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CHAPTER 1

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1 STUDY BACKGROUND

1.1 INTRODUCTION

This study investigated the components required for managers to enable their team members who create information-driven deliverables while working remotely from them to produce according to expectations, with the aim of creating: *"A managerial framework for the enablement of the performance of virtual knowledge workers".*

Chapter 1 provides the background to and motivation for the research, summarising the problem statement and describing the purpose of the research. These were translated into the research objectives that have driven and guided the research process. This chapter also gives a preview of the theoretical, methodological and practice-level contributions that the research has made. The research scope and approach, namely an embedded multiple-case study using mixed data collection and analysis methods in support of the problem statement and purpose, are described, as well as the assumptions made. Next, the chapter provides definitions of the key terms used in the study, namely the concepts of organisation, virtual worker and performance management. Some neologisms, such as "virtual performance" and "virtuality", which are not necessarily dictionary terms, but are used extensively in this study, are also explained. Lastly, the chapter layout is described. It should be noted at this early point that the traditional sequence of chapters, namely "Introduction, - Literature Review – Methodology", has not been used for the first three chapters. This is in line with the research process of constructivist grounded theory which has been followed.

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1.1 BACKGROUND AND RESEARCH MOTIVATION

Over the last decade, the advances in information and communication technology and the use of the internet and broadband technologies have become more pervasive in work situations (Raghuram, Gurad, Wiesenfeld & Gupta, 2001:384; Raghuram, Wiesenfeld, & Gurad, 2003:181), enabling various changes in organisational structures. These organisational structures range from the original hierarchical and bureaucratic organisations described by Weber (1947:7) to the multinational and global corporations with their inter-organisational networks and modular forms (Ghoshal & Bartlett, 1990:603; Schilling & Steensma, 2001:1149). The advances in information and communication technology have also allowed work to become more dispersed and remote from direct management (Jackson, Gharavi & Klobas, 2006:219), as opposed to the standard worker in a bureaucratic organisation who worked in a fixed employer location, was directly controlled by management and had fixed office hours.

The new type of workers are sometimes referred to as nonstandard workers, working in a geographically remote location, not under the direct control of management, and not necessarily bound by strict office hours (Ashford, George & Blatt, 2007:66-69; Connelly & Gallagher, 2004:959). These work arrangements give organisations various financial and functional benefits, such as being able to scale the workforce, scale the level of skills and reduce the cost associated with physical office space (Broschak, Davis-Blake & Block, 2008:4; Cappelli, 1999:151-152; Cascio, 2000:81-82). Barley and Kunda (2001:76) state that the theories for studying bureaucratic organisations no longer apply to the changed organisational landscape, and need to be recast, specifically through applying work studies on the new contingent (nonstandard) work arrangements.

In this information age, information has become the new commodity (Chichilnisky, 1998:39; Drucker, 1999:97), with the knowledge workers as the "vessel" of this commodity, who therefore own the means of production through the knowledge they possess (Drucker, 1999:149). These knowledge workers are also defined by Davenport (2005:10) as having "… high degrees of expertise, education, or experience, and the primary purpose of their jobs involves the creation, distribution,

or application of knowledge". By performing these knowledge activities, the knowledge worker contributes to the performance of the organisation. Both Drucker (1999:135) and Davenport (2005:8) agree that the productivity of knowledge workers, and the measurement of their productivity, is therefore of key importance to organisations.

However, due to the complexity of the concept of knowledge workers and their performance, the research has not been exhaustive, nor has it been able to create and test new theory in any definitive way. The difficulty lies in the fact that the tasks often need to be defined by the knowledge workers themselves, and that the knowledge of how the task is done is the knowledge worker's competitive advantage. This may lead to the knowledge worker withholding (either consciously or subconsciously) specific information that is relevant to the task and its measurement (Davenport, 2005:17-21; Drucker, 1999:142).

In the early 20th century, Taylor (1916:36) applied scientific management to break down a task to its lowest components. However, this principle cannot be applied to the modern knowledge worker (Davenport, 2005:45). In addition, the added complexity is that the advances in mobile technologies have allowed knowledge workers to work in a place geographically remote from their traditional workplace (Ashford *et al*. 2007:69; Luyt, 2007:13). The effect is that the workers are "… removed from the direct sphere of influence of management and co-workers" (Jackson *et al*., 2006:219). Workers fitting this description will be referred to as virtual knowledge workers in the context of this study.

