

## CHAPTER 6

### 6 DATA INTERPRETATION

#### 6.1 INTRODUCTION

The data analysis for the study, as described in Chapter 5, has led to the identification of four main themes. They are listed below:

- **Theme 1:** The concept of “virtual” in the term “virtual worker” is often misunderstood, and the definition should be applied on a continuum of virtuality, leading to the concept of perceived and true virtuality.
- **Theme 2:** The need to define how deliverables and metrics relate to perceived, actual and true performance, and to highlight the difference between management of performance and performance management in the virtual context.
- **Theme 3:** Understanding how the multitude of parameters affecting performance from the organisational, contextual, managerial and individual side link to the manager as an enabler.
- **Theme 4:** The continued importance of the visual, or face-to-face interaction in managing virtual performance.

The purpose of this chapter is to consolidate the data found in the current study regarding these themes into relevant theoretical models, and to compare the findings with the initial literature review. Additional and more recent literature will also be added and enfolded into the results, to determine how the theoretical models of the data are similar to, extend or add to the current body of knowledge regarding the management and enablement of the performance of virtual knowledge workers.

The above four themes will be used to structure this chapter.

## 6.2 THEME 1: UNDERSTANDING “VIRTUAL” IN VIRTUAL WORK

### 6.2.1 Theme Introduction

For the purpose of the study, a virtual knowledge worker was defined as a (knowledge) worker who works in a situation geographically remote from the traditional workplace (Ashford *et al.* 2007:69; Luyt, 2007:13), which results in their being "removed from the direct sphere of influence of management and co-workers." (Jackson *et al.*, 2006:219). Even though this definition was provided in both the manager's information pack and in the online questionnaire, there still seemed to be confusion as to when an individual would be seen as a virtual worker. This was evident from the difference in individuals' perception of their being a virtual worker (only 66% of the individual respondents answered “yes”) and the calculated value for being a virtual worker, which was 86%.

Individuals working on customer site (in other words away from their direct line manager) did not necessarily deem themselves to be virtual workers, since the customer was dictating where they worked. There were some managers who preferred face-to-face interaction. There were also cases where the work in the team required collaboration on a regular basis, yet where elements of virtuality were still inherent in where the work was taking place. In some cases interaction was needed with other remote teams. It therefore seemed that that individuals and managers understood the word “virtual” to mean “working from home” rather than “working away from the manager”.

This theme therefore shows the extent of virtuality that was actually present in the companies under investigation, in relation to the definition of the virtual worker, and shows how “virtual” should be understood. Although in the companies surveyed there were not many virtual workers working from home on a more permanent basis, flexibility of hours and location was more common. This flexibility is a form of virtual work, and organisations need to take cognisance of this fact, so that performance in these situations can be enabled in the right way

## 6.2.2 Virtual Work Perceptions

Three elements were extracted from Table 5-30 in Chapter 5, where the summary of virtual work arrangements was given, namely location, timing and independence. *Location* indicates the place where the individuals are working when working away from their manager. Another aspect is how much *time* per week is spent away from the manager, or the manager spending time away from the individuals. In other words the frequency of remote work, which could range from none to occasional or, ultimately, permanent. *Independence*, the third element, is associated with how much discretion individuals have in selecting their place of work: whether they may choose, or have to ask permission on a more regular basis.

From an *office location* point of view according to the examples found in the study, Table 6-1 shows how either the manager moves between the main office, home and customer sites, **or** the individual moves between the main office, home and customer sites, or both. In all of these cases the manager (line or project manager) and individual have limited contact or can be classified as working virtually, and performance needs to be managed over a geographical distance. Only where the manager and individual are working in the same main office location, or at the same customer site, would they be defined as co-located and not virtual.

**Table 6-1: Virtual status matrix based on office location**

Individual	Manager			
	Main Office	Customer	Home	Other Office
Main Office	Co-located	Virtual	Virtual	Virtual
Customer	Virtual	Co-located <sup>(2)</sup> Remote <sup>(3)</sup>	Virtual	Virtual
Home	Virtual	Virtual	Virtual	Virtual
Other Office <sup>(1)</sup>	Virtual	Virtual	Virtual	Virtual

Note: (1) Other building in same office park, or other regional office, or even different country (2) Same customer. (3) Different customers.

Adding the *time and frequency* to the model, various arrangements of virtual work were established by the participants in the study. Six of the resulting scenarios are

given in Table 6-2. All of these scenarios can be regarded as individuals working truly virtual. Only the degree of virtuality differs.

**Table 6-2: Virtual work scenarios (Timing added)**

<p><b>Scenario 1: Remote site worker = Client site worker / Alternate site worker</b>            Manager works in main office            Individuals work remotely (permanent basis) i.e. "offsite" location (regional office or client site)</p>
<p><b>Scenario 2: Flexi-hours</b>            Manager works in the office, but hours differ from those of the individuals reporting into him/her            Individuals work mainly from the office, but timing not official office hours. Part of the flexi-hours may be done from home.</p>
<p><b>Scenario 3: Flexi home days</b>            Manager works in the office, and makes sure available on "local" days            Individuals work from either office or home, based on "schedule" (e.g. two days from home per week)</p>
<p><b>Scenario 4: Home workers</b>            Manager works in office or mobile            Individual works permanently from home.</p>
<p><b>Scenario 5: Mobile Manager</b>            Manager often works away from the individuals reporting to him/her, either on permanent or occasional basis            Individuals work "at the office"</p>
<p><b>Scenario 6: Multi-location or Flexi-worker</b>            Manager works multiple locations            Individuals work multiple locations (including home)</p>

In the case of the individual working on an alternative office site, or on the customer site, there is what can be called the "management panopticon" or "eyes-on-site" that can assist the manager in his/her task of monitoring. In Jackson *et al.* (2006:222), the professionalism of the individual becomes the internal "panopticon", while in this study the "other eyes on site" become the management panopticon. The management panopticon assists the manager by "being on site" when he or she cannot be on site. This is shown in Table 6-3. The management panopticon can also be a limiting factor if this becomes too multi-layered, as with matrix management, and the individuals have too many managers to report to.

**Table 6-3: Virtual work scenarios, independence and panopticon**

Scenario	Location		Frequency	Independence (Permission)	Panopticon
	Manager	Individual alternate			
1a: Client site worker	Main office or various	Client site	Permanent	No (Choice of customer)	Customer Other managers
1b: Alternative office worker	Main office or various	Regional office / Satellite office	Permanent	Partial	Other managers
2: Flexi-hours	Main office or various	Main office	Permanent/ Occasional	Once-off	Colleagues
3: Flexi-home days	Main office or Various	Home	Fixed schedule Occasional	Once-off	None
4: Home workers	Various	Home	Permanent	Once-off	None
5: Mobile Manager	Various	Main office	Permanent/ Occasional	NA	Colleagues
6: Multi-location	Various	Various	Flexi-schedule	Once-off	Combination of above

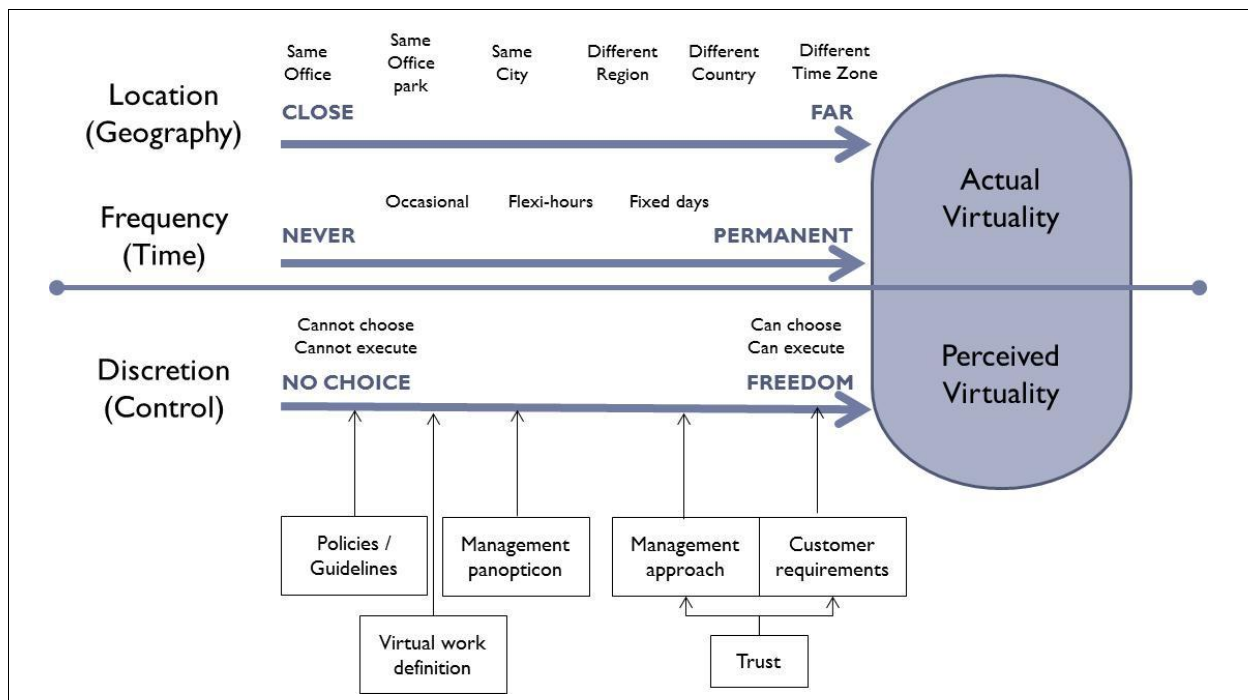
Table 6-3 also shows the amount of independence or discretion normally allowed in the different scenarios. The independence is normally influenced by how comfortable the manager feels with the remote and flexi-work scenario, as well as the customer requirements for physically seeing the individuals. These are both related to the amount of trust in the relationship. Other elements involved in the amount of independence are the perception of what policies are available in the organisation and the extent of the management panopticon when individuals are working remotely. These elements, as well as the known definition of virtual work, in turn drive the perceived virtuality of the individuals.

These elements of location, timing and discretion are shown next in one model in Figure 6-1, together with the potential range of values of these elements. The moderators for discretion or control, which have an effect on how the individual perceives their virtuality, have been added to the diagram, and are:

- to what extent the individual and/or manager believes that policies and guidelines exist allowing virtual work (“Policies and guidelines”);

- how individuals and managers understand the definition of virtual work (“Virtual work definition”);
- the number of other managers and the customer who will monitor the individual (“Management panopticon”);
- the manager’s self-concept, experience with virtual work and technical experience (“Manager’s approach”);
- the customer’s needs and service requirements (“Customer requirements”); and
- the trust that both the customer and manager have in the individual (“Trust”).

