deliver on their requirements. This type of trust was established as an outcome of experience, having worked with the firm before, or as an outcome of industry recognition. This was similar to trust in pricing fairness; because most management consulting services do not have 'a reference price list', the client organisation would want to believe the consulting firm they were dealing with had a fair pricing practice.

In the management consulting sector there is also an anticipated reliance on professional colleagues for expert information and specialist advice, because the consulting operation sometimes involves inputs from multiple disciplines and expertise. This reliance on others for support puts pressure on the need for effective knowledge sharing in organisations. The research identified two key notions of trust in the organisation that significantly affected its knowledge management and innovation. These notions were competency-based trust and benevolence-based trust. With competency-based trust, both parties in an interaction would like to believe the other party has either a certain level of competence in the area, or could make sense of the information. From the benevolence perspective, employees would like to believe the information shared will not be unfairly used

against them, that whoever they have to share information with will act in their best interests, at least when it comes to the application of that information.

7.4.4 Changing industry dynamics

The changing industry dynamics were revealed in the research investigation as one of the key factors of knowledge and innovation management development in the research environment. The industry structure was an important part of that change. The three tier structure was explained in section 7.3.2 on the competitive environment. The majority of the changes that occurred in the research organisation from strategic and operational perspectives were in response to the structure of the industry. These included the changes made by organisations to identify niche services that either the big players had not focused on or were different to them, as with the software solution initiative of the research organisation. They may also have identified a service area that one of the big four had launched as having market potential, such as the adoption of financial services consulting by the research organisation. Market leadership had a significant influence on the direction of the sector, and was seen in the research investigation; organisations responded to the market leaders by changing their knowledge and innovation management approaches.

Another key area of change in the industry was in innovation management, where the industry was gradually transitioning from management that relied exclusively upon closed innovation practices to one that was more open and collaborative in innovation engagement. Within the sector there were several new innovation management concepts, such as open innovation, collaborative idea generation and innovation co-creation, which all focused on the principle of innovation from more than one entity (Chesbrough, 2011). New client requirements in the sector also necessitated new thinking and approaches to both the way organisations innovated and with whom.

Another dimension of innovation in the management consulting sector was in its type and level. Unlike some sectors of the economy, such as manufacturing, innovation in this sector did not need to be in a physical product such as a computer or car. Instead, it was largely in the form of processes rather than in

products. This dimension anchored organisations to adopting different approaches to innovation.

Although technological development and evolution had affected the way innovation was managed in the research organisation, it was not the most critical factor. Practices such as collaboration, co-creation and client engagement had the most significant impact on their innovation management.

Another key factor that affected innovation management, according to the research, was the short life cycle of innovation, in which products and services were easily replicated and modified by other entities. A key differentiation came from an organisation being able to adapt to the changes in the sector and in client demand by having a skilled workforce. This was because client circumstances were different, so organisations had to be able to adapt to the changing client context. It would require a skilled workforce because in most cases clients were paying for the engagement with the company employees; therefore, there had to be value in it, which comes from how skilful the employees were.

Knowledge management represented a significant area of focus in the research organisation, and was also one of the areas affected by the changing industry dynamics. Key processes of knowledge management, such as knowledge creation, knowledge sharing and knowledge exploitation, were all affected by this change. The actors or participants in knowledge creation were no longer only the traditional employees. There is now more dynamism in the way organisations create knowledge. As seen from the research investigation, management consulting firms now expand their idea generation community to include clients and competitors, in an era of openness and collaboration.

Knowledge sharing processes are now less bureaucratic and more progressive and the role of people in the organisation is now more one of facilitation rather than as dictators of outcomes. The research revealed how uncertain the role of the organisation could be in terms of knowledge sharing, and how factors such as trust and competency shaped knowledge sharing in the organisation.

The application of knowledge in management consulting used to be solely based on legitimacy, whereby clients were offered products or services the sector deemed

to be of additional value to their organisation. But now knowledge application in the client environment not only has to be legitimate but also has to meet the clients' needs. Apart from a few practices, such as risk and audit, which had strong statutory compliance components to their solutions, services are now largely client need-driven rather than industry- driven.

All these changes compelled organisations to respond with a corresponding knowledge management strategy, which had in the past been polarised along either codification or personalisation perspectives (Powell and Ambrossini, 2012). Whether the adoption of a single strategy had worked successfully in the past or not for organisations in general will not be the focus of this section. But in the research organisation, it was more of a utility strategy, meaning the adoption of whichever strategy suited it best, depending on the circumstances. Now the sector had driven many organisations towards a more dynamic approach to knowledge management, an approach that required the complementary adoption of both personalisation and codification. The sector relied heavily on the power of human connection, but it also needed the codification of key and valuable information and access.

The above changes led to an interesting factor in the changing dynamics of the management consulting sector in the UK, that of people management. People management was always important in almost all industries and for all organisations regardless of size or location, but in the management consulting sector, the people in the organisation were what the business was built around. Every product or service marketed by the organisation was on the basis of an employee being able to deliver it. This put considerable pressure on organisations and a premium on a skilled workforce to ensure they had the right people and the right practices internally to manage their performance and development. Organisations now recruited in the sector from diverse backgrounds; it was no longer exclusive to people with project management, accounting and auditing or actuarial backgrounds. This change was brought about by the diverse requirements of the clients and industries supported by the sector.

As evidenced by the research organisation, the way employees *are* managed now called for flexibility in practices, locations and status. Many of the new generation

employees also require flexibility in their work location, and organisations are now accepting such flexibility as part of their general business operations requirements. Within the research organisation, there was an employee who accepted his role on the basis of being able to work three days from home. Status of employment was also looked at differently in the sector, with innovation in permanent, temporary or contract employment, and new concepts in the sector such as contracted executive professionals, who accepted executive roles in organisations for periods ranging from six months to two years. Furthermore, there was a need for organisations to make succession planning for sustainable business development. All these changes were due to the changing demographic of the workforce and the needs of the sector.

7.4.5 Innovation performance as product development

The representation of innovation performance purely as organisational output represented in products and services has affected the development of innovation management in the sector. This perspective has led to over-reliance on enhancing product development as a means of business performance and competitive advantage.

In the research organisation, it was identified that this consideration had a considerable influence on the development of innovation and knowledge management. During employee recruitment, emphasis was placed on people with product development skills, who could contribute more to portfolio development, rather than any other skills set. This perspective viewed innovation as an objectified element that the organisation needed to develop and deliver to its clients. From this perspective, the research organisation focused on the development of market leading products and services. Apart from affecting the way people were hired in the organisation, it also affected organisational practices such as performance management. Performance was evaluated based on end results, and in the process many critical contributions were overlooked. Evaluation of contributions to the client environment was also analysed from the perspective of the objectified product and its performance against its set objective.

The product portfolio of the organisation was the biggest beneficiary in this approach, as many market leading products were developed, such as the software

suite and the audit mapping framework. These products were seen as a key innovation in the sector, whose performance in the market would define the future of the organisation. There was also a higher level of intensity in research and development in other organisations or divisions within them that had this perspective than in those that did not, because the future of their business and the sustainability of their operations hinged on their product and service development capability.

Within the sector, there were a number of niche management consulting firms that approached innovation performance in this manner, and were successful in expanding their business. The evidence from the research organisation came from the dominant practice of this approach by the technology division and the public sector audit division. The technology division relied heavily on its ability to introduce into the market new or improved products, because achievements and business performance to them were based on the number of finished products introduced to their clients and market. Any development that did not deliver an acceptable client solution was considered as a non-valued activity and was not supported. The public sector audit division operated on the philosophy of practices in which performance was based on outcome and commercial contribution. Although they engaged with clients during the consulting or audit processes, the focus of the exercise to them was on the final output. Public sector project reports did not capture insights from the client environment or reflection on the engagement; the summation was around the quality of the output in relation to the set objectives.