Performance management and measures, like many of the other organisational management tools, have not been sufficiently adapted to reflect the new way of work, and are often still based on the outdated bureaucratic principles of organisation theory and design (Drucker, 1974:166; Barley & Kunda, 2001:45). These new workplace dynamics need to be investigated, especially in relation to individual performance and the management of this performance (Ashford *et al.*, 2007:69–74). If the new way of work and models are not considered and included in further research, the following statement may become true: "Over time, society will change and people's expectations of organizations will change accordingly. An organizational

behaviour field that clings to an outdated model of individuals and their interactions with organizations will become anachronistic" (Ashford *et al.*, 2007:106).

For virtual knowledge workers, Cascio (2000:88) makes the statement that goals must be set, and assessment mechanisms put in place, i.e. "develop specific, challenging goals, measures of the extent to which goals have been accomplished and assessment mechanisms so that workers and managers can stay focussed on what really counts". Davenport (2005:26) states that measures will differ according to the type of knowledge worker. Drucker (1999:149) gives high-level guidelines regarding the measurement of knowledge workers, rather than a definitive set of metrics. In Jackson *et al.* (2006:241), there is a suggestion to review how the use of information technology can assist with monitoring individuals, specifically related to the role of the "inner panopticon", i.e. where individuals start monitoring themselves, as opposed to there being a need for external monitoring.

The importance of this study is therefore that it filled the gap regarding the understanding of management of performance of remote individuals by specifically focusing on the performance of virtual knowledge workers, and how the manager could enable this. The study also created a more consolidated view of all the parameters impacting on this virtual performance. To do so, the study was performed in real-life, modern organisations through the case study methodology.

As shown in the background literature, technology has been the key enabler for remote work. At the same time technology has also become a barrier, by making it more difficult for the manager to set expectations and to track the result of the activities. The actions of the individual and the manager and the impact of the technology on this are shown in Figure 1-1. This diagram compares with the very simple but clear definition provided by Dunnette and Fleishman (1982:xx) that performance is "…the results or outcomes of work", thereby opposing it to behaviour. They state that "… performance is the end result and behaviour is the means to that end". The individual performs work and performance is the output thereof, as shown in Figure 1-1.

Figure 1-1: Model for actions of individual and manager showing technology impact
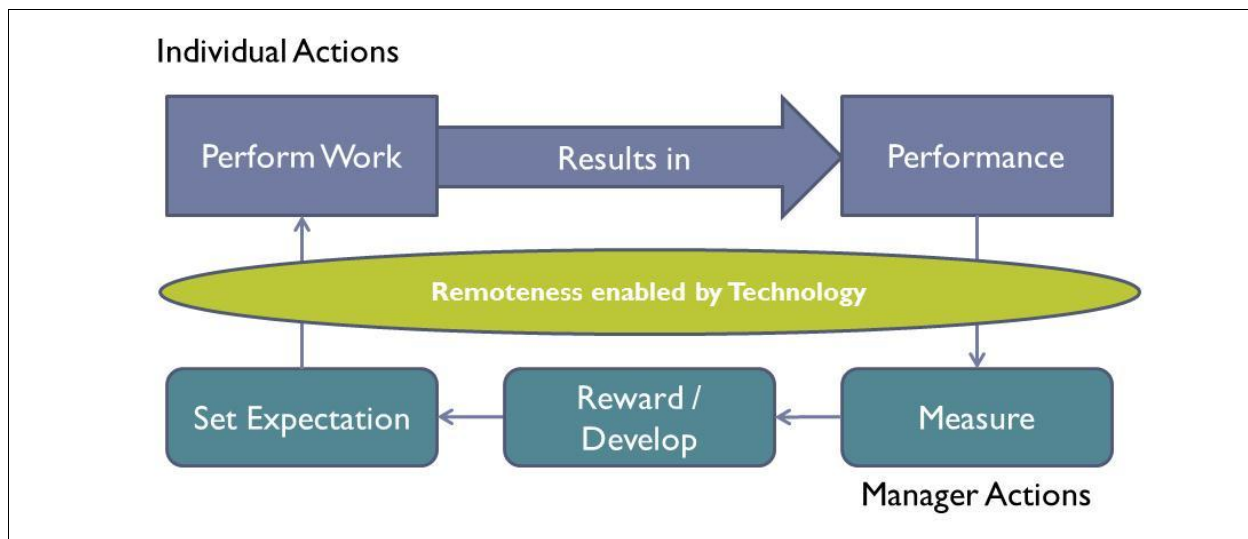
In Chapter 3, the initial literature review gives a historical perspective of performance appraisals, including their objectives (Cascio, 1998:33; Harvard Business School, 2007:1; Latham and Wexley, 1994:5); systems and types of instrument involved (Grobler, Warnich, Carrell, Elbert & Hatfield, 2006, 262; Latham & Wexley, 1994:47); and issues encountered with performance appraisals (Cascio,1998:58; Culbert, 2008; Harvard Business School, 2007:2-3; Latham & Wexley, 1994:1). Some research has been conducted relating to the performance and measurement of virtual knowledge workers, and how this differs from the more traditional approaches (Broschak *et al.*, 2008:22; Davenport, 2005:39; Drucker, 1999:142; Jackson *et al.*, 2006:221, Piccoli, Powel & Ives, 2004:372).