**Figure 6-1: Actual vs. perceived virtuality**



## 6.2.3 Additional Definitions of Virtuality

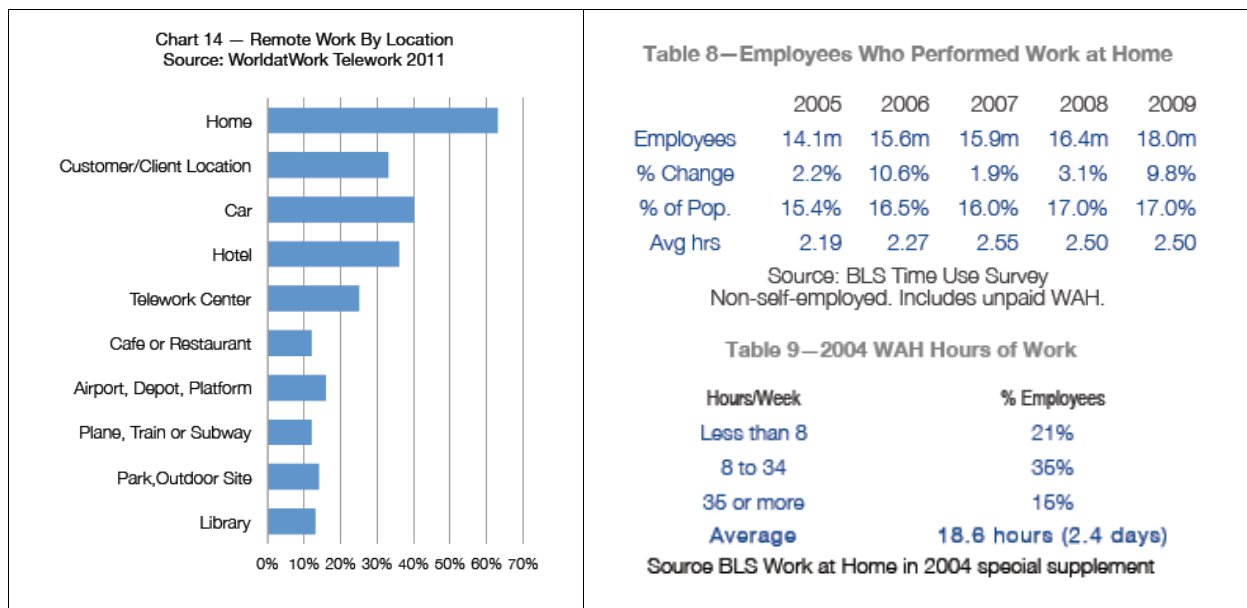
### 6.2.3.1 *International reports and statistics*

The definition of telework in *article 2 of the European Framework Agreement on Telework of 2002* defines telework as “a form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work which could also be performed at the employer’s premises is carried out

away from those premises on a regular basis” (Welz & Wolf, 2010:3). In this definition, telework is not specifically seen as something done from home, but something done “away from the employer’s premises”. Raghuram *et al.* (2001:383) further mention all the remote places that individuals could work from as “working remotely from home, in cars, from hotels and satellite centres and other non-headquarters locations”; in subsequent research Raghuram *et al.* (2003:181) mention teleworkers as having “reduced proximity”. These definitions all add to the diversity that is inherent in the concept and definition of virtual work, and links to all the various flexible arrangements of which examples were found in the study, thereby further confirming the validity of the actual virtual status of individuals in this study.

The Telework Research Network on a regular basis collects and reviews data from existing sources to review trends in mobile work. The specific 2011 report relating to the United States (US) summarises findings relating to “non-self-employed people who principally work from home”, also abbreviated in the report as WAH or “work-at-home” (Lister & Harnish, 2011:4). The report consolidates data from various sources, including that from federal agencies such as the Census Bureau and the Bureau of Labor Statistics (BLS), as well as from the private sector such as the organisation WorldatWork. As a comparison with the data obtained in this study, the WorldatWork data for 2011 shows that most of remote work (by location) happens at home (63%), in the car (40%), then at a hotel (35%), and only then at the customer (32%) as shown on the left-hand side of Figure 6-2. This is in contrast to the current study, in which most of the work remote from the manager was reported to happen at the customer site (49%), and then home (30% in total of which 14% part-time and 16% full time). The percentage of use of satellite offices (13%) is similar to that of part-time work from home (14%).

**Figure 6-2: Telework Research Network report statistics**



Source: Lister and Harnish (2011:19;20)

Abbreviation: BLS = Bureau of Labor Statistics (US)

The other finding of the report, shown on the right-hand side of Figure 6-2, was that in terms of the BLS data, employees only spend an average of 2.5 hours per day at home, and that this has not changed dramatically since 2008. This is in contrast with the current study, in which those working from home do so on average for 2.9 days per week, and of the group of individuals having some form of remote work, 16% were classified as home workers. In other words working from home 4 or more days a week. This is closer to the 2004 report, in which the average paid time working from home was calculated at 2.4 days per week.

Another comparable statistic of the report is that according to the survey performed in 2001 by WorldatWork (in Lister & Harnish, 2011:4), which related to workplace flexibility, only 37% of companies in the US offered a full-time arrangement for work from home. There was, however, flexibility allowed for occasional work from home (83%) and also work from home for either one day a week (57%) or one day a month (58%). This seems quite low in comparison with the perceptions that many managers in this study had regarding the advanced virtual-work status in the US.



### **6.2.3.2 Virtual distance**

Additional sources were also consulted in relation to how “virtual” should be defined. Chein (1954:115) had already intimated that environments where humans work are not controlled, clean environments, but highly complex. To this end, Koffka (in Chein, 1954:116) distinguishes between an actual environment (also called the “geographical environment”) and the environment as perceived by the individual (or the “behavioural environment”). Relating to this idea of an environment as perceived by the individual, more recent research has investigated the concept of virtual distance, and the fact that more than geographical distance should be considered when looking at what constitutes the concept of “virtual” in virtual work.

Napier and Ferris (1993:350) carried out an in-depth review of previous research addressing the constructs relating to virtual distance. They have grouped these as structural distance, functional distance and psychological distance in their Dyadic Distance model, which aims to explain certain aspects of the relationship between the manager and the individual team member. In a more recent practitioner’s interpretation, Lojeski and Reilly (2010) define the facets of virtual distance as physical distance, affinity distance and operational distance. In a similar practitioner’s guide, Fisher and Fisher (2001:42) also describe elements that could create distance, namely culture, space and time, and divide teams according to this.

#### **6.2.3.2.1 Structural and physical distance**

*Structural or physical distance* includes aspects of time and space, and relates to proximity, or how far away managers and their team members are from each other (Napier & Ferris, 1993:327; Lojeski & Reilly, 2010:142). The proximity of individuals can also create or reduce opportunities of interaction between the manager and team member (Napier & Ferris, 1993:327). Various examples of physical distance were manifested in the current study. In some of the cases the physical distance of teams remained within South Africa, while for others it extended to multiple countries and even beyond the local South African time zone. (In Foxtrot and Delta some individuals were working in multiple time zones, away from the manager on a regular or permanent basis.) Another example of extensive physical distance in the study

was the case where the individual was situated at the head office, but the manager was actually working in a different country or from home. An example of where the physical distance was the closest was when the individuals were situated in a different office block in the same office park, or where the manager and individuals were sitting in the same office block but still not seeing each other.

#### **6.2.3.2.2 Operational distance**

The next element of virtual distance is *operational distance* which, according to Lojeski and Reilly (2010:142), is the "psychological gaps that grow due to the many day-to-day problems that arise in the workplace". This definition includes elements of communication (misinterpretation of the context of an email or message), multitasking (when the number of tasks to perform is all-encompassing, and does not leave time to interact with others), lack of readiness (powerlessness to resolve technical issues that stand in the way of performing the required tasks) and distribution asymmetry (a team being split up unevenly between different locations).

For this study, an example in which the physical distance is actually close but the operational distance is great is when the individual is working in the same office block as the manager, but does not see the manager because the working times of the manager and individual differ due to flexitime arrangements, or the manager has many off-site meetings to attend with customers, or the manager has many individuals to manage. Napier and Ferris (1993:322) refer to the last component as the "increased span of management control", and include it as part of structural distance. They point out that as team sizes have increased, the manager has had to split his or her attention between more and more individuals, effectively making the time slice available per individual very small. This was also found in the current study where large teams, which were also dispersed, needed to be managed, meaning that the time for one-on-one performance discussions, as well as regular operational meetings, became limited. If the manager also needs to divide his or her time between a large set of geographically dispersed customers, this often results in low accessibility and visibility of the manager to the team members in general.

### 6.2.3.2.3 Functional, psychological and affinity distance

The third grouping looks at *functional, psychological and affinity distance*. Napier and Ferris (1993:327,324) refer to functional distance as the "quality and closeness of the relationship" and indicate that psychological distance is created by age, value systems, sex, race, and the value orientation of dyads or relating to two individuals linked as a pair. These two concepts compare more closely to the aspect of affinity distance as described by Lojeski and Reilly (2010:141) as "the emotional disconnects between virtual team members rooted in lack of fundamental relationship development." Cultural differences, differences in social standing, limited opportunities of sharing personal and organisational experiences and low anticipated collaboration requirements are included as part of this concept.

Relationship building was mentioned as a very important responsibility for managers in the current study. Managers felt that they needed to build relationships with individuals in the team, as well as between individuals, to ensure belonging and therefore reduce the impact of the physical distance. In terms of relationship building, in some cases the concept of the manager being regarded as "the mother" or "the friend" was also evident. This was an example of the increasing blurring of the lines between work and personal life because the work can be performed anywhere, any time. In addition, the way that the manager defined deliverables and measurables (i.e. as team or individual measurables) enhanced or diminished the need for individuals to work interdependently.

One of the elements of *functional distance* that has an impact on the virtual distance and relationship between managers and their team members is the decentralisation of authority when authority and work occur in two locations (Napier & Ferris, 1993:324). Napier and Ferris found that this had an impact on task autonomy, discretion and empowerment, in that remote individuals had an "increased latitude and influence in the decision making process". This links to the concept described by Weick and Sutcliffe (2007:15) as one of the principles of high-reliability organisations, namely that they allow operational individuals in the front line to make decisions. This is normally required when there is no time to wait for a decision to be vetted through a long chain of command, and non-action can lead to disaster. In the current study,

where individuals were working on customer site, they were often expected to act as the company representative on site, and would also be expected to make decisions on their own.

Reliability and taking of responsibility were stated as important characteristics for remote workers in the current study. One of the important manager responsibilities identified was that the managers needed to set specific measures and targets and then allow individuals to execute them autonomously. On the other hand, individuals were also expected to keep the manager informed and escalate issues as soon as possible, potentially reducing the perceived independence and latitude of the individual. Further to autonomy in work decisions, the amount of perceived independence in terms of choice to work from home, as well having the autonomy to execute the choice, also influenced the individuals' perceptions of whether they saw themselves as virtual workers or not. The concept of autonomy is used to extend the functional distance definition by adding a component of discretion in terms of choice of location and flexi-hours. The elements of work autonomy and discretion in decisions regarding virtual work are grouped under the "Discretion/Control" element of Figure 6-3.

#### **6.2.3.2.4 Degrees of virtuality**

As regards the concept of degrees of virtuality, Nauman, Khan and Ehsan (2010:638) in their study included the level of use of technology; the geography of locations; and length of time together or apart while collaborating; and the fact that individuals worked for different organisations, as parameters on the continuum of virtuality. They confirmed their theory that empowerment was higher in more virtual projects, and task-behaviour was similarly important in more and less virtual projects, while relationships were more important in virtual projects.

González-Navarro *et al.* (2010:1478) also concluded in their study that the degree of virtuality affected the group interaction style. González-Navarro *et al.* (2010) found that the degree of virtuality was higher in geographically dispersed teams with lower information richness in communication technology, while lower virtuality was created by co-located team members and information-rich communication technologies. The

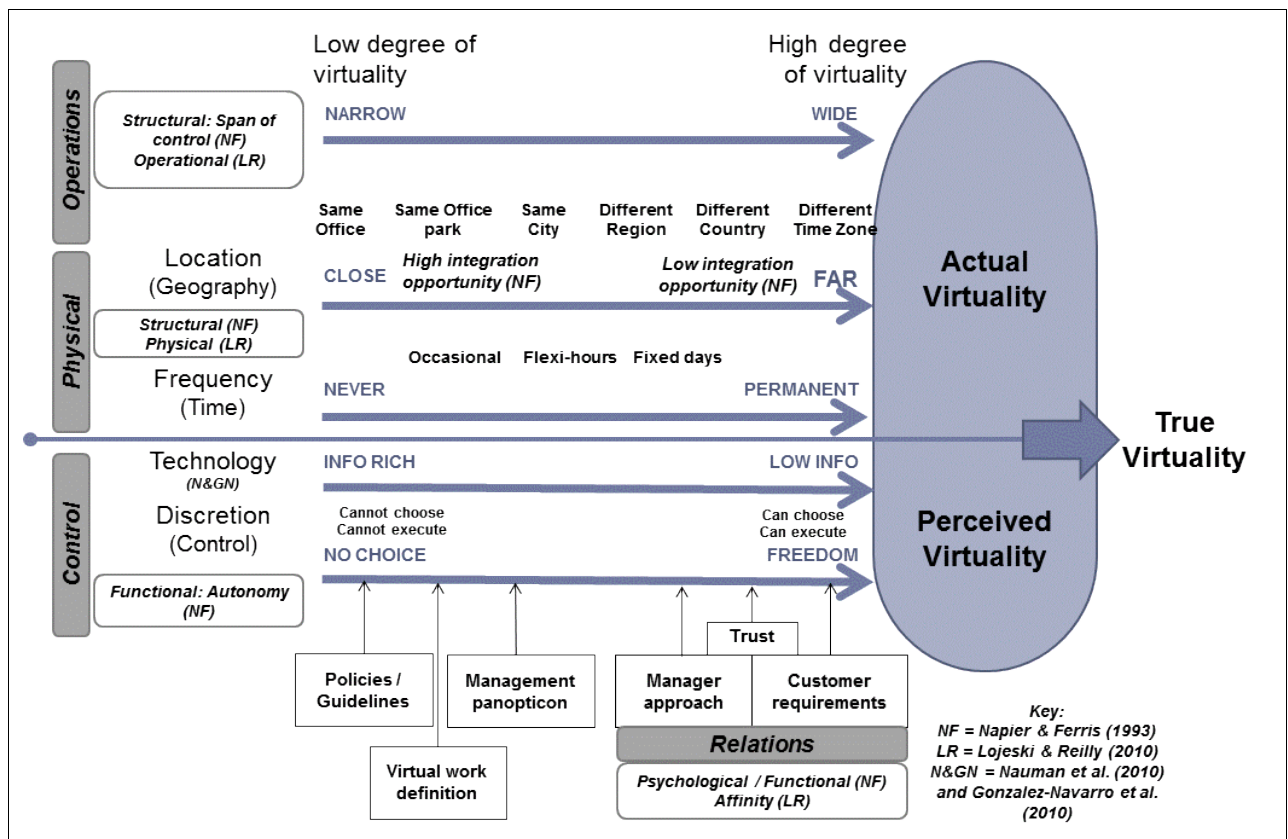
theory that they proved was that the group interaction style (i.e. being passive or constructive) was moderated by different levels of virtuality to produce different outcomes. The subjective outcomes were higher where information-rich communication technologies were used together with the constructive style.