7.4.6 Process and enhancement as innovation performance

Another view in the organisation of what represented innovation performance was the perspective of including process and enhancement in addition to products and services. The key issue was that it was possible to achieve innovation performance across the whole activity chain of the organisation. From the input stage all the way through to the output and the delivery process, the organisation could and should be innovative in every part of its activity chain. This perspective was prioritised in the knowledge and innovation management activities of the organisation. From the recruitment stage, the focus of this approach was on people with outstanding analytical and relationship management capabilities, skills sets that were important in collaboration, and continuous improvement in project execution.

Performance management in this instance focused on both the output and the process, with the process considered to be as important as the product or service. There were efforts made to ensure that necessary credit was attributed to valuable insights generated, even if the product or service itself was not delivered. The risk advisory services shared several examples of how inputs from failed development projects had contributed towards securing a different project. To them it was important that the definition of innovation was not limited to products, but also included enhancements and processes.

Enhancement in internal processes was also understood to be important to the efficient project execution capability of the division. They identified project execution as a key part of the product or service offered by them, so that regardless of the uniqueness of the product, if it was deployed without full sensitivity to the stakeholder or client environment, it might affect the performance of the product or the perception of the quality of service to the client. This position appeared to be the most acceptable to the advisory service firms in the sector. Although many others in the research organisation saw the value of this perspective and sometimes presented it as the best approach, their practices did not seem to align to the position.

A key part of this alignment was mostly evident in employee performance evaluation and reward, in terms of what employees were measured against or rewarded for. In the technology division, the director was very clear in his view that innovation performance was represented in the final output, rather than in anything else and that employees' performance would be measured by their contribution to activities that had directly led to a product or service. In public sector audit, however, there seemed to be pronouncements that process enhancement formed part of the performance indicators of innovation. But the practices of the division with respect to what was measured for employees as key performance indicators, and for which they were eventually rewarded, was contradictory to the philosophy of considering process enhancement as part of the innovation performance. The research evidence points to a practice in which employee performance measurement and reward did not recognise process improvement and enhancement as innovation performance.

From this perspective of process and enhancement as innovation performance, there was a high level of emphasis not only on the development process in the organisation but also the delivery engagement into the client environment. This consideration, just like that on innovation performance as a product development, shaped the way the organisation developed and managed its innovation and knowledge management activities.

7.4.7 Client engagement as a value proposition

Another key factor from the research that affected the development of knowledge and innovation management activities in the research organisation was the idea of client engagement as a value proposition. Client engagement during project delivery is an important part of the project itself in the management consulting sector, and there are divergent views about the position of that relational engagement. The divergent views will be the focus of this section and the following section 7.3.8.

The first perspective deals with the concept of a value proposition, that the organisation had an opportunity to generate value from the engagement and a means for unique differentiation. It could generate value through knowledge creation, knowledge sharing, trust enhancement and business development, which could develop a unique differentiation.

The research saw evidence in the organisation of the relational engagement with clients, providing an avenue for new knowledge creation and in which the client infused new ideas into a project that were either used within it or applied to a different project.

Knowledge sharing was also evidenced, whereby the organisation used the engagement to share knowledge on upcoming solutions that enhanced the client organisation, either as it related to the current project or to a completely different area of the client's operation. There was also the possibility of enhancing the level of trust, particularly the competency-based trust between the organisation and the client, by which the engagement was used to further enhance the client's knowledge of the product or service.

What this perspective showed for the research organisation was the need for a deliberate strategy to facilitate the conversations that delivered the required benefits during an engagement. It showed that without this the organisation might miss out on generating those insights or value.

7.4.8 Client engagement as a means of delivering value

The second perspective on the role of client engagement in project delivery was the idea of it simply as a means of delivering value. The focus here was on the solution or the project item; that once the service offering was deemed good, then by implication the project was completed. There was no commitment to generating any value out of that engagement.

During the research investigation, the research identified a number of project deliveries that were approached in this way. Even when key insights were evident, they were not subsequently utilised because the focus was to make the delivery and move on to the next project. The focus of this particular approach was on the product and its financial performance, not on the process or the potential value of the client engagement.

These divergent views on client relational engagements had a significant influence on some key knowledge and innovation management activities in the research organisation. They affected the organisational approach to who participated in client engagements, what was reported back to the organisation and what was done with the output of the engagement.

7.5 Theory generation

7.5.1 Overview

In the preceding sections 7.3 and 7.4 there was discussion of open codes, axial codes and theoretical concepts. In this section the research will further synthesise these concepts in order to generate a model of knowledge management and innovation management development. But before then, the research will further expand on the process of how these codes are analysed, leading to theory generation. Several open codes were generated purely from the participants' responses in the research; *these codes were later related linked into axial codes to*

form some context. A challenge for the research was in making sense of the axial codes and relating that into theoretical conceptualisation; an example from the research data was the axial code of 'trust'. Trust as an axial code and as an important factor in the organisation's knowledge and innovation management development appears to have more than one context. In trying to move the axial codes into theoretical concepts without losing some context in the research, 'trust' was adapted into two distinct areas: theoretical conceptualisation of client expectation (7.4.3) and client engagement (7.4.7). The movement of these codes from one stage to another involved a deep reflexive interpretation and synthesis of the research data and also ensured that the context of the research setting was captured at all times. The synthesis and the clustering of the theoretical codes in theory generation was a result of this constant conceptual integration of the theoretical propositions that best explained what was going on in the research environment. The theoretical model from the research suggests that both knowledge management and innovation management developed in the research organisation thanks to a combination of three key theoretical factors: environmental responsiveness, client relational engagement and conflicted understanding.