The theories that are affected by this adjusted way of work are then discussed, and include socialisation (Barley & Kunda, 2001:87; Broschak *et al.*, 2008:18-19), the psychological contract (Rousseau & Tijoriwala, 1998:679), self-efficacy (Staples, Hulland & Higgins, 1999:758-776), goal-setting (Locke, Latham & Erez, 1988:23; Locke & Latham, 2006) and management control (Jackson *et al.*, 2006:220). Finally there is a short review on how information systems and management of performance are used in the context of virtual work (Limburg & Jackson, 2007).

1.2 PROBLEM STATEMENT

Performance management principles and measures in modern organisations have not adapted sufficiently to enable and measure the performance of knowledge workers both effectively and efficiently. With the advent of mobile technologies, management now face a double dilemma of not only having to manage the performance of knowledge workers who work within their direct sphere of influence, but they also need to manage the performance of virtual knowledge workers whom they cannot see on a day-to-day basis. This often leads to management's perceptions of low productivity, especially where trust is low. It can also lead to reduced productivity on the part of the virtual knowledge workers if tasks and deliverables are not defined or agreed on sufficiently, or when too many controls are instituted. In short, the problem that this study addresses is that managers in general have great difficulty with managing the performance of virtual knowledge workers.

1.3 PURPOSE STATEMENT

The purpose of the study was to *investigate, analyse and describe* the ongoing or continuous management and measurement of performance of virtual knowledge workers from the perspective of the manager. It would also *explore* why managers often found it so difficult to manage the performance of this type of worker. The ultimate aim of the study was to suggest a new conceptual framework or intellectual tool to *prescribe,* or rather *suggest, how* managers should manage and enable the performance of virtual knowledge workers.

1.4 RESEARCH OBJECTIVES

The research objectives have been based on the purpose of the study, and the resulting objectives and sub-objectives are listed in Table 1-1.

Table 1-1: Research objectives and sub-objectives

Objective	Sub-Objective
1) To critically review the current state of knowledge and understanding of how the performance of virtual knowledge workers is managed.	RO1: To critically review the current state of knowledge and understanding of **how the performance of virtual knowledge workers is managed**.
2) To analyse and describe how the organisational context and the approach of managers affect the behaviours and outputs of virtual knowledge workers.	RO2a: To analyse and describe how the **organisational context** affects the performance and outputs of virtual knowledge workers.
	RO2b: To analyse and describe how the **approach of managers** affects the performance and outputs of virtual knowledge workers.
	RO2c. To determine what **individual factors** play a major role in the performance of virtual knowledge workers.
3) To create a new conceptual framework or intellectual tool to help managers to manage and enable the performance of virtual knowledge workers, and suggest what organisational context would be required to support this.	RO3a: To create a **new conceptual framework** or **intellectual tool** to help managers to manage and enable the performance of virtual knowledge workers.
	RO3b: To determine what **organisational context** would be required to support this new conceptual framework.
	RO3c. To determine how **individual factors** might influence the definition of the intellectual tool.