These two studies add technology and the information richness of the medium as an additional parameter to define virtuality. In the context of the current study, technology as such is described as one of the parameters affecting performance under Theme 3, but will be added to the model of virtuality. The subjectivity of performance is discussed as part of Theme 2.

#### **6.2.4 Consolidation of Theme 1 Concepts: Virtuality**

As a summary, the current study contributes to the definition of virtual distance by defining four components: physical, operations, relations and discretionary distance. *Physical distance* combines the structural components of Napier and Ferris (1993) with the physical components of Lojeski and Reilly (2010), and retains the definition related to temporal and spatial aspects of distance. *Operations distance* is seen as a combination of the span of management control (Napier & Ferris, 1993), and operational aspects of Lojeski and Reilly (2010). It expands on the existing definition in that the actual operational work requirements, and not necessarily issues, drive the fact that team members do not see their managers or vice versa. The definition of “operational” has therefore been extended by the elements of span of management control and way of work, and been renamed “Operations”. Elements of functional, affinity and psychological distance have been combined in the definition of *relations distance*, represented by the manager’s approach and the customer relationship in the model. Lastly, this study has added *discretion* as a separate element to show the importance of this in terms of virtuality perceptions. The classifications in Figure 6-1 have been amended, and are shown in the combined Figure 6-3.

Figure 6-3: Actual vs. perceived virtuality – theory map (“True Virtuality”)



Note: Enlargement of this diagram available in Figure 15-1 in Appendix F.

## 6.3 THEME 2: PERCEIVED, ACTUAL AND TRUE PERFORMANCE

### 6.3.1 Theme Introduction

Section 5.3 “Virtual Work (Context)” reviewed the different formats of virtual work and arrangements made for measuring performance while working remotely, and Section 5.4 “Managing Virtual Performance (RO1)” reviewed how performance of virtual workers was being managed. These two sections contributed to answering Research Objective 1, namely “To critically review the current state of knowledge and understanding of how the performance of virtual knowledge workers is managed”. The high-level elements of how performance of virtual workers was managed were shown in Figure 5-14. This section now compares those findings with the initial literature review, as well as more recent literature. It looks at them from both a formal performance management and a “management of performance” perspective, especially in relation to how virtual performance is perceived.



### 6.3.2 Managing Performance

As indicated in the summary of Chapter 5, three aspects were used to describe the management of performance, namely the way the manager managed in general, specific deliverables and associated metrics. In principle, the managers did not manage co-located as opposed to remote individuals differently. This was achieved by focusing more on outputs and deliverables than *how* or *where* the individual achieved those outputs. Cascio (2000:86) also agrees that the key difference in managing in a virtual context is the move from managing time to managing projects, which is a form of an output.

The way in which managers managed virtual knowledge workers was also linked to the process groups of PMBOK (PMI, 2004:42), of “initiate, plan, execute, monitor and control”. The aspect of defining deliverables and setting specific expectations as part of the “initiate” phase in the current study corresponds with the views of sources in the initial literature review (Cascio, 2000:87; Locke *et al.*, 1988:23) and more recently Geldenhuys (2010:180), who agree that managers need to define measurables, set goals and be clear on deadlines. Cascio (2000:87) also affirms that once the measurables have been set, the manager should also monitor and give feedback. This is part of the monitoring activity performed by managers in the current study. To assist the manager during the monitoring stage, individuals also need to be transparent and communicate regularly with the manager.

In setting the deliverables and measurements, many administrative deliverables were defined (38%), leading to the perception of micro-management on the individuals’ side. In the current study, reasons for measurement included the fact that timesheet information was required for customer invoicing; the need to determine workload distribution or improvement in service delivery; the need to show the customer that service levels had been achieved; and to benchmark against the industry. Also, monitoring of work while individuals worked remotely for the fixed-days arrangement was important. There were also cases where additional information and task tracking were required because the manager’s manager needed to be convinced that the individuals were actually working, or where senior management did not believe that individuals were actually working if they were not in the office, even though the

results (financial and customer happiness) confirmed that the work was being completed. This is reminiscent of the fable of the Lion and the Ant, one of the online versions of which is reproduced below (Noone, 2010).

*“Every day, a small Ant arrived at work early and started work immediately, she produced a lot and she was happy. The boss, a Lion, was surprised to see that the Ant was working without supervision. He thought if the Ant could produce so much without supervision, wouldn’t she produce more if she had a supervisor!*

*So the lion recruited a cockroach who had extensive experience as a supervisor and who was famous for writing excellent reports. The cockroach’s first decision was to set up a clocking-in attendance system. He also needed a secretary to help him write and type his reports. He recruited a spider, who managed the archives and monitored all phone calls.*

*The Lion was delighted with the cockroach’s reports and asked him to produce graphs to describe production rates and analyze trends so that he could use them for presentations at board meetings, so the cockroach had to buy a new computer and a laser printer and recruit a fly to manage the IT department. The Ant, who had been once so productive and relaxed, hated this new plethora of paperwork and meetings, which used up most of her time.*

*The lion came to the conclusion that it was high time to nominate a person in charge of the department where the Ant worked. The position was given to the Cicada, whose first decision was to buy a carpet and an ergonomic chair for his office. The new person in charge, the Cicada, also needed a computer and a personal assistant, whom he had brought from his previous department to help him prepare a work-and-budget-control strategic optimization plan.*

*The department where the Ant worked was now a sad place, where nobody laughed anymore and everybody had become upset. It was at this time that the Cicada convinced the boss, the Lion, to start a climatic study of the environment. Having reviewed the charges of running the Ant’s department, the Lion found out that the production was much less than it had been before, so he recruited the Owl, a prestigious and renowned consultant, to carry out an audit and suggest solutions. The Owl spent three months in the department and came out with an enormous report in several volumes, This concluded that “The Department is overstaffed.”*

*Guess who the lion fired first? The Ant, of course: “Because she showed lack of motivation and had a negative attitude.*

*Disclaimer:” The characters in the fable above are fictitious and resemblance to real people and facts and any coincidence with corporate world is purely coincidental”.*

In this fable, the Lion (in other words the manager) cannot believe that the ant (or the worker) can be productive without supervision, so a complicated “framework” to measure the ant’s performance is instituted, which includes multiple layers of management (“management panopticon”). In the end, the ant is so busy proving that work is being done that no real work can actually be done, and ultimately the ant is fired because of low productivity. This links directly with the question of how much time is actually spent on measurement, as opposed to producing technical deliverables, in the virtual work situation. Also, the question should be asked as to



how many managers are used in the process of monitoring and measuring as part of the management panopticon?

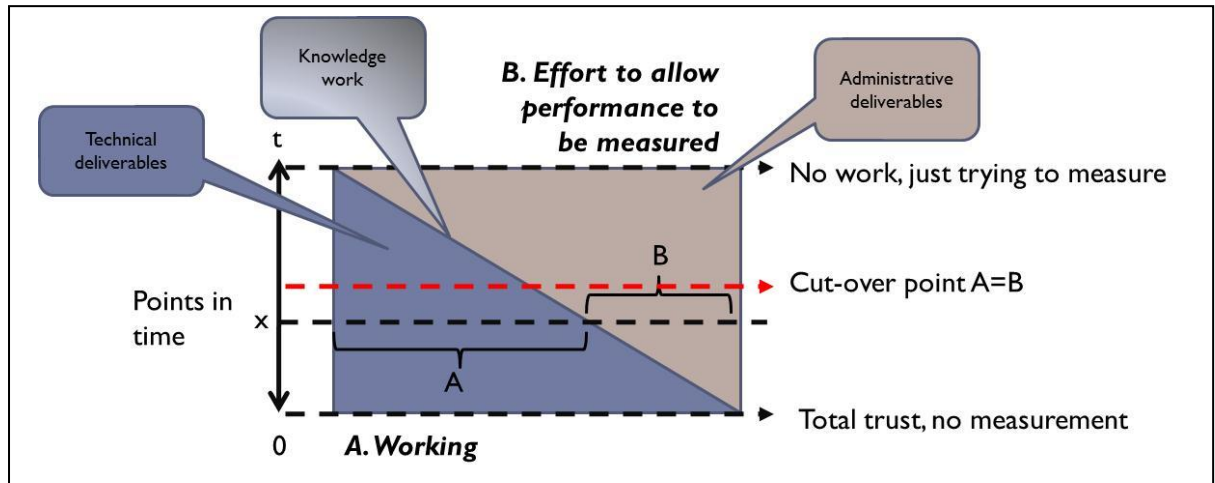
From the interpretation above, it seems that a balance needs to be reached between working and measuring. The questions that need to be answered are “What is it important to measure?”, “Why are we measuring?” and “What will the measurement facilitate?” Some of the managers in the current study have answered these questions and found that less is in some cases more. In other words, defining only the critical elements on which the individual will be measured gives individuals more time to focus on producing actual work.

Figure 6-4 shows a one-by-one grid which can be used to show the progression between two situations from one extreme to the other extreme over a period of time. It consists of a rectangle that has been divided diagonally. The two resulting triangles represent the two distinct situations. At any point in time, a certain percentage of both situations will be present; for example, at time  $x$ , there will be a portion of situation “A” and a portion of situation “B”. The only time (theoretically) that only one of the two situations will be present is at time 0, when only situation A occurs, and time “ $t$ ” (at end of “transition”) when only situation B will be present. The grid has been used to show time spent “working” as situation A and time spent “measuring” (or “effort to allow performance to be measured”) as situation B. Based on the principle that organisations exist to deliver a product, it follows that the effort to allow performance to be measured (situation B) should always be less than the actual work that needs to be performed (situation A). Thus, mathematically stated,  $A > B$ . The ways in which B (effort to measure) can be reduced is firstly by more trust between managers and individuals; secondly, saving time by using more systems that can automatically gather the data, instead of manually capturing the data. Thirdly, if the measurement in itself is a deliverable, such as capturing time to invoice the customer, or using this data as a once-off exercise to create benchmarks, it makes more sense to spend the time to capture this information.