7.5.2 Environmental responsiveness

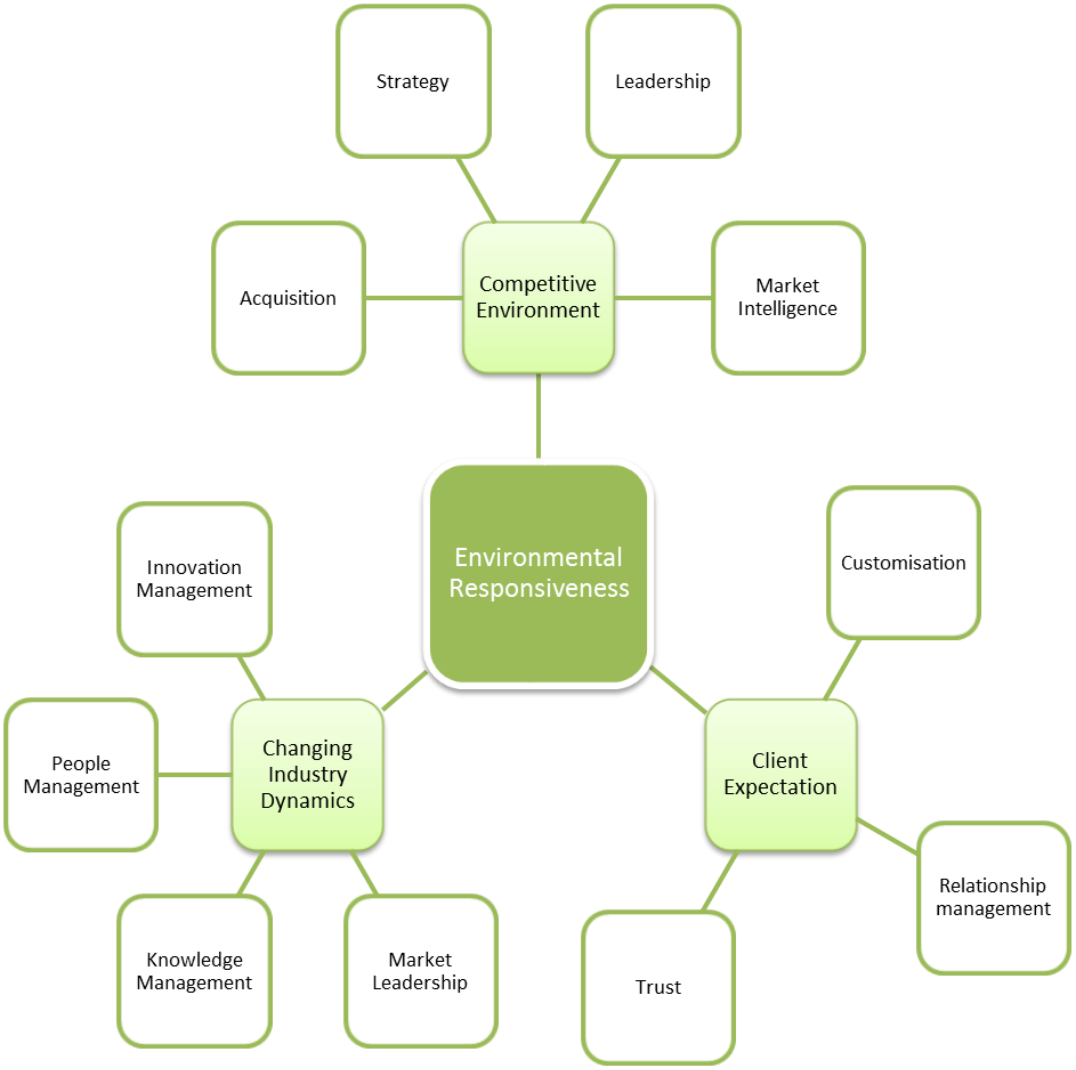

Figure 2: Environmental responsiveness factor from the theoretical and axial codes

Within environmental responsiveness three key issues were revealed in the research study that shaped the development of knowledge and innovation management in the research organisation. These were the competitive environment, client expectation and changing industry dynamics.

There were series of events in the competitive landscape of the management consulting sector that made the operating environment for most consulting organisations very competitive, and in a way difficult to do business in. These included the dominance of the big firms, the lack of major barriers to entry for new organisations, and workforce mobility. The research organisation correspondingly and continuously managed to review its strategic approaches to knowledge and

innovation management in order to stay competitive. Some of these strategies and approaches were explained in the previous sections of the research, and included acquisitions, development of new service divisions, recruitment of experience personnel, and the development of an enterprise knowledge management system.

Client expectation also changed dramatically in the sector due to the availability of options and access to information in terms of product portfolio, standard of delivery and pricing. Technology played an important role in democratising client options, by providing comparison platforms for clients to be able to evaluate their options. These platforms included client panels that provided appraisal of their experiences with firms, social media platforms to observe ongoing conversations about services and solutions in the wider sector, and public sector procurement platforms that provided access to pricing and bid documentation of projects from other consulting organisations.

The research organisation, like many in the sector, continued to adapt to these changing client expectations. Some of the new practices evidenced in the organisation included the adoption of a portfolio of highly customised products and services; enhanced account management practice; and management of trust within teams as a core element in its relationship with clients.

Changing industry dynamics in the wider management consulting sector also precipitated some changes in the way the research organisation's knowledge and innovation management developed. Some of these changes revolved around the regulatory operating environment of its clients, technological evolution and changes in the demography and needs of its workforce.

These changes and responses later formed part of the organisation's strategy to position itself for market leadership. Some of these responses have been explained in the previous sections, and include the adoption of a more collaborative innovation strategy, a dynamic knowledge management strategy and an elaborate people management strategy.

These various approaches towards environmental responsiveness were part of the overall framework found in the research study that explained how knowledge and innovation management evolved and developed in the research organisation.

7.5.3 Relational engagement

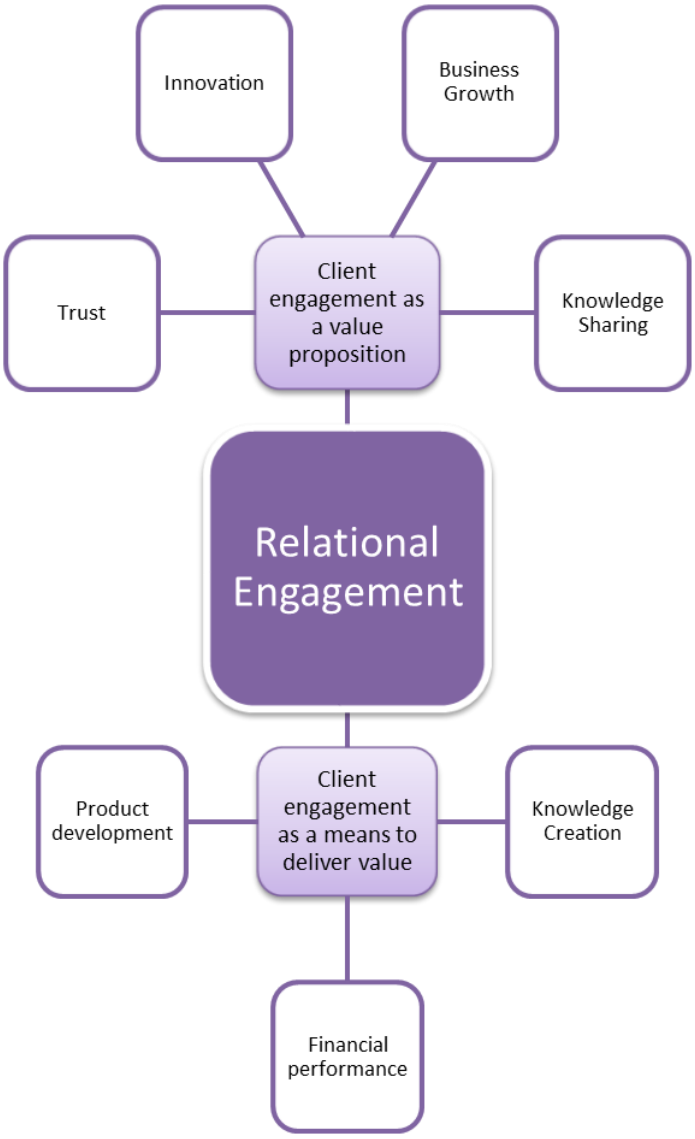

Figure 3: Relational engagement factor from the theoretical and axial codes

The factor of client relational engagement may be very specific to the research organisation as an example of a management consulting firm, because in the consulting sector, business performance is essentially attributed to clients' perception of value, especially during service delivery engagement.

The obvious implication of the delivery engagement with clients was in the potential for the firm to generate new knowledge that could contribute towards new development or enhancement of an existing portfolio, in addition to the financial contribution to the organisation.

The less obvious implication, but key in this discussion, was that of the delivery process itself, varying from the potential opportunity to enhance trust with the client, to possible new business opportunities and knowledge sharing. Because these potentials were more often spontaneous and ephemeral, the research organisation developed the resourcefulness to facilitate the type of engagement that would enable it to take full advantage of these relational engagements.

The development of the organisation's knowledge and innovation management strategies was partly a reflection of this relational dimension.