1.5 CONTRIBUTIONS OF THE RESEARCH

The aim of this study was to build theory by introducing new constructs and by reconceptualising existing constructs through the data-analysis process of constructivist grounded theory, and by following the multiple-case study strategy of inquiry. In this regard, the extended theoretical models that were created based on the real-life multiple-case study used for this research can be used as a basis for future research.

Furthermore, the study makes a significant contribution on a methodological level by showing how multiple cases that include embedded units of analysis on three levels can be analysed and documented in a systematic way, using both qualitative and quantitative data collection and analysis methods. The research therefore demonstrates how such a multi-faceted study can be executed to develop theoretical insights into the complex phenomenon of enabling the performance of virtual knowledge workers.

From a practice or practical perspective, the study makes a contribution by addressing the gap in the understanding of how the performance of virtual knowledge workers is actually being managed and enabled, and provides a conceptual framework that could assist managers in the management of virtual performance.

In addition the study also makes a contribution on a policy level, by identifying areas where changes may be required to policies in support of the management of performance of virtual knowledge workers on organisational level.

1.6   RESEARCH SCOPE AND APPROACH

The study was performed as an embedded, multiple-case study design because a current, real-life situation needed to be reviewed. Multiple cases were included to ensure that generalisations could be achieved across the cases, and that theory could be built in this way. The cases were represented by a set of companies that were using information and communication technology (ICT) as part of their daily business, or implemented such solutions, and which employed knowledge workers to do so. This excluded factories or manufacturing concerns, where many functions still have to be performed by on-site staff. Both fully owned South African companies and companies with international parents were included. Some of the South African companies also had branches overseas. This gave a good spread of managers and individuals locally in South Africa, the United States (US) and the Eurozone, thereby covering managers and individuals in different countries and time zones. A set of four companies was initially included, and this was extended to a fifth company to ensure that data saturation had been achieved.

The study had an embedded design, as multiple units of analysis were used. The units of analysis included teams of individuals, managers, and the organisation. The *team* in the context of this study consisted of the combination of the manager and the individual team members. Multiple teams per business unit were included in order to ensure sufficient coverage of those business units and probable data saturation. From a *manager perspective*, the study included teams who were managed by either a project manager or by their line manager. On the *organisational level*, the company

was represented by one Human Resources (HR) and one Information Technology (IT) representative. It was not always possible to gain access to the full HR or IT policies, and the company representatives in these cases provided the relevant extracts only.

A *mixed methods approach* was used to collect and analyse the data. Analysis of and comparisons took place both within-case and cross-case. The study was executed in the framework of constructivist grounded theory, with the aim of building theory through an inductive approach rather than testing existing theory.

Although the study centred on the performance of virtual knowledge workers, the aim was not necessarily to find ways to improve performance, but rather to measure and evaluate how performance was currently being managed and enabled. Even though knowledge management is important in the context of knowledge workers and the modern organisation, the study did not explore the knowledge worker in more detail. Lastly, the focus was on enablement and management of virtual performance and not management in general.

1.7   ASSUMPTIONS

Leedy and Ormrod (2010:5) state that assumptions are often like "… axioms in geometry – self-evident truths…". It is therefore important to identify these assumptions and make them explicit. If they do not hold true, the whole research effort may be in vain. Three areas of assumptions have been addressed.

From a *theoretical perspective*, the assumption was that no single theory exists that can adequately describe how performance of virtual knowledge workers is managed. The interplay between the theories that occur in a specific context could have different results because of the impact of the different variables on each other.

Two key assumptions on the *research philosophy and paradigm* were identified. Firstly, in relation to an interpretivist view, there is a belief that there is not one truth only which will be found through diligent search. This is important from a social

sciences perspective, since a company cannot be frozen or placed in a laboratory in order to obtain a controlled and definitive result. Rather, there are multiple truths that will emerge through different contexts. The second assumption, in relation to the research philosophy of pragmatism, was that quantitative and qualitative methods can be implemented together in a mixed methods approach. The research philosophy and paradigm are described in more detail in Chapter 2 of this document.