Three areas of deliverables and measurements, namely the actual or technical deliverable, the additional knowledge deliverable (likened to “metadata”) and then the

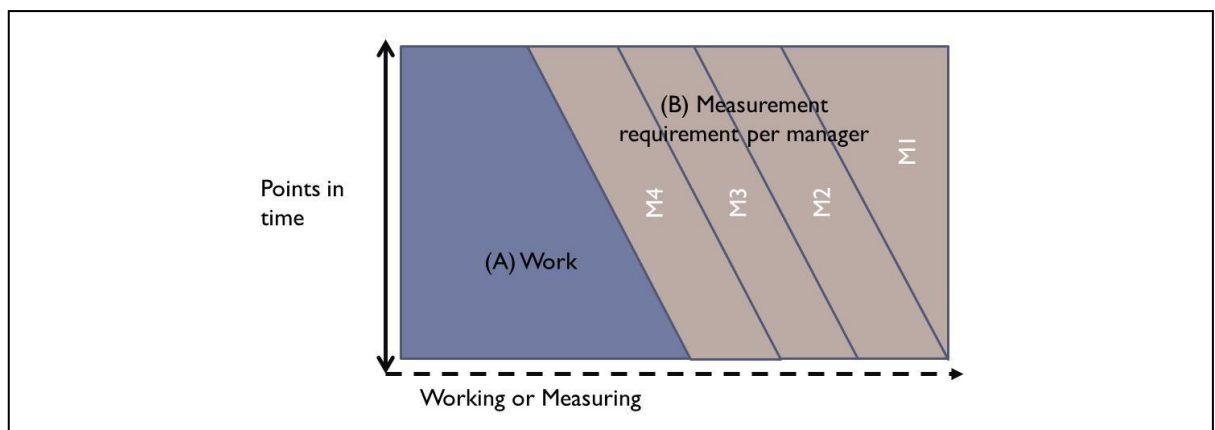
administrative deliverable, have been mapped to Figure 6-4. The “knowledge” deliverable has been mapped as a combination of technical and administrative deliverables, since in some cases it will be a deliverable in itself. In other cases it will be the meta-data to describe a situation, or be used as input to future work and processes.

**Figure 6-4: Working time vs. Measurement time**



Using the principle of the two-by-two matrix of working as opposed to measurement time, the measurement requirements of multiple managers can clearly be seen to reduce the individuals’ working time (Figure 6-5).

**Figure 6-5: Impact of multiple managers on working time**



Gordon (1997), in an attempt to summarise her experiences regarding telecommuter productivity, defines productivity for telecommuters simply as “effectiveness”.

Effectiveness is seen as the combined multiplicative function of quality, quantity, timeliness and the number of tasks that the individual can be involved in simultaneously (“multitaskability”). The definition of productivity in the current study was still very much about number of products in a specified time. However, in some cases (such as Foxtrot), the company found it futile to count the number of calls or number of lines of code, because this focus on quantity left out the element of quality.

$\text{Productivity} = \text{Effectiveness}(\text{Quality} \times \text{Quantity} \times \text{Timeliness} \times \text{Multitaskability}) \text{ (Gordon, 1997)}$
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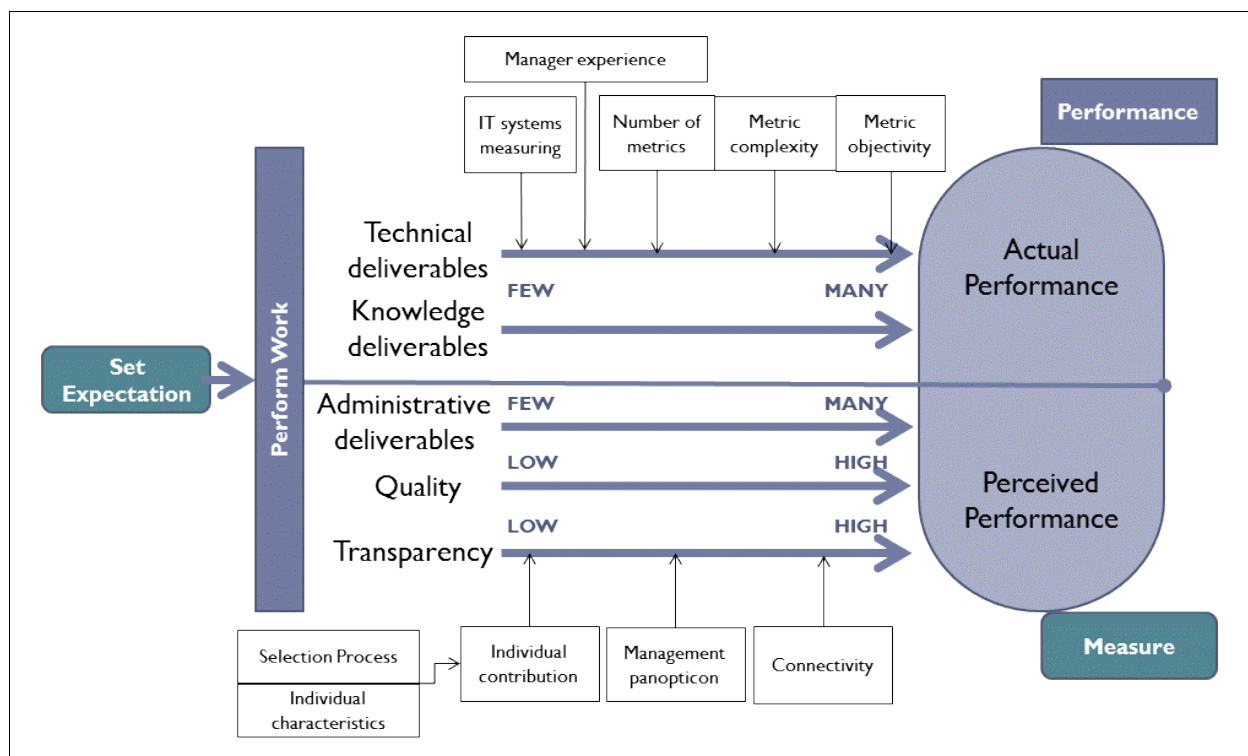
In relation to the question of “Why measure?”, Gordon (1997) also refers to the “politically correct need to measure”, and highlights the fact that there is often a difference between what managers ask for as measurements, and the actual reason for measuring, or what they really want. This is often based on mistrust. As explained above, the current study looks in depth at this issue as noted by Gordon (1997). If the underlying reason is mistrust, then the manager needs to decide if the working relationship is fruitful enough to maintain, or if so much time will be spent on measuring that no effective work will be achieved. The current study is in agreement with Gordon that identifying the underlying concerns for measurement is important, rather than just adding measures for the sake of measurement.

A study by González-Navarro *et al.* (2010:1478) showed that the group interaction style (i.e. being passive or constructive) was moderated by different levels of virtuality to produce different outcomes. The subjective outcomes (or perceived performance) were higher when information-rich communication technologies were used together with a constructive style. This can be related to the concept of transparency in the current study. In other words, using information-rich IT technologies will increase the level of transparency during communication and feedback.

The elements described above in terms of managing performance are now combined in Figure 6-6 to show how each of these contribute to the two concepts of actual performance and perceived performance. They are also mapped to the original elements in Figure 1-1 showing the gap for enabling virtual performance. The manager sets expectations, after which the work is performed. The work performed includes the technical, knowledge and administrative deliverables, as well as quality

and transparency. Technical and knowledge deliverables relate to actual or tangible performance. Administrative deliverables and quality associated with deliverables lead to perceived or subjective performance. This is normally where performance is measured. In addition, the degree of transparency of the individual will also positively affect the manager’s perception of the amount of work that is being performed. Additional moderators that will affect how accurately the technical deliverable can be measured include: having systems available that can assist in measurement (“IT systems measuring”); the manager’s technical experience relating to the deliverables (“Manager experience”); and, in terms of metrics, the number, complexity and objectivity of the measurements (“Number of metrics”, “Metric Complexity”, “Metric objectivity”). The moderators that will enhance or reduce the transparency of the work being completed include the way the individual works (“Individual contribution”, related to their personal characteristics), the extent to which other managers and individuals can give feedback to the manager or require feedback from the individual (“Management panopticon”), and the quality and information richness of connectivity provided through IT technology (“Connectivity”).

**Figure 6-6: Actual performance vs. perceived performance model**



### 6.3.3 Performance Management

In a recent contribution to the 2012 Conference of the Society for Industrial and Organizational Psychology in San Diego (Gorman, Ray, Nugent, Thibodeaux, List, Lonkar, Bradley, Mason, Pittington & Pokhrel-Willet, 2012), a survey of performance management practices in the US was conducted to determine the current state of performance management in organisations. It also evaluated the gaps between science and practice. As stated by Aguinis (in Gorman *et al.*, 2012:3), performance management is defined as “the continuous process of identifying, measuring, and developing the performance of individuals in organizations”.

The US study gave findings on various items relating the performance management practices, including design characteristics, rating formats, multi-source performance ratings (MSPRs), performance-management rater training, contextual factors, and fairness and effectiveness of performance management systems. *Evolving themes* were also discussed. These findings are now compared with the current study. In the paragraphs below, “US study” will refer to the one documented by Gorman *et al.* (2012) and “current study” to this study for the managerial framework when comparing data. Elements of the initial literature review relating to performance management will also be cited at the same time.

In the context of performance management, the first aspect that the initial literature review looked at was the process of *formal performance management*. From the perspective of this process, the individual performance appraisal (IPA) was still mentioned and used extensively by the managers interviewed, especially in the companies where the shared services HR model was being used. So as per Miner (1992:379) and as shown in Figure 3-1 of Chapter 3, the current study found that the organisational objectives were translated to dimensions of performance and the related human behaviour was expected from this. Some managers had more detailed spreadsheets that assisted them with the ratings and levels associated with the required performance. The objectives of the business unit were also used to understand why specific activities within the unit were important. According to the initial literature review, linking deliverables and measures to the organisational or

business unit goals ensures validity of performance appraisals (Allen, 2007:44; Brinkendorf & Dressler, 1990:63; Carney, 2007:51; Johnson, 2007:97–103).

In the aspect of *performance management design characteristics*, the US study found that 55% of performance appraisal systems were developed by the HR department and 19% by external consultants. In the current study it seemed that this was purely an HR function, especially in the context of the shared services model for HR and the corporate performance appraisal systems. In the US study, it was also found that 88% of the organisations used a single system company-wide. In the current study, this was the objective of the companies, but had not always been possible from a business unit integration perspective, especially when the company itself had an aggressive “mergers and acquisitions” drive. In the US study, most of the systems had been in place for three or more years. The question to ascertain this was not specifically asked in the current study. The US study also showed that the frequency of performance appraisals was once yearly for 64% of the organisations and twice a year in 24%. In the current study this took place mostly twice per year. In Foxtrot only did it take place once per year.

As part of the design characteristics, the *function of performance management* in the US study was found to be 22% administrative, 12% developmental, and 66% a mixture of the two. According to the policy objectives of the companies in the current study, the purpose of performance management was mostly developmental. This is also in line with the initial literature review completed for performance management in Chapter 3. The two most important objectives of the performance appraisal were given as motivation (counselling) and development (training for knowledge and skill) in order to improve productivity (Latham & Wexley, 1994:5).

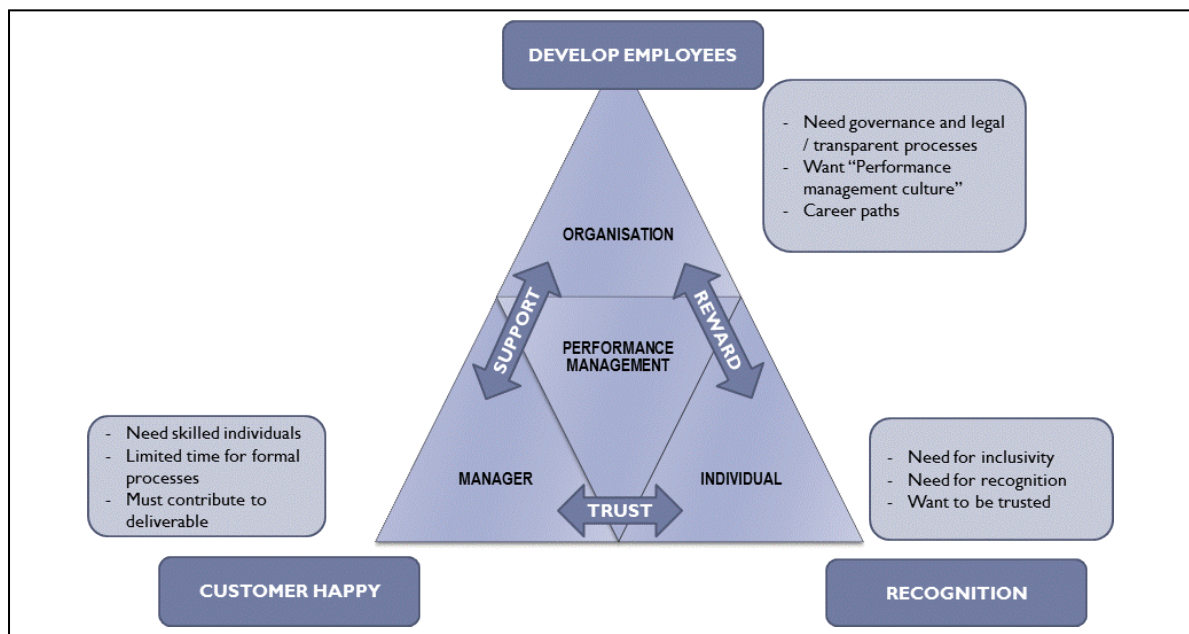
From the manager’s perspective, however, it was found that formal annual or bi-annual performance discussions were often held in the context of the salary increase process. The day-to-day discussions of the managers were happening in the context of delivering what was expected, or in other words, managing performance. In addition, even though IPAs were referred to extensively in the current study, there seemed to be a disconnect between managers and the organisation in terms of the training and development objectives, since managers, as part of their selection



criteria, would prefer to appoint individuals who were already skilled and experienced. This is especially needed in a remote work situation, where the individual may not necessarily have face-to-face access to other skilled resources or the manager, and would be expected to perform most of the job autonomously.