7.5.4 Conflicted understandings of innovation performance

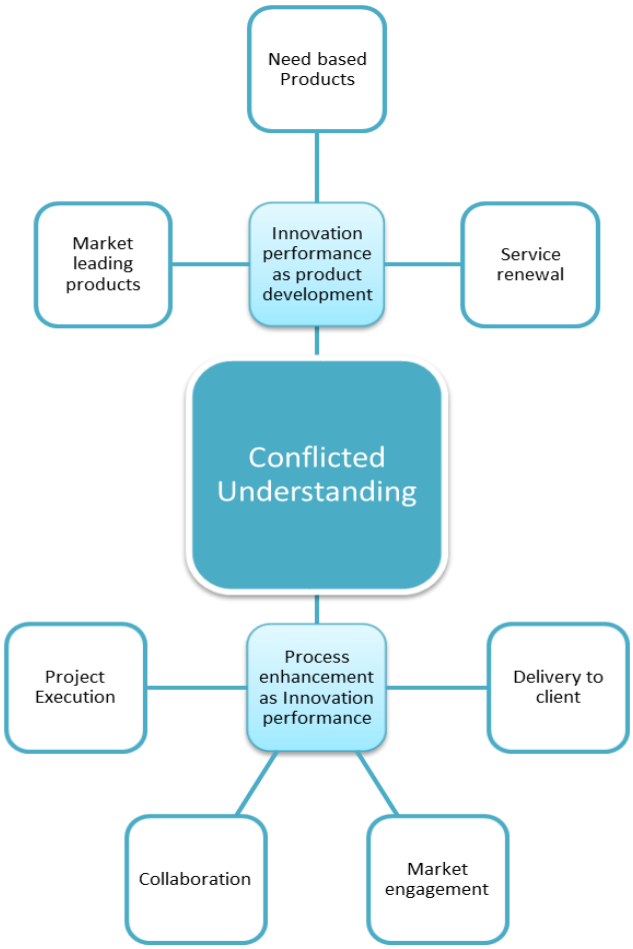

Figure 4: Conflicted understanding factor from the theoretical and axial codes

The theme 'innovation performance' featured prominently in the research with conflicting descriptions, but with a common focus on its organisational relevance.

The two key conflicting descriptions were represented as the consideration of innovation performance purely as the performance of a product or project, or the process of generating the solution and delivering it could also qualify as innovation performance. A product development-led perspective in the research organisation represented the view that innovation performance was the performance of any given product or service against its organisational set value. If the product were to be a software-based knowledge solution, innovation performance in this case would be attributed to the value of such a solution. This perspective led the organisation into adopting some practices focused on having market leading products, developing need-based products and services for key clients and adopting service renewal as a component of the product value chain.

On the other hand, there was a process-led perspective that considered innovation performance to also include the process of service delivery, rather than just focusing on the outcome. Clients do not just pay for the solution; in the case of a software-based knowledge solution, the delivery process constitutes a significant part of the value chain. Moreover, the organisation should focus on enhancing the client experience and perfecting the delivery process, as they do with the product. This understanding led it to also focus on the process of generating intelligent insights, stimulating the clients for co-productive/collaborative delivery, and enhancing the organisation's project execution capacity. The different perspective, as explained in sections 7.5.3 and 7.5.4, has contributed to different approaches, with a significant impact on the development of knowledge and innovation management in the research organisation.

8.0 Chapter Five: Discussion

In the following sections, the research will provide a discussion of the research. It will also explain its theoretical model of knowledge and innovation management development, and situate the conceptual model of the research within the existing literature. The impact of the researcher's intervention in the research organisation will also be highlighted.

8.1 Situating the theoretical model within the literature

The three theoretical factors identified in the research combined together to form the theoretical proposition explaining the development of knowledge and innovation management in the research organisation. The research approach led to the model, which is dynamic in its adoption of knowledge and innovation in an organisational setting. This is a departure from the substantialist and tentative approach of the existing models.

Existing theories on knowledge management development highlight theoretical factors such as scope (Sparrow, 2005; Ehms and Langen, 2002), styles (Choi and Lee, 2003) and readiness (Kochikar, 2000; Pee et al., 2006; Lee and Kim, 2001). Innovation management development theories are centred on the dimensions of contextual development (Ortt and Duin, 2008) and evolutionary development (Niosi, 1991). The focus of the existing theories has been on evaluating knowledge and innovation management as two distinctively different phenomena.

This study started from the same position of considering knowledge management development as different to innovation management development; in the conceptual model proposed at the beginning of the research, knowledge management and innovation management were viewed from two different dimensions. The research work was led by the evidence in the research organisation to a unified approach, in which knowledge and innovation management were approached within one overarching framework. This was because the distinction between knowledge management and innovation management activities in the context of the research organisation was very transient in practice. The two were interchangeably used, depending on who was spoken to and when. In most cases,

'knowledge' was referred to as an input, while 'innovation' was used to describe the output. But the differentiation in itself was not distinctively clear, as sometimes one unit's input could be the output of another. In order to have a coherent analysis the research adapted to the research environment by putting forward a unified model of knowledge management and innovation management development. This finding further expands on the dynamic fractal organisation proposal by Nonaka et al. (2014), who argue that there is no clear dichotomy between exploration (a knowledge practice) and exploitation (an innovation practice). They argue that organisations must be able to synthesise these activities in order to create a sustainable innovative environment.