Lastly, from a *methodological point* of view, the assumption was that the chosen organisations would sufficiently represent the phenomenon under consideration, namely the management of performance of virtual knowledge workers. Also that both the managers and the individual team members would truthfully answer the questions in relation to how performance is measured.

All of these assumptions have held true throughout the research process.

1.8   DEFINITION OF KEY TERMS

There are three areas that are defined in this section: firstly, terms relating to the concept of the organisation, secondly terms relating to the concept of the virtual worker (standard, nonstandard, virtual knowledge worker), and lastly terms relating to the concept of performance management.

The study takes place against the backdrop of how the structure of organisations has changed since the beginning of the 20th century till the present day. The term "bureaucratic organisation" is used when referring to organisations that comply with traditional structures and management approaches, while the term "modern organisation" is used for organisations of the present day. The term "virtual workplace" is defined as an extension of the modern organisation. The details are given below.

- **Bureaucratic organisation**: the type of organisation where ownership is split from management, and the managers become "officials" responsible for an "office". Each office has legal authority, must adhere to rules, works within a specific area of skills, adheres to pre-agreed supervisory hierarchy, and all

decisions are confirmed in writing (Weber, 1947:8–9). Typical examples were the large factories of the late 19th and early 20th century.

- **Modern organisation**: Globalisation, together with the advances in ICT, has set the stage for societies of organisations, interorganisational networks of multinational corporations, virtual workplaces and boundaryless organisations (Ghoshal & Bartlett, 1990:603; Schilling & Steensma, 2001:1149, Walsh, Meyer & Schoonhoven, 2006:665). "Boundaryless" does not only relate to interaction between various independent organisations, but also to geographic location, type of work contract, approach of the manager, and structure of work in these organisations (Cappelli,1999:154; Scott, 2004:10).

- **Virtual Workplace**: "[A] workplace where the time and location can be chosen and technology will be the key enabler for connectivity and collaboration. Time will be chosen in terms of a schedule ('when' work is performed) and proportion ('how many hours' are spent working virtually). Location can vary between the main office location, a satellite office location (this could also be a customer site), home and any other non-traditional working place where technology enables connectivity (for example a coffee shop with wireless connection)" (Luyt, 2007:13).

In the domain of the modern organisation, and with the growth of information and communication technology, new ways of work have become feasible. Reference is made to "nonstandard workers", meaning that their previous way of working was standard, and they are now working in a nonstandard way. In the context of using information technology, many new types of jobs were created that were based more on knowledge as the commodity, rather than a specific tangible product or deliverable, as in factory work. Thus the concept of a knowledge worker was born. The fact that these knowledge workers could work remotely from a central office and collaborate via information technology gave rise to the term "virtual knowledge worker". These terms are now explained in more detail, and how they apply in the study:

- **Standard work(er):** Standard work is linked to elements of the "Weberian bureaucracy" such as a lifelong career in the organisation, implying a long-term relationship with the organisation (*i.e.* a strong employee-organisation

relationship). The contract for the standard worker in a bureaucratic organisation was fixed employer location, direct control by management and fixed hours (Ashford *et al.*, 2007:76).

- **Nonstandard work(er):** Broschak *et al.* (2008:3, 4) define the term nonstandard work as a work arrangement which includes non-permanent contracts, as opposed to standard work, which is defined as a "full-time work for an open-ended duration, performed at an employer-owned location and under the employer's administrative control". Other terms used for these types of nonstandard worker include contingent workers, temporary workers and contract workers. Although the research does not necessarily refer to virtual work, activities of the nonstandard worker could potentially be performed away from the appointed manager. Where individuals specifically work away from their manager as virtual workers, terminology for these workers includes telecommuter, teleworker and mobile workers, to mention but a few (Ashford *et al.*, 2007:165; Cascio, 2000:85).

- **Knowledge Worker**: This is somebody who trades in knowledge. In other words, these are individuals who engage on a cognitive level with work, and even though they may produce tangible results or deliverables in the form of reports, computer programs, analysis and the like, the work actually may stop when the individual leaves the organisation. In addition, two similar deliverables are often difficult to compare in terms of their quality (Davenport, 2005:10; Drucker, 1999:149).