Only in one company (Delta) was there a stronger focus on development and gaining experience through the performance management process, rather than for salary increases only or simply getting the job done. This also compares with improvements proposed by the initial literature review relating to the separation of performance and development discussions (Harvard Business School, 2007:19). Managers in the current study also seemed to associate HR's contribution in the performance management process rather with the facilitation of disciplinarys, in other words "non-performance". They found the procedures around formal performance management time-consuming and a distraction from operational activities. The most important measure of success for them was whether the customer was happy. From the individuals' perspective, they wanted to be recognised for work well done, and felt that performance should not be considered only when issues arose. They also wanted to be trusted; in other words they did not want all the documentation and administration that managers required of them in order for their performance to be measurable. The resulting triangular relationship is shown in Figure 6-7.

**Figure 6-7: Performance management triangle**



The next section in the US study related to *performance rating formats*. The US study found that 54% of organisations used an absolute rating based on the behaviour of the individual in terms of predetermined standards; 19% used a relative format whereby the employees' behaviour was compared with performance of others for the specific job; and 27% used both. Based on this definition, the ratings in the current study were absolute rather than comparative, either from the perspective of a job comparison or a comparison between individuals. The focus in the current study was also not very strongly on behaviour as such, but rather on technical deliverables. The behavioural interpretation in the current study was based more on qualitative measures, which the managers found very difficult to put into words. Rating types used in the US study included the use of graphics (27%), trait ratings (19%) and behaviourally anchored rating scales or BARS (14%). On performance appraisals, the current study used mainly 5-point rating scales (where 1 indicated non-performance and 5 indicated performance far above the average). A simple Yes-No scale was also used extensively ("Was the document sent or uploaded?"). In addition, in the US study, 85% of organisations reported goal-setting or management by objectives (MBO). MBO as such was not specifically mentioned in the current study by either the managers or the HR representatives, but in terms of managing individuals they could not see, all managers agreed that managing outputs was important, which also correlates with the literature on managing virtual knowledge workers (Reddin, 1988:33, Von Hoffman, 2007:153) as provided in the initial literature review. The qualitative measurement of knowledge deliverables was, however, not a priority for the managers in the study, and this was measured rather on a Yes-No metric.

The US study also reviewed the prevalence of *multisource performance ratings* (MSPRs), in other words collecting performance metrics formally from more than one source. This concept was also mentioned as an improvement to ensure more reliable performance measures in the initial literature review (Latham & Wexley, 1994:111; Grobler *et al.*, 2006:279). In the US study, only 26% of the organisations used MSPRs. This low percentage seems to correspond with the findings in the current study, where the use of peer reviews to ensure reliability of performance measures was not used extensively by the managers in the current study, except in Delta,



where a more comprehensive MSPR system was in place. Peer reviews were mainly used in the context of improving or ensuring the quality of deliverables. Informal feedback was used, linking to the management panopticon, and customer feedback was also very important in all the companies. In the question posed to the individuals as to who measured their performance, 53% of individuals selected their manager as evaluator, and across the whole group 84 (of the 163) individuals indicated that they were evaluated *only* by their manager. This is close to 52% of the respondents in total and only 1% less than the individuals who indicated their manager as the evaluator. Self-evaluation and customer as evaluator were also selected in 16% and 11% of the responses respectively. This could be due to: time constraints in getting more inputs from multiple parties; the fact that operational execution normally has priority; simply the mindset of who should evaluate performance; or the fact that performance evaluation happens only during formal performance appraisals.

The US study also investigated the occurrence of *performance-management rater training*, and found that 84% of organisations trained management on how to conduct performance reviews. In the current study, managers did not specifically mention receiving training in performance management, nor did HR officers specifically mention that they trained managers in this. The question of management training in the context of managing virtual workers was discussed. In this context, there seemed to be very little management induction in the first place, and none on how managers should handle the virtual work situations. Managers in general created their own measures and did not ask for assistance from HR.

In terms of *contextual factors* in the US study, 45% of organisations held raters accountable for their ratings. Contextual barriers included, among others, the organisational structure and rewards, rating inflation and errors, and the differences between rater and ratee expectations. In terms of next-level reviews, in which a committee would review the overall ratings, there was only one company in the current study which seemed to have such a next-level review in place. The biggest barrier in the current study related to performance management was finding sufficient time to complete the formal performance appraisal process and making sure there were standards that were agreed upon across related business units or teams. This view was not necessarily restricted only to companies that did not have an online

system. Ultimately, the achievement of customer satisfaction was very important to all managers.

Another element reviewed in the US study (Gorman *et al.*, 2012) was the *fairness and effectiveness of performance management systems*. There seemed to be a tendency towards “fairness”, since 68% of the organisations felt that the performance appraisal systems were somewhat or extremely fair, while 21% of the organisations felt that the performance appraisal systems were somewhat or extremely unfair. Only 7% of the organisations believed their systems were legally defensible. In the current study, just over half (53%) of the individuals across the cases did agree that HR procedures to evaluate their performance were fair. There was a large group (35%) that was uncertain and the rest disagreed. There seems to be an even smaller percentage in the current study than in the US study that agrees that procedures are fair.

Finally, in terms of *evolving themes* in the US study, there was mention of a concept of competency modelling that has been receiving recent research attention (Campion, Fink, Ruggerberg, Carr, Phillips, & Odman, 2011 in Gorman *et al.*, 2012:7), as well as team-based performance management, which seemed to be gaining in popularity in organisations (Aguinis in Gorman *et al.*, 2012:7). In terms of the current study, competency modelling was not mentioned. Only in one company (Foxtrot) were there specific measures for teams instead of for individuals, unless projects were being delivered.

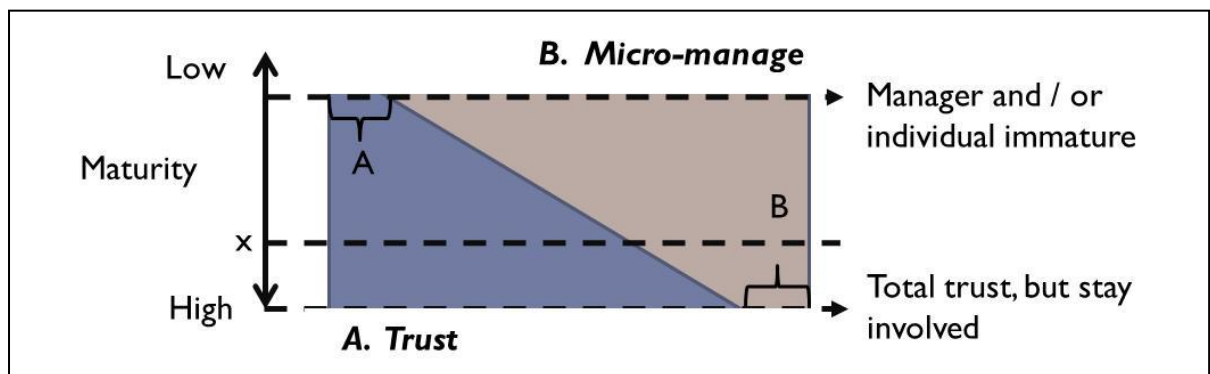
In terms of performance appraisals, the current study included an example of a case where the appraisal instrument was not measuring the right thing, as found in the initial literature review (Harvard Business School, 2007:35; Latham & Wexley, 1994:1). This was when goals were set on an individual level, so that the team could not be measured, and vice versa. Managers pointed out that care needed to be taken with setting goals on the right level and using the right metric to ensure that the right outcome was achieved.

### 6.3.4 Trust and Perceived Performance

Trust was one of the elements which was mentioned in the current study as important in managing virtual workers. The fact that trust is so important is not a unique finding of the current research, and has been reiterated in various studies relating to virtual work, the management of geographically dispersed teams and e-leadership (Malhotra et al., 2007:61, Matlala, 2011:73; Raghuram *et al.*, 2001:387). Geldenhuys (2010:176) also refers to trust as the “willingness to take a risk”. This is true for the current study in the sense that managers need to trust individuals to deliver according to agreement, even though they will not be seeing the individual on a day-to-day basis.

In the same way that different types of deliverables were shown in the two-by-two matrix of Figure 6-4, Figure 6-8 shows situation A as “trust” by the manager and situation B as “micro-management”. The amount of trust as opposed to micro-management will depend on the maturity of both the manager and the individual. However, there should always be some trust left in a situation. If this is not present, the relationship between the manager and individual is non-existent, and the individual will very probably resign, or the manager will re-position the individual to another team. On the other hand, even if there is full trust, the manager still needs to stay involved with the individual to ensure “belongingness” of the individual in the team and ultimately the organisation.

**Figure 6-8: Trust vs Micro-management**



Low trust situations which lead to micro-management are normally more prevalent where the individual (or the manager) is immature, or where the individual is still junior in the position. A certain degree of micro-management in these cases may not necessarily have a negative effect on performance, and activities related to low maturity and low skill level are represented in Table 6-4. This is in line with the model of Situational Leadership of Hersey and Blanchard (1981), in which the leadership style is adjusted according to the maturity of the follower.

**Table 6-4: Maturity and skill vs Actions**

Value		Parameter	Value	
LOW		Maturity of individual	HIGH	
		Maturity of manager		
		Skill level		
Low end action		Parameters	High end action	
Micro-manage	Specific outcomes based on standards in the environment	Deliverables	Individual defines the deliverable	Trust
	Expand to task level	Setting of Goals	High-level goals only	
	Specify behaviour required	Behaviour	Expect behaviour to happen	
	Higher towards output and deliverables	Type of deliverables	Higher towards behaviour and knowledge work	

The trust aspect can also be related to the psychological contract that was mentioned in the initial literature review. According to Rousseau and Tijoriwala (1998:681), this is "an individual's belief in reciprocal obligations arising out of the interpretation of promises", and therefore not necessarily a written or explicit agreement. Where the psychological contract seemed to be used most extensively was in Echo, where the manager referred to being creative in the management style in order to motivate individuals. This allowed individuals to have the flexibility to take some personal time during the day, but be available for additional customer queries and requests that were received outside of formal office hours (as customer expectations are that individuals will be available for extended hours). In general, the work and checkpoints needed to be much more formalised in a remote situation, since there would not be visual clues and informal discussions to support the general "flow of work".

Another item that could potentially be related to trust, especially in situations where difficult messages needed to be conveyed (such as during performance appraisals), was that a few managers preferred to hold difficult performance conversations telephonically or remotely so that they could focus on the message and not be distracted by the reaction of the individual. This could be a reason why managers are often seen as unfair judges in a situation when performance is being managed, as described in the initial literature review (Cascio, 1998:58; Culbert, 2008; Harvard Business School, 2007:2–3; Latham & Wexley, 1994:1). In addition to what is stated in the literature, this type of situation not only reduces trust, but may potentially exist because of a low trust situation to start off with. This becomes a perpetuating circle. This shows again the importance of trust in the relationship.