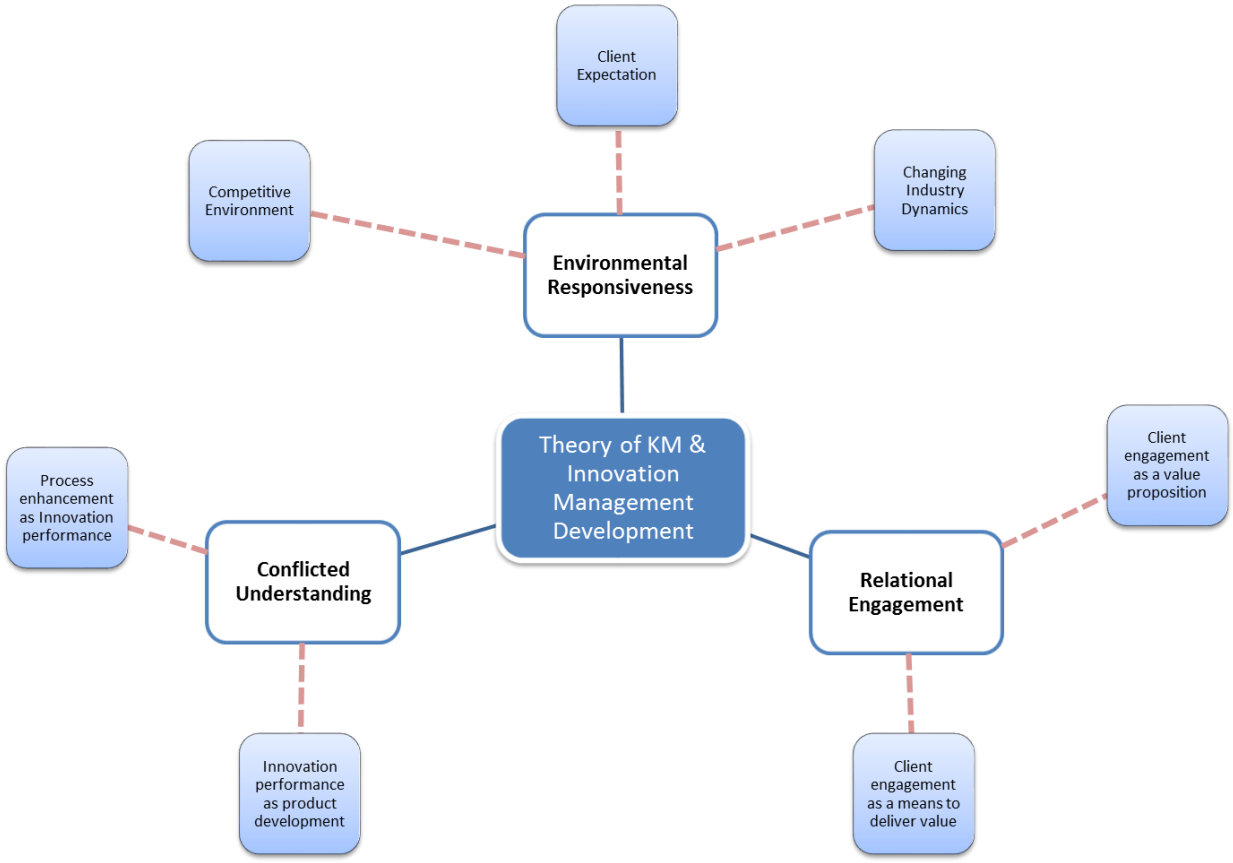

Figure 5: Theoretical model grounded in the research data

Due to its unified consideration of knowledge management and innovation management development, and the context of a management consulting organisation in the UK, the theory does not claim to be a major extension of any existing work. This does not imply that the existing theories have become obsolete in

explaining the development of either knowledge management or innovation management development. In fact, it could be argued that some of the theories can be adapted to explain some of the development factors revealed in the research organisation, although not the entire model.

The contextual development theory of innovation of Ortt and Duin (2008, p.523) can be adapted to explain the theoretical factor of environmental responsiveness found in this research study. They believe that "contextual innovation, in which innovation managers adapt innovation processes to their specific organisational and societal context, is emerging as a mainstream practice in innovation management". This is not far from the findings of this study, which concludes that environmental responsiveness is an important factor in the development of both knowledge and innovation management in the research organisation. The three key elements of environmental responsiveness, as explained earlier in the research, are changing industry dynamics, the competitive environment and client expectation. All of these define the organisational and societal context that Ortt and Duin (2008) refer to in their contextual innovation theory.

This research study also reveals an evolving development structure in the research organisation, one that is responding to both its changing operating environment and the internal organisational conditions. This position is aligned to the findings of an in-depth study on knowledge management development conducted by Sparrow (2005), which points to the fact that this development could be explained by the organisational consideration of different knowledge management activities in both its current practices and priorities.

The different approaches taken by the research organisation, and the evolving nature of development within it, were not in themselves the only influence on the development of knowledge and innovation management; they were part of the overall context. Pee et al. (2006) and Kochikar (2000) theorise on knowledge management development based on organisational readiness, with key characterisation of the maturity stage of the organisation in management. Their categorisation assesses organisations at different levels, from chaotic, through to conscientious and advanced integration. As organisations pass through these

maturity phases, their knowledge management activities are shaped and developed from that experience.

That was partly the case even with the research organisation, as is evident in both the acquisition programmes and the software solutions programme. The organisation developed over time around some of these movements and activities. However, this only represented one part of the context in the research organisation, as there were other key components within and outside it that significantly impacted on the development of knowledge and innovation management at the same time. These factors, at least in the case of the research organisation, include relational engagements and conflicted understandings.

Within the theories of knowledge management development, Choi and Lee (2003) consider the role of four different types of style in the shaping of knowledge management development in organisations: system-orientated style, passive style, human-oriented style and dynamic style. Human-orientated style was also evident in the research organisation, and can be adopted to explain the relational engagement, due to its emphasis on tacit knowledge and interpersonal experience, which are core considerations in the relational engagement factor.

In the management consulting sector, business performance is essentially determined by client perception of value, a perception that is largely developed during consultant-client relational engagement. The research organisation's knowledge and innovation management activities reflected this relational dimension of development. This dimension is not entirely new in the knowledge and innovation management development literature, as evidenced by Choi and Lee's (2003) human-oriented style. It was the context and the significance it represented within the research environment that makes it a significant factor in the theoretical formation.

Development Factors		Key References	Characteristics
Knowledge Management Development	**Readiness**	Kochikar (2000) Pee et al. (2006)	Maturity Model 1. Chaotic 2. Concientious 3. Management 4. Advanced integration
		Lee and Kim (2001)	Stage Model 1. Initiation 2. Propagation 3. Integration 4. Networking
	Style	Choi and Lee (2003)	Style 1. Human 2. Systematic 3. Dynamic 4. Passive
	Scope	Ehms and Langen (2002) Sparrow (2005)	Level Development Characteristics
Innovation Management Development	**Evolutionary**	Niosi (1999)	Technology Push (Science-Led) Market Pull (Need-Led) Technology Push & Market Pull combined Innovation in Alliance
	Contextual	Ortt and Duin (2008)	Type of Innovation Type of Organisation Type of Industry Type of Country/Culture

Table 4: Development theories

This theoretical factor of relational engagement is critical in explaining the development of knowledge and innovation management in the sector. Sparrow (2005) concludes that the partnership and learning orientations of organisations can have related consequences on knowledge management development. Similarly, O'Mahoney (2011 reports that working with clients represents the biggest trigger or source of innovation in the UK consulting industry by far. In the research organisation, the research identified working with clients as representing a key source of innovation, as a result of a significant level of co-creation activities with them in portfolio development. O'Mahoney also concludes that "contrary to some qualitative accounts, neither the size nor the ownership of consultancies appears to have any impact on how innovation was reported to have been initiated" (p. 10).

This is an interesting insight, as it offers the possibility of a wider industry implication for this research study with regard to the role of relational engagement in shaping the development of knowledge and innovation management.

Innovation and its performance have been described differently, both in the academic literature and among practitioners, as the research reveals. In the academic literature it has been presented as knowledge activity, in which ideas or practices are adopted for the advancement of the organisation or the market in general (Herkema, 2003). It has also been defined as new product development (Smith, 2010).

In the research organisation, the research reveals this conflicted understanding of innovation and its performance to be a significant influence, which varies from the consideration of innovation performance as an outcome of an innovative product or delivery, and as the level of innovation in the delivery process, rather than just its outcome. These conflicted understandings elicited certain responsiveness in the research organisation, which affected the development of knowledge and innovation management. O'Mahoney (2011) makes a similar and equally interesting finding in his work on innovation in the UK consulting industry, that more than half of the sector considered innovation to relate to new solutions (creating products, processes and services which are new). But when asked further to explain the most commonly generated form of innovation in their businesses, more than two thirds believed it was the modification of existing services or products, or changes to internal processes, that counted. This was the case with the research organisation, where modification of existing services, processes and products contribute the most to their organisational performance and innovativeness.

The same conflicted understanding narrative was part of the considerations that Niosi (1999) explains in his evolutionary theory of innovation management development. This states that innovation management in organisations is predominantly influenced by technology and the needs of the market. In the theory, he presents technology push, market-led influence, and the innovation alliance as the key attributes of the evolutionary theory. In this research investigation there was an auxiliary component to that theory. Within all the four different evolutionary stages that Niosi explains, there is the validation process, which evaluates the output

and determines if it represents any form of innovation. In the research organisation, this evaluation and consideration represent a significant part of its philosophy on innovation. Some divisions in the organisation had strong views on this validation, particularly on legitimising any form of enhancement or modification that has no immediate commercial contribution to the firm as innovation performance. This led to the adoption of several practices to ensure that people were contributing comparatively to what their respective part of the business considered to be innovation performance. This conflicted understanding continued to push the organisation into adopting different sets of activities that shaped the development of its innovation management.