- **Virtual Knowledge Worker:** Knowledge workers who work geographically remotely from the traditional workplace (Ashford *et al.*, 2007:69; Luyt, 2007:13) are as a result "…removed from the direct sphere of influence of management and co-workers" (Jackson *et al.*, 2006:219). When considering the definition of the virtual workplace above, types of virtual knowledge workers can be defined in terms of when work is performed, how many hours are spent working remotely (in relation to the total hours worked), the location used and finally the type of contract. Virtual work is seen as working outside the main office at least one day a week (Illegems & Verbeke, 2004:319).

- **Telecommuter:** Telecommuting is working away from the main office location, of which home could be one of the options, while being connected via

technology (Cascio, 2000:85; Duxbury and Higgins in Schweitzer & Duxbury, 2006:105). In this sense the terms "telecommuter" and "virtual worker" are seen as synonyms in this study. Cascio (2000:85), however, emphasises the point that the individual does not have face-to-face contact with his or her manager and colleagues, except through the technology, which would preclude locations such as regional offices or customer sites, while the current study does include those locations as part of the telecommuting or virtual work definition.

From a definitions perspective, the term "performance management" (as opposed to management of performance) is very important. Traditionally, performance management has been seen as a way to ensure continuous improvement of employees and is normally completed on a bi-annual basis.

- **Performance Appraisal:** Performance appraisal is the process of evaluation whereby the performance and behaviour of the individual is compared with the previously stated objectives of the job. This is to ensure that the behaviour is still directed towards the overall objectives of the organisation (Cascio, 1998:40; Grobler *et al.*, 2006, 262; Miner, 1992:379). The individual must be both effective in achieving the behavioural expectations (Latham & Wexley, 1994:3) and efficient or productive (Latham & Wexley, 1994:45). In the context of the socialisation process, the evaluation of performance will give an indication whether the individual has adapted to the culture and processes in the organisation (Ivancevich & Matteson, 2002:79). Synonyms of the term performance appraisal include performance review, performance evaluation, merit evaluation and employee evaluation (Grobler *et al.*, 2006:262).

- **Performance Management vs Management of Performance:** Performance appraisals fall within the broader concept of performance management, which forms part of an organisation's human resource management processes. Performance management covers the total process of performance, and ranges from the appraisal tools to goal setting, evaluation, development and continuous feedback (Grobler *et al.*, 2006:262; Latham & Wexley, 1994:3; Williams, 2007:23). Performance *per se* should be separated from the outcomes or results of performance, which are seen as effectiveness (Cascio,

1998:43). The focus of the study was on the management of performance of virtual knowledge workers, which does not necessarily imply using only a formal performance management system.

- **Information Systems:** These can be defined as systems that support collaboration, communication and socialisation, as well as the measurement of performance, and may include HR systems such as such as the Enterprise Resource Planning (ERP) systems, SAP. Limburg and Jackson (2007:146) investigated the use of information systems to support the management of remote workers.

Some additional terms that have been used in the context of this research, which are not necessarily common terminology, are:

- **Virtual performance:** is used to indicate the performance where the individual is working remotely from the manager;

- **Virtuality:** is used to indicate the virtual status of the individual;

- **Teamness:** refers to the sense of teamwork, and relates to the cohesion and interdependence amongst team members which is created through the communication of feelings, sensory information, and roles and identities in written or verbal communication (Knoll & Jarvenpaa, 1998:10).

The list of acronyms, as well as a summary of other terminology used in the document, is given in Appendix A –Terminology.

1.9   THESIS STRUCTURE

Since the core data analysis technique used for the study was content analysis, based on the principles of grounded theory, the first three chapters do not follow the traditional sequence of "Introduction – Literature Review – Methodology". The approach rather uses the case study process as basis (Eisenhardt, 1989:533; Yin 2009:1). In addition, the chapter sequence has taken guidance from the grounded theory approach, which is an inductive approach, requiring therefore only a minimalistic literature review up front. The sequence of the chapters has been

mapped on the case study process of Figure 1-2, and the overview of the chapters is given below the diagram.