### **6.3.5 Consolidation of Theme 2 Concepts: Managing Performance**

Comparing the model of actual and perceived performance with the literature reviewed in the previous paragraphs showed that the elements in the current study have a high relationship with individual aspects of the literature reviewed (Cascio, 2000; Locke *et al.*, 1988, González-Navarro *et al.*, 2010; Gordon, 1997;), and included generally the elements of initiation, planning, executing, measuring and controlling as prescribed by PMBOK (PMI, 2004). One of the studies which had a more comprehensive model was that of Geldenhuys (2010), who created a framework for management within the virtual workplace, incorporating people, processes and places. Even though aspects of Geldenhuys (2010) were also prevalent in the current study, namely management in general and limitations, advantages and disadvantages of virtual work, the current study has focused specifically on the management and enablement of *performance*, and how organisational and other factors affect this. The current study also extends the understanding of actual (objective) and perceived (subjective) performance (González-Navarro *et al.*, 2010:1478), by adding additional elements that affect these two concepts. In addition the current study adds the concept of “true performance” as a state of performance that is a combination of actual and perceived performance. The current study also shows that the degree of virtuality of the individual can act as moderator for perceived performance. It is therefore important for the manager to

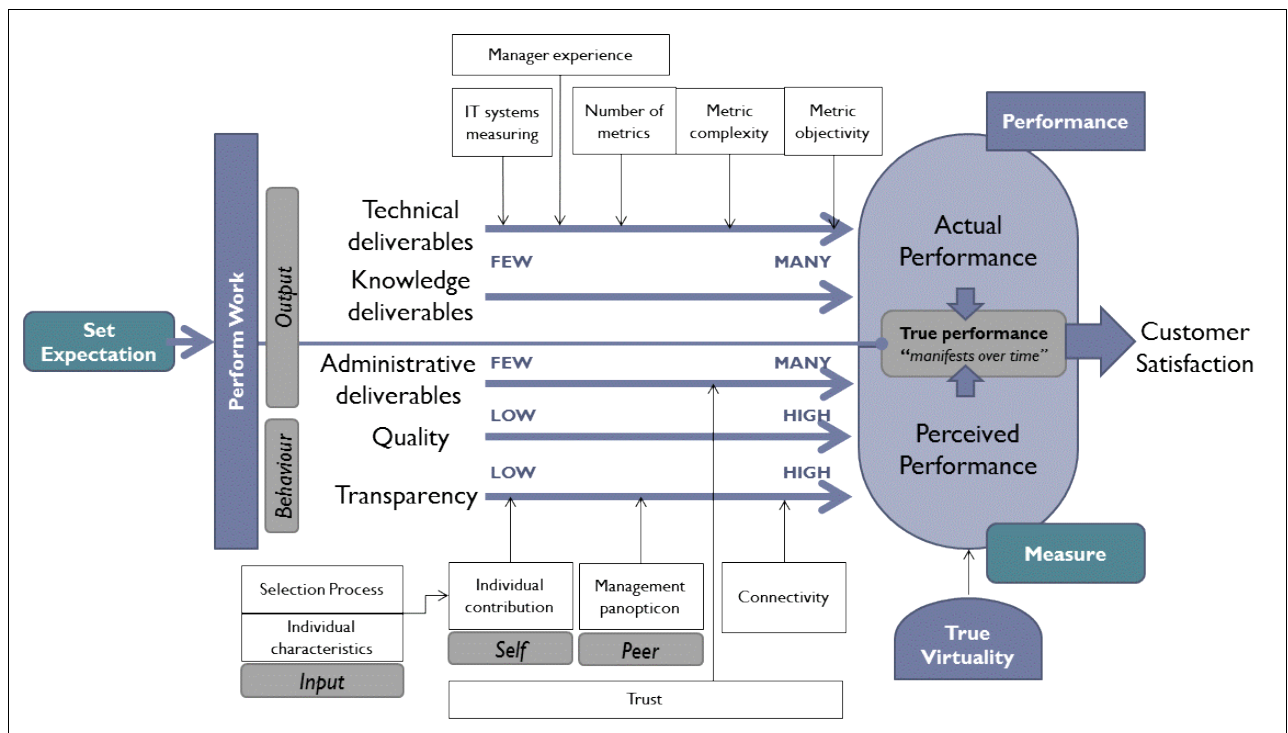
determine the true virtuality of an individual so that it does not unnecessarily affect the perceived, and ultimately the true performance.

The additional element of trust as moderator for the number of administrative deliverables has been added to the original model of “Actual vs. True Performance”. Moreover, the “True Virtuality” of an individual, as elaborated in Figure 6-3, will moderate the perceived performance. As was stated by the managers in the study, true performance ultimately manifests itself over time, and has been added as the combination of actual and perceived performance. If the time available for the true performance to manifest itself is very short, and there are only limited systems and metrics to ascertain actual performance, managers have to rely on perceived performance which, as can be seen from the model, requires many additional inputs from individuals and will also depend on the degree of transparency. Managers often know intuitively (have a “gut feeling”) what the true performance of an individual is, especially if they have been working very closely (not necessarily in distance but in terms of involvement) with the individual. Nevertheless, all the measures and deliverables remain important. Ultimately true performance results in “Positive Customer Satisfaction” or, in simple terms, customer happiness. This progression is shown in Figure 6-9.

As an additional classification of deliverables, and as already discussed in the initial literature review, the study conducted by Limburg and Jackson (2007:146) discussed control approaches in relation to how workflow management systems (WFMS) could be used for collection of performance management data. These control categories have been used as a link to the different types of deliverables. These categories are represented by the grey blocks with the words “Output”, “Behaviour”, “Input”, “Self” and “Peer”.

All of the deliverables, metrics and moderators, as well as their interrelationships, have been mapped in Figure 6-9 to represent a view of how true performance is made up of the combination of actual and perceived performance.

**Figure 6-9: Actual vs. perceived performance model (“True Performance”)**



Note: Enlargement of this diagram available in Figure 15-2, Appendix F.

## 6.4 THEME 3: PARAMETERS AFFECTING PERFORMANCE

### 6.4.1 Theme Introduction

The whole of Section 5.5 in Chapter 5 was devoted to defining parameters affecting the performance of virtual knowledge workers. These were broadly divided into organisational, contextual, manager and individual parameters (refer Figure 5-35, the summary of the Impact Parameter Model, in Chapter 5). Some additional relationships of these impact parameters have been shown in the “True Virtuality” model (Figure 6-3) as well as the “True performance” (Figure 6-9) model.

The paragraphs below explore how this initial Impact Parameter Model should be extended to accommodate parameters identified in additional literature, or highlight parameters of specific significance that were found in other parts of the study, which link to the model.



#### 6.4.2 Organisational Impact

The categories relating to organisational impact were leadership, organisational culture, design and strategy. The creation and application of policies was seen as a sub-component of the strategy of an organisation when the coding was completed in Chapter 5. However, HR policies play an important role in terms of the perceived virtuality as shown in the model of True Virtuality (Figure 6-3). This model shows that the lack of a virtual work policy, or the lack of knowledge of such a policy, could lead to a lower perceived virtuality. When individuals were asked in the individual questionnaire if a “work from home” or a “flexible work hours” *policy* existed, there were similar numbers of respondents who indicated “Yes”, “No”, and some were “Uncertain” whether the policy in fact existed or did not exist. Uncertainty regarding the existence of the policies, especially the “work from home” policy, may have been due to the fact that in all of the companies individuals were allowed a more flexible work style, including working from home occasionally, at the discretion of their managers.

A possible further misunderstanding could also be based on the word “policy” itself. The Microsoft *Encarta dictionary* defines policy as relating to a “course of action” which is then described as “a programme of actions adopted by a person, group, or government, or the set of principles on which they are based”. In this definition, the word “policy” refers to a decision that has already been made and thereafter documented, or a way of work that needs to be adopted by all. Individuals who understood this more formal meaning of the word policy would have indicated “Uncertain” or “No”, because they understood that all flexible work arrangements were somewhat discretionary.

Even the managers in the larger organisations were not all sure about the existence of formal policies, illustrating the difficulty in larger organisations of ensuring that everybody is aware of all the rules. Furthermore, when the HR representatives were asked about the policy, there seemed to be a common notion that flexible work was allowed and could be decided on by the managers, but that creating a specific policy for “work from home” would “open floodgates” to individuals who would demand to be allowed to work in this way. Even Foxtrot, which as an organisation displayed a lot of



flexibility around virtual work, had a “cautious” approach to allowing individuals to work from home, and the draft telecommuting policy was only because of the governance requirements in the US.

A more formal definition relating to organisational policies is: “HR policies are guides to management’s thinking, and they help management achieve the organisation’s objectives. Policies also help define acceptable and unacceptable behaviour and establish the organisation’s position on an issue.” (Grobler *et al.*, 2006:12). This shows that policies represent the organisation’s view on the matter, especially where there may be legal implications. According to the same source, policies are also important in creating a common work framework against which operational decisions can be verified for consistency, especially when there is a difference of opinion.

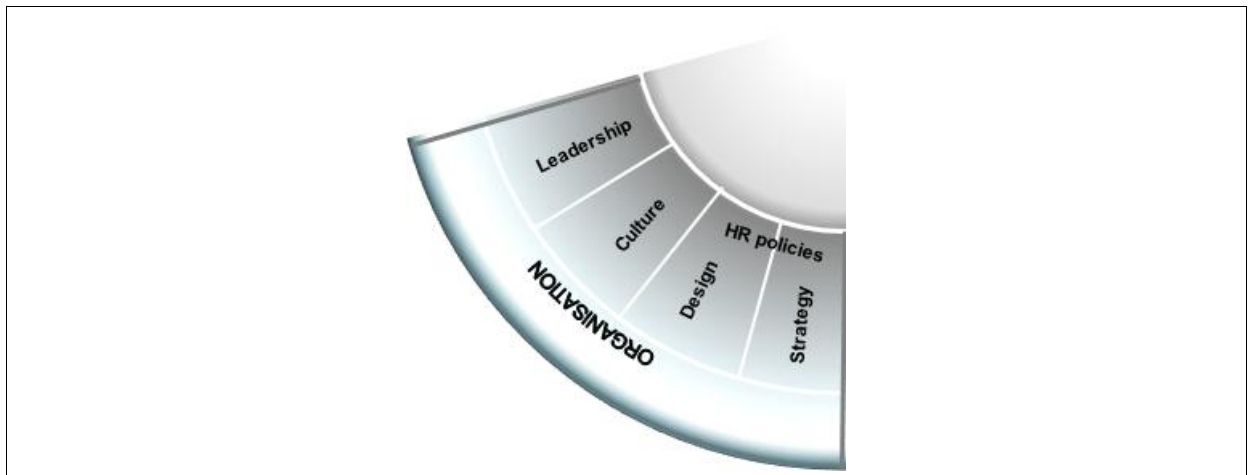
The way that Delta has approached the dilemma of a policy becoming the right of all employees was not to specifically have a policy for working from home, but to create extensive guidelines for flexible work styles. This is supported by policy statements on flexible work availability. This assists managers and individuals to build and evaluate a business case that will be appropriate for the type of job, the customer, the manager’s style and the individual’s requirements. Most of the managers did indicate that a guideline or framework would be beneficial for assisting with these kinds of decisions, and would allow rules to be applied fairly and equitably. Moreover, a framework or guideline would give the manager the option of declining a request, rather than being forced into a situation that was untenable under a formal policy. It would also help managers understand the parameters available to them for this type of work.

When looking at telework policies in the US, the *State of Telework in the US* report (Lister & Harnish, 2011:22) stated “In February of 2011, *Fortune Magazine* reported that 82% of companies that made its annual ‘100 Best Companies to Work For’ list allow employees to telecommute or work at home at least 20% of the time”. In the light of governance around virtual work in the US, one would assume that these companies all had policies to support this kind of work. As an example of policies on the highest level, Montalbano (2010) reported in *Information Week* that as part of the Telework Enhancement Act of 2010, Obama had officially allowed federal employees

to telework under protection of the law. Montalbano further reported, “The bill, which requires agencies to establish telework policies and designate a managing officer with direct access to a top agency official to oversee telework programs, has been up for consideration since March 2009.”

HR policies have therefore been added in this study as an impact parameter related to both the strategy category (as policies set out the position of the organisation) and the design category (as policies assist in tactical execution in the organisation, and this drives how optimal team configurations will be designed). The quadrant that has been affected is shown in Figure 6-10.