The three theoretical factors analysed above combine to explain the development of knowledge and innovation management in the research organisation.

8.2 Impact of the researcher's intervention in the research organisation

In this section, some specific examples of changes that have occurred in the research organisation will be presented, which demonstrate the implications of the unified model of knowledge and innovation management development. During the process of engaging with the research organisation, the researcher went through several stages with the participants. Some started from cold reception to controlled resistance, eventually ending on a high note of acceptance, accommodation and support. There was a case of one of the participants who initially viewed the research as an audit of her/his performance, and as such was not fully co-operative and open in responding to the research investigation. Later, an interim report was submitted to the organisation by the researcher, which contained some useful insights and helpful suggestion on better facilitation of knowledge and innovation management and also on maintaining the confidentiality of all respondents. That very participant invited the researcher back for an enhanced evaluation to help guide some of the ideas they were considering on enhancing innovative practice in their unit. The second engagement was very different to the initial one, and positive insight was generated both for the research and for the enhancement of the company's innovation management approach. In the following sub-sections three

key examples of the impact of the researchers' intervention in the research organisation are given.

8.2.1 Movement from client account management to client experience management

The research investigation identified some gaps in how clients were managed in the organisation, through a process that was both chaotic and inward looking: chaotic, because it was not coordinated; inward looking, because it was focused on the organisation rather than on its clients. The research was tasked with identifying the problems and making recommendations to the business. The biggest challenge for the research investigation was in reaching organisational consensus as to what mattered most to the clients; just as with the model, the factor of conflicted understanding resonated with the scenario, as there were divergent views on what this was.

Another problem associated with the client management process was that the client account management framework in the research organisation was largely tailored to highlight product sales and contract renewal, in which clients were viewed as accounts, with key information based on the size of their portfolio, while their experience was discounted. A key element that was missing in the client account management framework in the organisation was end to end management of client experience, through an effective relational engagement process that was capable of delivering an enhanced client experience, in addition to contract renewal. This misalignment in client support and the changing competitive landscape meant the organisation lost some key accounts.

As a result of initial diagnosis from the research, a recommendation was made to the organisation to review some of the processes of client account management in order to focus more on the total experience of the management of its clients, which was sensitive to both the organisational capacity and resources and also client expectation. The framework recommended by the research had an integration point to all client engagement. Every employee engaged with clients would have up-to-date information on any contact made to or by the client. This was a departure from the old practice, in which details of client contacts were managed and left at unit level.

In the course of this, the organisation had to streamline its processes in order to manage the tension around service performance by delivering an enhanced client relational engagement regime. There was a transition from a client account management approach to a more robust approach of client experience management, which was triggered by the theoretical research factors of environmental responsiveness and client relational engagement. These two theoretical factors were critical in shaping this knowledge and innovation management activity.

8.2.2 Evolution of a knowledge mediation system

The research organisation had a functioning knowledge management system, which had some legacy challenges. These challenges ranged from a lack of flexibility in data creation and insight generation, to difficult performance metrics evaluation. The performance of the system was evaluated on the frequency of access and data volume, with a complete lack of data quality assurance safeguards.

There were no quality safeguards to sensitive client information, nor were there any checks on the validity of the client data inputted. There were a number of incidents when this lack of data quality assurance safeguards had come to hurt the business, by losing project renewals and missing out on key opportunities. The majority of the employees in the organisation used the knowledge management system to access client accounts and information that would lead to experts or portfolio managers for insight into client accounts. Key data generated from the relational engagement with clients was often not captured on the system, either because there was no way of capturing it, or because of the perception of lack of value for such relational insight.

Technology has revolutionised the industry, with many organisations already adopting a systematic and efficient approach to managing their knowledge and innovation activities. The research organisation planned to enhance its knowledge management system, and the research study made a significant contribution to the design and evolution of the system by identifying key areas lacking in the existing system and those with potential added value, for an elaborate knowledge mediation system. This system would be able to facilitate the effective generation,

sharing, and exploitation of the key organisational, client, and industry data available to the organisation.

The new knowledge management system will serve more of a mediation role in the organisation, both as part of an enterprise system and as a process. It will facilitate the flow of ideas and empower users, rather than just facilitating data automation and constraining users from being dynamic in their knowledge and innovation practices. The system will also enable instant integration of multiple data points, and support data consolidation and correlation from multiple sources. It will also allow for multimedia content analysis and provide for comprehensive data lifecycle management. All these enhancements were developed to better facilitate knowledge creation and sharing by simplifying access and offering flexibility to the employees. They will also enhance idea exploitation due to the added intelligence functionality.

The coordinated development of this system and its underlying philosophy was an outcome of the combined impact of the theoretical factors of environmental responsiveness, relational engagement and conflicted understanding, as identified in the research. The organisation's responsiveness to environmental changes, such as technology and the changing industry dynamics, has made it more accessible to developing the type of solution that could support the operation of a management consulting organisation. The context of the firm's relationship with its clients and the conflicted understanding of innovation and its performance also formed a critical component of the design and the presentation of the solution.

8.2.3 Operational zone of tolerance

The research evidences the presence of conflicted understanding of innovation performance in the organisation and its impact in shaping the development of key knowledge and innovation activities.

The research study further reveals that the effect of this conflicted understanding was further exacerbated by the presence of two dominant 'tribes' in the organisation. The first could be referred to as 'command and control' or 'traditionalist'. These were employees who saw themselves as the gatekeepers of the organisation, charged with restoring organisational order. Their key focus was on

delivering organisational efficiency through excellence in product development and driving staff performance; nothing else counted. The second tribe could be referred to as 'humanist' or 'progressive'; they saw their role more as facilitators and they focused more on improving organisational performance through enhancing the quality of employee relationships, and managing staff motivation and reward. Most of the employees in the second tribe had worked in more than one organisation or were new to the research organisation.

The conflicted understanding stemmed from the underlying notion of considering knowledge and/or innovation in the organisation as a commodity that could be enhanced independent of its constituent attributes, as in a manufacturing organisation, where people would turn up for work to create products that the organisation would then commercialise. The first tribe expected employees to come and 'create' knowledge and innovation and then the organisation would decide when and how to exploit it and obtain value. This position had led the first tribe, or the traditionalists, to adopt a command and control approach to issues, in which the most important element to work was being available, and the value of time in employee hours at work or on the client's site was linked to billable hours. This was a position the second tribe, or humanists, viewed as too narrow, counterproductive and unsustainable. They wanted a situation where people would be given the flexibility to be creative and the time to think and make connections with others.

The research attempted to streamline some organisational processes by working with senior management to develop a more aligned approach to innovation performance. This became very difficult to achieve and the process began to create additional tension in the organisation, particularly between two key divisional heads, who held divergent views about what the outcome might represent.

After several attempts it became clear that the process of resolving this tension of conflicted understanding of innovation activities and performance might be disruptive to the organisation. It also had the potential to affect its innovative capacity and erode value, rather than gain it. The organisation reviewed the situation and considered the tension to be within the threshold of their operational zone of tolerance, a scenario in which the net effect of the conflicted

understanding and the potential associated value of its resolution to the organisation was not negative or within tolerable limits.

The research argues that although the conflicted understanding had a significant organisational impact, it did have benefits. For example, it helped in stimulating diverse input into the organisational knowledge and innovation management discussions. Regardless of the good intentions, its resolution, even where possible, might not necessarily generate a better outcome. It was therefore accepted to be an inevitable outcome of a social system, by both the researcher and the organisation.

The scenario presented the research with another good example of the implications of the theoretical model in the development of knowledge and innovation management in the research organisation. This was the corresponding effect of the conflicted understanding in the organisation and its direct influence on the prioritisation of knowledge and innovation practices. The situation in the research organisation was that these different perspectives on innovation performance triggered different sets of innovation management approaches.