Figure 1-2: Case study process
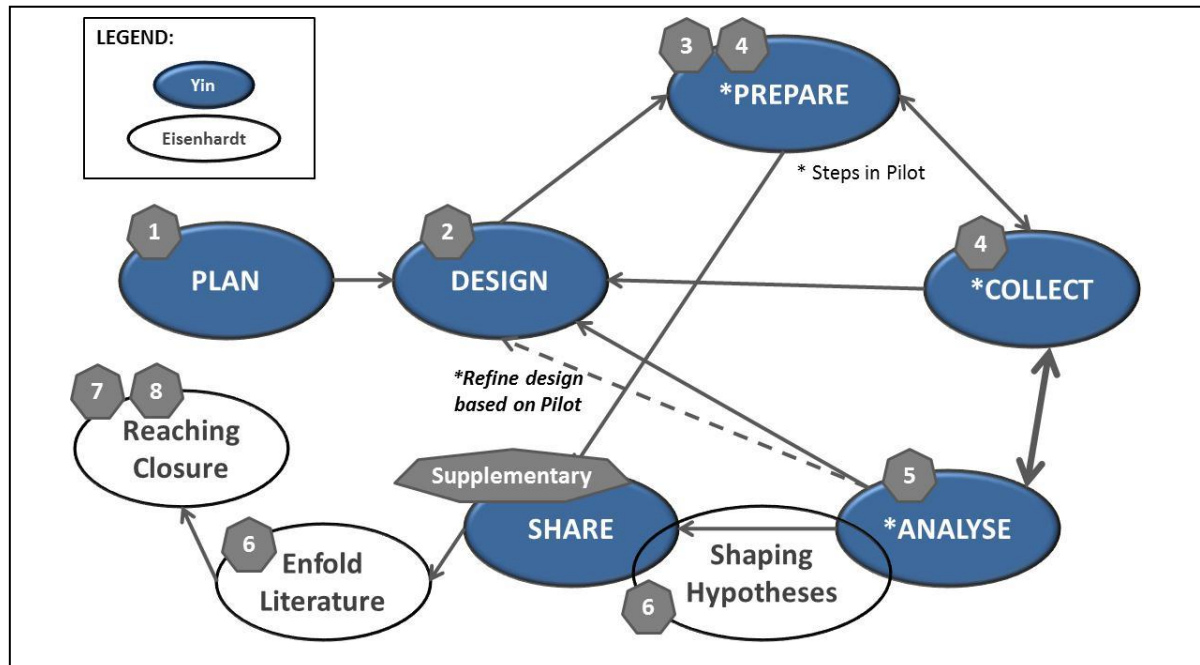
Source: Eisenhardt (1989:533); Yin (2009:1).

The proposal presented to the Research Committee of the university was part of the *plan* and *design* steps in the case study research, and the result of that planning is contained in Chapters 1 and 2 of this document. Chapter 1 also gives the rationale for the research, based on existing literature. Chapter 2 provides the research approach and design, and includes the philosophical considerations and decisions made regarding the type of research, strategy of enquiry and research approach.

Then follows the initial literature review in Chapter 3. In keeping with the principles of constructivist grounded theory research, the aim of this literature review was not to do an exhaustive search on management of performance of virtual knowledge workers, but rather to gain sufficient material to create interview guides and questions for the online questionnaires to be used in the research. This was part of the *prepare* step, in which the protocol for approaching each case was also created (Refer to Appendix D – Case Study Protocol). The protocol contains the instruments,

processes and procedures for approaching a case; this aided the reliability of the study (Yin, 2009:79).

The protocol was refined by executing a pilot study in which the first iteration of *collect*, *analyse* and *share* took place. The detail of the pilot study and how the protocol was applied to this study is provided in Chapter 4, as part of the execution of the research methodology. Chapter 4 also contains a detailed description of the data collection and analysis methods and how these were used to document the multiple-case study. The *collecting and analysing* of the data took place iteratively for each case, with the individual case analyses being now available as supplementary documentation. Chapter 5 contains the results of the *analyse* step for the study as a whole (also referred to as the cross-case analysis and data synthesis). *Sharing,* or member checking*,* was done through reviewing the individual case descriptions with each company representative respectively.