**Figure 6-10: Impact Parameter Model: Organisation: HR policies**



### **6.4.3 Contextual Parameters**

The contextual parameters include elements of geography such as time-zone and regions, absence of visual clues (face-to-face interaction), situational factors, external stakeholders including customers, other teams, the individual’s personal situation and third parties. Metrics that were difficult to define are also listed under contextual parameters, and lastly some technological limitations in terms of HR tools not being available. In addition to this specific technological limitation, the issue of lack of bandwidth availability was mentioned in most of the manager interviews when additional IT requirements were discussed.

*Technology* has also been one of the fundamental enablers for the proliferation of remote work possibilities (Piccoli *et al.*, 2004:359; Raghuram *et al.*, 2003:181; Watson-Manheim & Belanger, 2002:61). Tasks that could originally be completed only in the main office location because systems were available only within the corporate network have now become accessible via wireless and fixed-line broadband connectivity. The fact that most of the employees (61%) in the current study worked away from their manager (and the main office location) more than four days a week attests to this. The importance of connectivity, and the resultant requirement for bandwidth, is therefore self-evident. This connectivity gives access to the systems that need to be checked as part of customer service delivery, company portals to access standard documents or knowledge artefacts, and in more general terms for communication, collaboration and socialisation, as categorised by Palmer (1998).

In the managerial framework created by Geldenhuys (2010:262), technology was linked to people (simplified and standardised use of technology for people), process (how technology can support improved business processes for remote workers) and place components (addressing aspects of infrastructure feasibility). As already shown in “Theme 1: Virtuality”, technology is the mediator through which managers need to manage and enable the individuals reporting to them. The current study therefore confirms the importance of technology in the virtual management situation.

Because bandwidth is such a scarce and expensive commodity, especially in South Africa, companies in the current study tended to limit certain functions while on the corporate network, and limited especially the use of social websites. Computing networks and environments have also become increasingly complex, as found in the current study, where individuals were struggling to obtain the right level of access and connectivity on both corporate and customer networks. The general bandwidth limitations in South Africa were found to be especially limiting around the requirements for more visual interaction via video conferences, and especially online video conferences through voice over internet protocol or VOIP-based applications.

These connectivity limitations have led to the need for individuals to visit the main office locations more often, or managers to visit remote sites on a more regular basis,

and have an impact on perceived virtuality (perceived virtuality is reduced if information technology is not information rich) and perceived performance (transparency is reduced if individuals cannot connect, which reduces perceived performance). The importance of technology needs to be shown more clearly in the Impact Parameter Model, and specifically the connectivity aspect of technology. This is now added as a separate parameter and the related quadrant is shown in Figure 6-11.

**Figure 6-11: Impact Parameter Model: Contextual parameters: Technology**



The absence of visual clues, or in other words the absence of face-to-face interaction, is explored in more detail in Theme 4.

#### **6.4.4 Customer Impact**

Throughout the study, it became apparent that the customer has a major impact on both the actual virtuality and the perceived virtuality of an individual, as well as on how performance is measured. Some of this impact has already been shown in Figure 6-3, where the model for true virtuality was built and “Customer requirement” was added as moderator for “Discretion”. In this regard, the customer defines the *service requirements*, which include deliverables, their measurement and the location at which they should be delivered. (Customer requirements were initially coded as a

limitation of virtual work, as well as a reason for virtual work because of geography and time zones).

*Quality* has also been defined as meeting customer expectations or adding value to the customer's service. Ultimately, if the customer is "happy", then it can be assumed that the individual team member (or the team) has performed, as shown in the model for true performance in Figure 6-9. In this regard, the customer becomes part of the *management panopticon* that can give feedback to the manager if things are not going according to agreement, or provide the manager with positive feedback when things are going well. Managers reported that monthly reports, surveys and informal feedback were used for this. When non-performance occurs that negatively affects the customer's business, the customer also often expects to see action taken towards the individual.

The manager's role is to set expectations at the beginning of a service engagement, protect the individual when things go wrong, and build trust with the customer so that the virtuality of the individual can be increased. The customer impact code that has been categorised as part of the external stakeholder category of "Contextual Parameters", as shown in Figure 5-35, was used for negative impacts from the customer (in other words when the customer was the cause of non-performance by changing service requirements, or causing issues which resulted in perceived non-performance). Negative impacts also include mistrust by the customers and their always wanting to see the individuals on site. This has been summarised as "Low maturity" of the customer. The part of the Impact Parameter Model that now more clearly shows this impact is shown in Figure 6-12.

**Figure 6-12: Impact Parameter Model: Customer impact**



#### **6.4.5 Individual's Contribution**

The interviews with the managers specifically requested inputs from the managers on what they expected of the individuals in terms of contributions that could make the management of virtual performance easier, and also the type of individuals that they deemed to be more suited for this type of working scenario. In this regard, the individuals have also been depicted as a quadrant on the Impact Parameter Model in terms of their characteristics, contribution, experience and skills. Desirable characteristics included professionalism, dependability, being achievement-driven and self-managed, having resilience and maturity, and personal preferences influenced by their inherent nature or personality. Desired contributions were classified as behaviour that exhibited transparency and integrity, communicating frequently, and performing detail planning. The skills component was listed under both characteristics and contribution, and was placed in its own high-level category. The characteristics and contributions for individuals found in the current study are the same as those found by Geldenhuys (2010:187)), which she compared with "Conscientiousness" from the "Big Five" personality traits. Geldenhuys (2010:184) also states that the manager has the responsibility of recruiting the right individual, to ensure success in working in the virtual situation. The same conclusion was found in the current study.

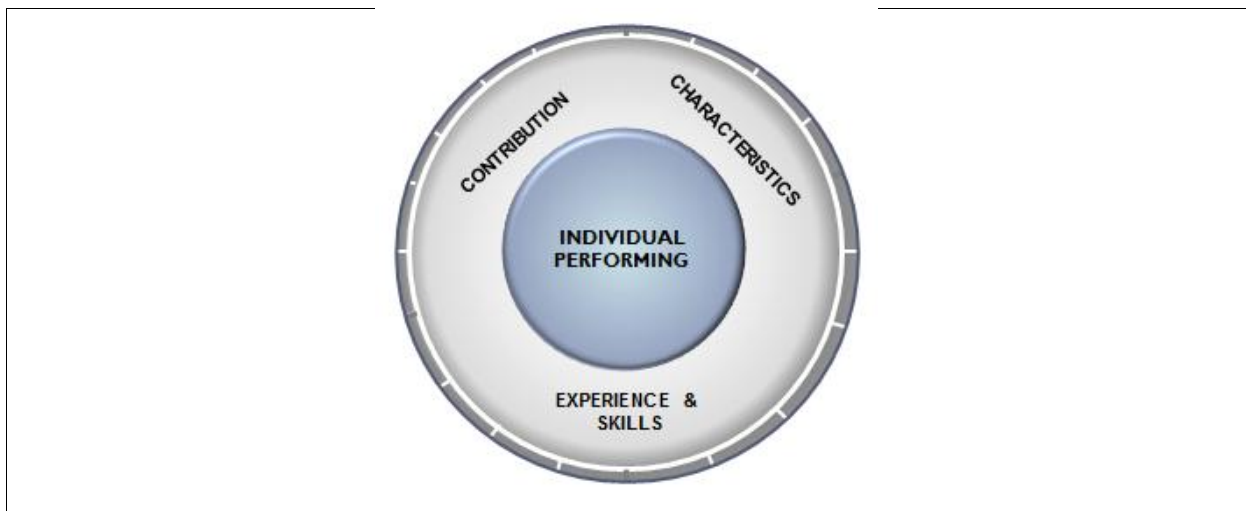
From the perspective of “managing performance”, it emerged from the current study that there was, however, always the danger of underestimating (or underplaying) the contribution that the individual was making, thereby placing emphasis on the micro-management component rather than the trust component, as explained under “Why Measure?”. This was clearly highlighted by one of the individuals who, after answering the questionnaire, took some additional time to point out this potential “flaw”.

I replied to your questionnaire and I just have a further note about it. The questionnaire is framed in a manager-centric way, implying that a management technique should be developed in order to solve the problems of distributed and remote workers. I am responsible for some of the project planning and task allocation in my company and have found that when a person is required to manage such distributed projects it becomes an all-encompassing task that can often not be performed successfully when the person has other responsibilities. We found on previous projects where we attempted a fully managed approach that the persons responsible have to turn into fully dedicated communications hubs due to the complexities of distributed software development, something that is not possible for an organisation and team of our size. P43 (3)

For these reasons we feel that it is better to divide our software into independent modules and have independent teams of co-located individuals working on such modules. The teams will regularly report to a core architectural team consisting of the technological lead(s) and the product owner to ensure that the entire process is moving in the technological and financial direction required. This approach requires individual developers to accept more responsibility, but seems to be a better fit for our company, since our developers have to become such in order to succeed in our environment anyway. P43 (7)

This one statement underscores the importance of the individual in this dyadic relationship and also the need to give the individual’s performance a more central role in the Impact Parameter Model.

**Figure 6-13: Impact Parameter Model: Individual**





In a recent study, Matlala (2011) investigated which factors were most important for virtual team success, and also evaluated the impact of trust, communication, conflict and knowledge in the virtual team situation. The research was completed in a South African power utility company, where virtual team members were involved globally in engineering work. Surveys of 74 individuals yielded 64 responses, with 47% of the individuals in South Africa and the rest in India, the UK and China. The study discussed the top four of each of task-related factors, general success factors and skills in more detail. Examples of all of these were also found in the current study, as shown in Table 6-5.

**Table 6-5: Current study mapping to virtual team success factors**

Factor	Top Four Ranked items	Example in current study
Task-related factor	(1) Feedback about how well I am doing my job primarily comes from information about how well the entire team is doing	More focus on individual, but some examples of measuring the team in Foxtrot.
	(2) Team member rather than manager decides who does what tasks in the team	Detail planning expected of individuals. Example of participative task allocation found in Foxtrot.
	(3) The work performed by the team is important to the customers in my area.	Customer impact on performance found throughout study.
	(4) Members of the team have great confidence that the team can perform effectively	Evidence found of interdependence in ability to perform.
Success Factor	(1) Establish interim deadlines and celebrate milestones when met	Setting of expectations and delivery dates important. Expect individuals to do detail planning to achieve the deadlines.
	(2) Selecting a team leader	Did not focus on team leads, but individual comment made about team leads interfering too much. Management panopticon.
	(3) Honesty in describing members' experience and abilities	Integrity listed for individuals' characteristics.
	(4) Team building exercises	Specific requirement for regular interaction, and face-to-face meetings identified including social interaction.

**Table 6-5: Current study mapping to virtual team success factors (Continued)**

Factor	Top Four Ranked items	Example in current study
Skill	(1) Make good decisions	Coding examples: <ul style="list-style-type: none"> <li>• Accountability</li> <li>• Integrity</li> <li>• Customer liaison</li> </ul>
	(2) Technical expert	Coding examples: <ul style="list-style-type: none"> <li>• Right Skills</li> <li>• Willing to share</li> <li>• Adding value</li> <li>• Experience</li> </ul>
	(3) Attention to detail	Coding examples: <ul style="list-style-type: none"> <li>• Feedback</li> <li>• Visibility</li> <li>• Detail planning</li> <li>• Professionalism</li> <li>• Taking responsibility</li> </ul>
	(4) Succeed when opposed	Coding examples: <ul style="list-style-type: none"> <li>• Resilience</li> <li>• Introspection</li> </ul>

Source: Adapted from Matlala (2011)

Relating to the success factor for team building, Mogale and Sutherland (2010:16) found that the need for purely social engagements among virtual team members, as a success factor in managing multi-national teams, was ranked as one of the six lowest-ranked factors. This is in contrast to what the current study showed, namely that the more remote individuals were, the more social time was planned together (e.g. going to shows together when visiting the remote country.) The current study found, however, that when managers were really very involved with the individuals, it sometimes became difficult to draw the line between personal involvement for performance improvement reasons (empathy) and personal involvement on a friendship level (sympathy). DasGupta (2011:1) also identifies social networking as one of the new skills for e-leaders.