9.0 Chapter Nine: Conclusions

This chapter will be the concluding one of the work, in which a summary of the research will be presented and how the research questions were answered. This will be presented along with the contribution of the research to knowledge, methodology and practice; areas for future research will also be suggested. The conclusion will end by highlighting key limitations of the study.

The research set out to investigate the development of knowledge and innovation management, using an organisation from the management consulting sector in the UK. It found three key theoretical factors, a combination of which help to explain the development of knowledge and innovation management within the research organisation.

In the last two decades there has been increasing interest in the study of knowledge management, but the areas that have received the greatest attention have been research into the nature of knowledge in organisations (tacit, explicit); knowledge processes (knowledge creation, knowledge sharing, knowledge exploitation, knowledge elicitation); and knowledge strategies (personalisation, codification). In addition, in innovation management research there has been more emphasis on understanding product innovation, the innovation value chain, innovation processes and, more recently, the concept of openness in innovation.

There has been little interest in theorising on how knowledge and innovation management develop in organisations. The literature and theories on knowledge and innovation management development are also inconclusive on some key issues within the management consulting sector. These issues will be summarised in the research summary, along with how the research has answered the following research objectives:

- Investigation into how knowledge and innovation management develop in a management consulting firm.
- Analysis of employee practices and views on the dynamics of innovation in the research organisation.

- Evaluation of the role of customers and the scope of their relationship with the research organisation's knowledge and innovation practices.

9.1 Research summary

The main objective of the research was to investigate how knowledge management and innovation management develop in a management consulting firm in the UK, using the research organisation. This was fulfilled by the research, which found that knowledge and innovation management development in the organisation were shaped through a combination of factors. From the research findings, it was theorised that it was the combination of the three factors of environmental responsiveness, relational engagement and conflicted understanding that shaped the development of knowledge and innovation management in the research organisation.

Proposition	Theoretical Factors	Characteristics
Theory of Knowledge Management and Innovation Management Development	Environmental responsiveness	Competitive environment
		Client expectation
		Changing industry dynamic
	Relational engagement	Client engagement as a value proposition
		Client engagement as a means to deliver value
	Conflicted understanding	Innovation performance as product development
		Process enhancement as innovation performance

Table 3: Theoretical Proposition

The theoretical proposition of the research is that the dynamics in the management consulting organisation require a combined influence of more than one factor to explain its development of knowledge and innovation management. Ortt and Duin (2008), in their contextual theory of innovation management development, also argue that a single set of theoretical factors or best practices can no longer be used to explain the development of innovation management in organisations.

Some development theories, on the other hand, propose explanations of knowledge and innovation management development based on the influence of a single factor. The evolutionary theory of innovation by Niosi (1991) seems to suggest that organisations adapt to changes in the societal and business environment to evolve their innovation management development. Choi and Lee (2003) argue that knowledge management development can be explained from the perspective of organisational style; that organisations' knowledge management development is shaped on the basis of their style, by being either system-orientated, human-orientated, passive or dynamic. This research found these explanations inadequate in explaining the experience of the research organisation. It required the combined influence of environmental responsiveness, the role of their clients in relational engagement and conflicted understanding among its employees in order to adequately explain their development of knowledge and innovation management.

An interesting finding from the research is related to the context of the knowledge in the research organisation. There are a number of perspectives on the context of knowledge, even in the academic literature. The dominant perspective is the functional view of knowledge (Kogut and Zander, 1992), which considers knowledge to be in a static set and open to economies of scale. Moreover, an organisation can exploit and make this available at low cost, and use it as a commodity that can be objectified.

This perspective did not resonate well with the research experience in the research organisation, where knowledge was evidently contextualised in meaning. Action and context were critical to meaning and knowledge in the organisation. This finding is supported by the situated view of knowledge (Patriotta 2003, p. 39); that it "is highly contingent upon the interaction among people, resources, and routines present in a given situation".

Another key finding of the research relates to the dimension of innovation. There are two dominant positions in the academic literature: innovation as an outcome and innovation as a process. Although the delineation between the two is not as clear as many would like to believe (Sood and Tellis, 2005), this debate on the dimensions of innovation has also found its way into businesses. In the research organisation, consideration of this different dimension was sufficiently prominent to have been identified as a major influence on the development of innovation management in the organisation. The research can summarily present the dimension of innovation in the research organisation to represent both an outcome and a process; that the two dimensions are not mutually exclusive, but complementary. This position is in line with Lu and Sexton's (2006, p.1270) description, that innovation can be both "an act of introducing and using new ideas, products and/or processes aimed at solving problems, viewing things differently, improving efficiency and effectiveness, or enhancing standards of living".

The research findings on the orientation and role of employee practices and perspectives in the dynamics of innovation in the organisation tie into the general debate on the dimensions of innovation. In the research organisation this is part of what led to conflicted understandings, with innovation management being approached in different ways. This finding indicates that the different perspectives in the organisation on what can be considered innovative strongly influenced its innovation management activities. And it was from the divergent perspectives that the theoretical factor of conflicted understanding was generated. Conflicted understanding as a factor had not been identified before as having much significance in shaping innovation dynamics in organisations. In the research organisation, it represented a significant factor for consideration.

The research finding on the role of customers and the scope of their relationship in the research organisation's knowledge and innovation practices was also addressed in chapter four. Client engagement is a significant factor in the research organisation and its business activities, and led to the theoretical consideration of relational engagement as a major component in the research theory of knowledge and innovation management development.

All the factors explained above tie into the overall framework of the research model, revealing how the three factors of environmental responsiveness, relational engagement and conflicted understanding distinctively shaped the development of knowledge and innovation management in the research organisation.

It is interesting to note that different factors may be dominant in shaping the organisational approach to knowledge and innovation management development at different times. But this does not take away the relevance of the other factors in the overall organisational approach. An example of the dominant role of one factor over the others was evident during the research study. In the last two years environmental responsiveness has been the most dominant theoretical factor in shaping the development of the organisation's knowledge and innovation management activities. This was largely due to the impact of the changing financial structure and technological evolution in the larger economy, which affected the overall dynamics of the industry in terms of competition, client expectation and the workforce. The central argument of the research finding was that it was the combination of three factors, and not a single one of them, that fully explained the development of knowledge and innovation management within the research organisation.

9.2 Contribution to knowledge

This research study contributes to the theoretical propositions of knowledge and innovation management development, and also enhances the understanding of how knowledge management and innovation management develop in a management consulting organisation in the UK. The research reveals that the existing theoretical arguments of knowledge management and innovation management development need to be reconsidered, in order to have a more robust understanding of the dynamics in a management consulting organisation.

The main contribution of the research is its consideration of knowledge management and innovation management development in a unified framework. Existing theories of knowledge management development (Kochikar, 2000; Pee et al., 2006; Lee and Kim, 2001; Choi and Lee, 2003; Ehms and Langen, 2002; Sparrow, 2005) and innovation management development (Niosi, 1999; Ortt and Duin, 2008)

could not be reconciled with the experience in the research study, in which both approaches to knowledge and innovation management were not distinctively different. No research study has been conducted to explore the development of both knowledge management and innovation management together, particularly in a management consulting organisation.