The *shaping of hypotheses as part of the interpretation of the data* occurred only after selective coding, as per the grounded theory process, had been started. This could only be done effectively when all interviews for all the cases had been completed; and is therefore described in Chapter 6. During the interpreting of the data, additional literature was reviewed, which led to the *enfolding of the literature* as part of the interpretation phase, with the final theoretical models prepared and presented in Chapter 6. The propositions relating to these models were then listed in Chapter 7. The combination of the final model and the related propositions form the conceptual framework. The last step of the process was *reaching closure,* and is documented as part of the findings, recommendations and future views in Chapter 8. The detailed chapter map is given in Figure 1-3.

The appendices include:
- Appendix A – Acronyms, formal definitions and terminology used
- Appendix B – Questions and question guides for the semi-structured interviews of the managers as well as HR and IT representatives
- Appendix C – Online questionnaires and related email templates
- Appendix D – Case study protocol elements

- Appendix E – Initial code lists and network diagrams
- Appendix F – Enlarged diagrams of theoretical models for readability
- Appendix G – Instructions for accessing and using the supplementary documentation such as the ATLAS.ti analysis files and individual case studies

Figure 1-3: Detail chapter map
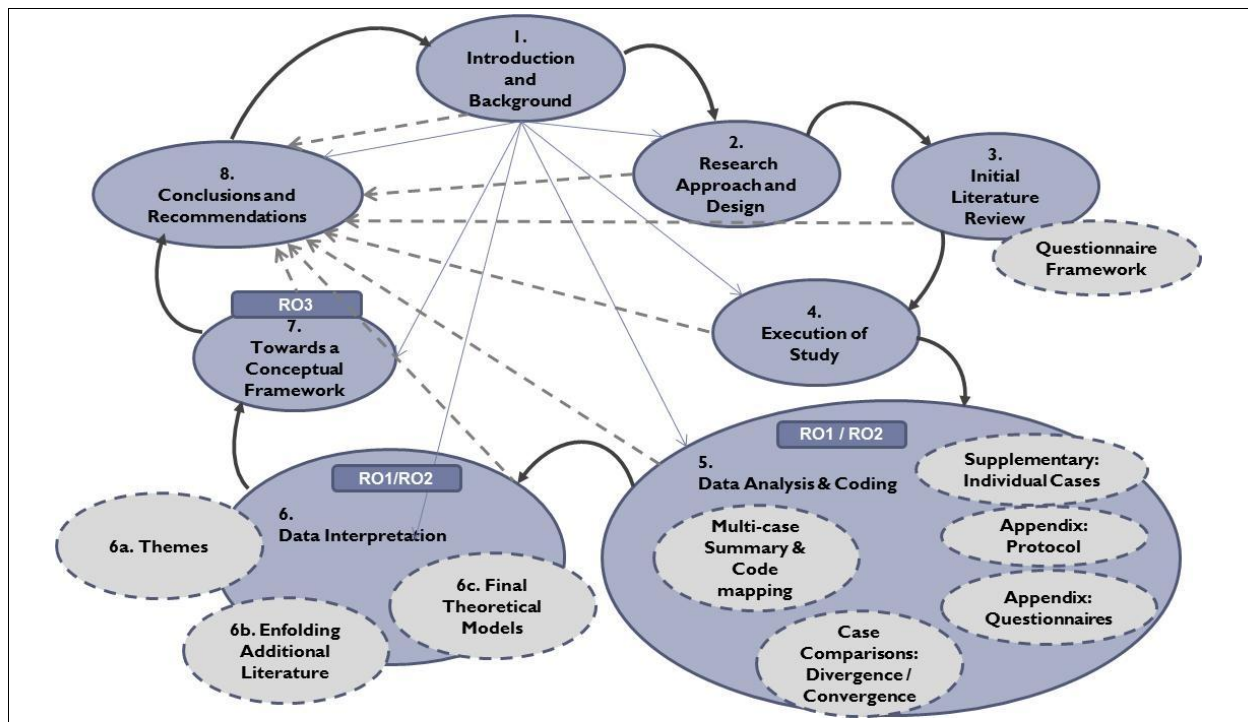
1.10 SUMMARY

Chapter 1 has given the background and motivation for the research, and has set the stage for the investigation, analysis and description of the ongoing management and measurement of performance of virtual knowledge workers from the perspective of the manager. The embedded, multiple-case study process described above will now be followed, with the next chapter, Chapter 2, giving a detailed explanation of the rationale and philosophies underlying the decisions made regarding the research approach and design.