Another major contribution is the identification in the research of the role of employees and its effect in shaping the development of knowledge and innovation management. Almost all the existing theories recognise the value and the significance of the external environment in shaping development, but very few identify the role of client engagement and employees in the development of knowledge management and innovation management. It is interesting to note that only one theory (Sparrow, 2005) has identified the notion of the employee perspective as a significant factor in the development of knowledge and innovation management in an organisation. Sparrow approaches the employee perspective from a mental and cognitive position, from which the emphasis is on evaluating how decisions and actions can be explained by individual mental models. This research, on the other hand, approaches the issue from a social interaction position, with emphasis on analysis of the different perspectives among participants or employees.

The research locates this debate on the role and perspective of employees within the spectrum of the research model of knowledge and innovation management development, which is represented in the three key theoretical factors. As explained above, a number of studies in knowledge and innovation management development highlight the role of the environmental responsiveness factor, with emphasis on the role of the external environment in organisations in general, because the external environment is the most visible of all the factors. In the research, the external environment is represented by the changing industry dynamics, client expectation and the competitive environment. It would be surprising to find any organisational theory which does not take note of these, particularly a knowledge management and innovation management theory. All the existing knowledge management development and innovation management development theories have identified the role of the external environment in shaping organisational knowledge and innovation management practices.

The second factor in the spectrum represents the context within which organisations respond to the external environment. In the case of a manufacturing organisation, for example, this is usually evident in their products. In the case of the research organisation, this was evidenced in the way they relate to their clients. This was what the research theoretical factor of relational engagement represents; how the research organisation synthesises its response to the external environment and contextualises it in its relationship with clients. In management consulting, client engagements remain the key means within which organisations evidence production. Within the existing theories, Sparrow (2005), Ortt and Duin (2008) and Choi and Lee (2003) all account for scope and contextualisation in their frameworks.

The third factor is unique to this research in its contribution to knowledge and innovation management development theory: conflicted understanding. This accounts for the micro-operational and management activities within the organisation that affect its ability to contextualise its response to the external environment.

The research theoretical factor of conflicted understanding is similar to what Leonard and Swap (2005) refer to as creative abrasion; although they advise that this should not be equated to conflict. For innovative purposes, every organisation should find the discipline to effectively manage the diverse thinking styles within it. But diverse thinking styles and perspectives in the research organisation did lead to conflict, and to incompatibility of ideas, principles and perception among employees. Organisations are not known to manage this diversity as effectively as Leonard and Swap would recommend. Even in military organisations, where it is expected that the micro-organisational setting has less tolerance for divergence of opinions on operational and management styles, the command and control philosophy is far more complex than just a 'yes sir' doctrine (Matláry and Øyvind, 2007). Although the research does not expect the role of the employee perspective to have the same effect across all organisations and sectors, it was certainly a very significant factor in the research organisation. Sparrow (2005) notes that the development of knowledge management practices in general has to take a holistic approach. With respect to the role of owner managers and their influence on the development process, he argues for the need to pay attention to the "many facets of their thinking, including their utilisation of semantic understanding, episodic

knowledge, skills, tacit feel and unconscious interpretations in their reasoning, mood, and creativity" (p. 137).

The research contribution is that the employee perception and conflicted understanding revealed in the research organisation was a key factor in shaping organisational knowledge and innovation management practices. This was identified from the research as an equally important factor, along with environmental responsiveness and relational engagement, in explaining its development of knowledge and innovation.

9.3 Methodological contribution

The methodological approach of the research study is another major contribution to knowledge; a constructivist grounded theory was dynamically adopted with sensitive interaction to literature and the researcher as a facilitating observer in the research environment. This opens up the potential to be adapted or extended in future business management research. As Simon (2010) points out, research methodology can be complemented by a number of approaches in order to achieve a deeper understanding of the research phenomena in a different way of seeing and constructing meaning. The methodology used in the research was from a deeper understanding of what was required in order to properly investigate the research phenomena, and how the different approaches to grounded theory methodology could be successfully adapted complementarily within the set rules and guidelines in a management research.

9.4 Contribution to practice

A key area of contribution to management and practice, which can reinforce the theoretical contributions, was in the client account management framework, which the organisation believed to be at the cornerstone of its operations. However, as evidenced by the research study, it had failed the organisation in delivering effective value to its clients. Many clients were frustrated by its lack of effectiveness, and the employees supporting the framework were also challenged by this failing. The research presented evidence of the lack of integration in the account management framework of the research organisation and the potential impact on

the business, and recommended a robust and integrated framework that would facilitate enhanced client experience management. The research recommendation was in line with the findings of Johannes and Armbrüster (2003), which emphasised the immense value of enhanced client engagement management for a management consulting organisation.

From a managerial perspective, the research findings and recommendations provide a valuable framework for practitioners to implement effective client experience management.

9.5 Limitations of the research

The research study has presented an explanation of the development of the two complex and dynamic phenomena of knowledge and innovation within the context of a management consulting organisation. As a consequence of this, a number of limitations were encountered in the study.

Some of the limitations and challenges of conducting a research project were highlighted earlier in section 6.5. Listed below are a number of further limitations encountered in the research.

- A key limitation was time; the duration of the investigation was managed in order to align with the overall PhD program of the researcher. If the research had had more time to explore other areas in the organisation, additional insights may have been generated, either in explaining further the research objective, or other areas of knowledge and innovation management.

- Because there was no existing unified theory on knowledge management or innovation management development in management consulting, the research had no robust conceptual framework to appropriately contrast with. It had to work on theories of knowledge management and innovation management development, some with distinct differences.

9.6 Recommendations for future research

The scope and dimension of the debate on the development of knowledge and innovation management is multifaceted, even at the level of a management consulting organisation. In order to generate more ideas and explanations, there is the need for further research investigations to assess other possible dimensions of the research area. The research will recommend and speculate on the following future research areas that could facilitate the assessment of other valuable dimensions:

- An important consideration in this research was the methodology used; a similar study could be conducted within the sector using a different methodological approach. This could be an ethnographic approach or any other methodological approach to evaluate the possible role or effect of the approach used in this research in shaping its outcome.
- A longitudinal research approach could be explored to determine whether the findings of this research were in any way influenced by its scope or the duration of the investigation.
- A different management consulting organisation in the UK or elsewhere in Europe could be investigated, in which there is a similar operating context. This could either validate the research model or evaluate its effectiveness in explaining the development of knowledge and innovation management within a new context.
- The research could be extended into another sector, such as financial services or higher education, where there are similar dynamics of knowledge intensity and client engagement. This could ascertain whether there are similar requirements in terms of both the intensity and relevance of such engagement to the development of the research phenomena.
- Another area of research that could be explored would be to focus more on the employee dimension, to prove further some of the challenges identified in this research. Additional in depth investigation and analysis could be carried out, to establish whether more insight could be generated from this dimension and whether it has more or less impact in shaping the development of knowledge and innovation management than had been credited by this research.

9.7 Conclusion

In the management consulting sector, organisations consider knowledge and innovation as the most important elements in both operation and performance. That was why the central tenet of this research was to explain how knowledge management and innovation management develop, using the research organisation as an example. Development here comprises both the governance and the organisation of the different innovation and knowledge activities that the organisation performs (Ortt and Duin, 2008). This is why explaining development is the most critical component in understanding how organisations evolve around innovation management and knowledge management.

The research has successfully presented an emergent theory of three complementary factors which go towards explaining the development of knowledge and innovation management in a management consulting organisation. Despite the benefits that have been presented with the existing theories about the role of single theoretical factors in explaining the development of knowledge and innovation management, the research found that there was more than one factor responsible for shaping their development in the research organisation. It revealed the theoretical factors of environmental responsiveness, relational engagement and conflicted understanding to be responsible for shaping the development of knowledge and innovation management in the organisation. In addition, the unified consideration of knowledge and innovation within the theoretical model has been both complementary and comprehensive in the practical experience of the research organisation.

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