#### **6.4.6 Manager as Enabler**

On a very broad level, and without diminishing the volumes of research that have been produced on the exact meaning of both management and leadership, the role of the manager is traditionally one of command and control (Ashford *et al.*,2006:91;

Jackson *et al.*, 2006:220;) whereas the role of the leader is one of setting a vision, and guiding by example (Bass, 1990:11; DasGupta, 2011:29), in other words, people *want to follow* leaders but *have to adhere* to managers. Bass (1990:11) states that leadership can be “conceived as a focus of group processes, as a matter of personality, as a matter of inducing compliance, as particular behaviours, as a form of persuasion, as an instrument to achieve goals, as an effect of interaction, as a differentiated role, as an initiation of structure, and as many combinations of these definitions”. In distilling the essential components from this definition, the leader must ensure that a goal is achieved, and this is normally done by exerting some form of influence or motivation. In this regard, a large portion of the current study has been dedicated to describing how the managers *manage* virtual performance, which has a large monitoring and control component, as could be seen from the coding.

In an article relating to the management of human capabilities, Brache (2003:65) proposes that the manager could be instrumental in evaluating barriers of a job that may be restrictive in terms of the physical, intellectual and psychological abilities of individuals. Re-evaluation of the job and determining if any restructuring of the job is possible could potentially remove barriers, especially if the ability of the individual is not necessarily a requirement for the job (e.g., the individual has a physical disability but physical ability not required for the job). An example in the virtual work context could be to allow a disabled individual to work from home, and provide additional connectivity and bandwidth so that the individual can collaborate from home, especially if the job entails knowledge work, and not physical ability. By contacting the individual regularly and making sure he or she is included in team meetings via teleconference, the manager would ensure a sense of belonging and teamness for the individual. In this way the manager becomes an enabler and no longer just a manager. Cascio (2000:88) refers to this helping behaviour as facilitation, where the manager removes obstacles such as poor connectivity.

Related to this theme of “enabler”, in the current study, and in addition to the codes and categories created for managing performance, an additional set of codes was also evolved which has been termed “Manager Responsibilities”. These codes were grouped into five categories: communication and organisational change management: focus on the individual: involvement and support: interface

management: and some elements relating back to the principle in management of performance (refer Table 5-25 in Chapter 5).

Previous studies relating to a similar concept of the manager as enabler were also explored, so that the findings could be mapped to the categories identified in the current study.

Malhotra *et al.* (2007:61) conducted a study of cross-functional, dispersed teams with highly interdependent tasks. Data was collected from 55 teams over 33 organisations through interviews and questionnaires with team leaders and their team members. These authors distilled six leadership practices that effective leaders of virtual teams conformed with.

Joshi, Lazarova and Liao (2009:249) completed a web survey of 700 service employees of a *Fortune 500* hardware and software company, based in the US, but with employees dispersed globally. There were 247 respondents giving a response rate of 35%. They found that the role of inspirational leaders was important in all contexts, but especially in dispersed teams, in building trust and commitment. These perceptions of trust and commitment that were built by the leader predicted team performance.

A study by Mogale and Sutherland (2010) for one multi-national company, with six interviews and 59 questionnaire respondents over four continents, analysed the enablers and inhibitors for managing virtual teams. They identified key leadership skills as well as enablers and inhibitors for managing virtual teams.

After holding surveys and interviews with 500 project teams, Lojeski and Reilly (2010:34) wrote a practical guide related to the concept of virtual leadership and virtual distance. In addition to the concepts relating to virtual distance already discussed under Theme 1 of this study relating to “True virtuality”, they identified three critical leadership skills for virtual leaders, namely “co-activating leaders, context building and cultivating community”. In a similar practitioners’ guide, Fisher and Fisher (2001:8) had emphasised the importance of the “distance” manager as a “boundary manager”. In other words focusing on the interfaces outside of the team

and additional resources that the team needed to have. They identified seven competencies of a boundary manager, which they termed being a leader, result catalyst, facilitator, barrier buster, business analyser, coach and living example.

There are also additional insights from more recent reviews of e-leadership studies. In their review of recent studies on leadership and future directions of research, Avolio *et al.* (2009:440) identified the topic of e-leadership, which they define as "leadership where individuals or groups are geographically dispersed and interactions are mediated by technology." DasGupta (2011:1) reviewed 77 journal articles which related to leadership at a distance, dispersed or virtual teams and communication technology. These three topics make up the components of e-leadership. From the reference list it seems that the topic of e-leadership started emerging in journal articles from about the year 2000.

The article looked at the advantages and opportunities that the technology provided for leaders and organisations: instant personalised communication, access to more skills, building more diverse teams, improved customer service hours, cost savings and setting the stage for better knowledge management. It also looked at challenges in trust, communication and motivation caused by the distance and the use of technology that decrease the effectiveness of the leadership style and looked at the new skill set that is being defined to overcome these challenges, which should include written communication skills, social networking, multi-cultural global mindset, awareness of individuals' emotional state and an "always-online" orientation (DasGupta, 2011:1). Both these literature reviews (Avolio *et al.*, 2009; DasGupta, 2011) also agree that technology and the information richness thereof is a key mediator for aspects associated with e-leadership outcomes such as quality of communication, level of trust, motivation and virtual performance, and that leadership style, distance, task complexity and team interaction styles moderate the effectiveness of these outcomes.

The challenges faced by managers in the current study were similar to the challenges faced by the team leaders in the study by Malhotra *et al.* (2007:68), which included co-ordination or synchronisation of work, impact of matrix management (i.e. commitment of resources who have additional "local" managers), multiple roles

associated with building relationships, belongingness and teamness, as well as the need for constant communication. In his literature review, DasGupta (2011:1) in addition to the elements of communication and motivation already mentioned, also identified the building of trust as a challenge caused by the distance and the use of technology. In this way, distance and the use of technology become moderators of the effectiveness of the leadership style.

The work of these studies and the study of Geldenhuys (2010) already mentioned in Theme 2, as well as the inputs from the initial literature review are now mapped to the categories of manager's responsibilities as identified in the current study. In addition, the mapping between the manager's responsibilities, and how they address some of the limitations and challenges of virtual work, as listed in Table 5-3, Code list: "Virtual work: Limitations and Challenges", will also be done.

#### **6.4.6.1 Communication and organisational change management**

The fact that communication is important, especially in the organisational context, is not new, especially not in the context of organising a group of people to fulfil the goals of the organisation. The following quote from Shockley-Zalabak (1994:2) exemplifies this.

"Organisations have been described as social units or groupings of people deliberately constructed and reconstructed to strive for specific goals. As such, they are characterized by divisions of labor for goal achievement. These efforts also are directed by relatively continuous patterns of authority and leadership. Interdependence exists both among organisational components and with the external environment. This complex interdependence requires coordination achieved through communication."

To achieve this same level of organising while not having individuals co-located is even more difficult. The importance of communication, and the challenges associated with it in the virtual context, has been mentioned on multiple levels of the current study. It was listed under limitations and challenges in the virtual environment, in that insufficient written communication skills mask the message; collaboration needs extra communication; and communication is needed in building of relationships. It was also mentioned as a key challenge for managing remote team members in the context of keeping everybody on the same page, thereby creating a shared level of

obviousness. But overall it has been mentioned as a management responsibility in relation to keeping the distributed team members informed in general and making sure that organisational messages are filtered down to the lowest level. In this context the manager is also playing the role of a “change agent” in the realm of organisational change management.

At the same time, it was pointed out that individuals needed to create a level of transparency about work status by giving feedback and relevant information, keeping the manager up to date and keeping task progress visible. In a practitioner’s guide for virtual managers, Sheridan (2012:143) also refers to practices to assist in overcoming communication challenges by being comprehensive, frequent, timely and thoughtful while communicating. Cascio (2000:87) states that communication challenges can be overcome by setting some ground rules for communication.

Some of the earlier attempts to define communication included definitions that centred on sharing of information in order to create a common understanding; definitions that leaned towards intentional influence or persuasion, and lastly a broader definition that tries to cover any type of influence or response, whether there is intent included or not (Severin & Tankard, 1979:5). Furthermore, communication is often explained in terms of sender, receiver, and the encoding and decoding of messages (Shockley-Zalabak, 1994:2).

Organisational communication specifically has received additional attention, and relates to how communication is practised within the organisational context, and how this organisational context adds to the body of knowledge regarding communications theory (Shockley-Zalabak, 1994:2; Jablin & Putnam, 2001:4). Two approaches mentioned by Shockley-Zalabak (1994:4) to create this shared reality that is necessary in the organisational context are the human relations approach and the systems-integration approach. In the current study, relationship building has been mentioned as important in the context of managing or enabling the performance of virtual workers, especially when difficult conversations need to be held. The relationship helps to build the trust that is necessary for sharing of performance issues.



The systems-integration approach brought in the impact of technology on communication. Related to this approach, Watson-Manheim and Bélanger (2002:66) did a multiple-case study, including two companies and 40 interviews, with the aim of proving a systemic relationship between distributed teams, communication-enabled work processes, communication modes and the impact of various contextual parameters in determining team effectiveness (which related to perceptions regarding assigning and completing tasks). Among their findings were that: there was a need for organisational norms in media choice; the urgency of the communication often dictated the mode; training affected technology choice (in other words, individuals tended to use only the technologies they were familiar with, often disregarding more effective modes of communication); and lastly they raised the concept of managing information overload created by the multiple modes of communication (Watson-Manheim & Belanger, 2002:80).

The impact of technology on communication was further investigated by Malhotra *et al.* (2007:61). In more recent studies has been given the name of “sociomateriality”, which is a new genre of research creating theories around the fusion of technology and work in organisation (Orlikowski & Scott, 2008:434). Overall, it is important for managers to select the communication mode that supports the work process most effectively. This is important especially where managers need to monitor, motivate and give performance feedback via communications technology. In the same context, the manager should understand that the audience might gain different insights from one single message (Severin & Tankard, 1979:7).

As regards the suggestions for change that were found in the initial literature review in the context of communication, managers in the current study definitely supported the principle of “ongoing, two-way exchanges” listed by Harvard Business School (2007:37). This seemed to be especially important where individuals were remote, and the two-way exchanges were also used to build the relationship and ensure that belongingness was established. DasGupta (2011:1) also confirmed that previous studies had found the importance of written communication skills as part of the new skill set for e-leaders to assist in overcoming communication challenges.

From an organisational change management perspective, in addition to the operational communication, managers in the current study also shared information and decisions made on organisational level, since organisational changes happening without reasons being given reduced trust and the loyalty of individuals. In this regard, Lojeski and Reilly (2010:110) talk about the importance of authenticity and transparency as related to “authentic leadership” (George in Lojeski & Reilly, 2010:110), and how this builds trust and subsequently team performance (Joshi *et al.*, 2009:240). Malhotra *et al.* (2007:61) add to this the fact that communication technology is used as a mediator, and therefore rules need to be set up to ensure that both managers and individuals use technology in the right way, to make their actions more explicit and build trust. This in turn links to the concept of transparency, which impacts on perceived performance, which was also identified in the current study (refer Figure 6-9 “True Performance”). Geldenhuys (2010:248) suggests the creation of an enabling culture through participative management, active change realisation and focus on output rather than people management.

In the context of communications theory and communication in virtual teams, the current study confirms the importance of communication and communications technology, and many of the challenges imposed by the virtuality of individuals, such as additional effort required by managers to keep communication open and transparent. The current study also confirmed the manager’s need for transparency from the individual’s side. In addition, communication was found to be only one element in the broader spectrum of elements that could potentially affect performance. Going forward, managers would need to relearn the art of communication, and think about what they want to achieve with a particular message, and what mechanism would be best to achieve it with, to ensure the greatest likelihood of all individuals actually receiving the same intended message (i.e. having a similar interpretation of the message.)

#### **6.4.6.2 Focus on the individual and teamness**

The second category in the manager’s responsibility was focus on the individual. The category included elements of relationship building with the individual and within the team (also referred to as teamness), trusting the individual, giving autonomy, looking

after the well-being of the individual, giving exposure and rewarding. These elements are now compared with the initial literature review, as well as the new literature identified at the beginning of the section.

Managers in the current study agreed that individuals needed to be given autonomy to perform the expected functions, which can be linked to the aspect of giving individuals accountability and responsibility for delivering, as mentioned in the initial literature review (Allen, 2007:44; Gary, 2007: 73; McGregor, 1957:135). In addition, one manager specifically quoted McGregor's Theory Y to the effect that by empowering individuals, the manager uncaps their potential. Many managers in the current study also mentioned the importance of individuals being self-managed, resilient and achievement driven, linking to the aspects of internal control and self-direction in McGregor's theory (1957:134). Nauman *et al.* (2010) also confirmed that empowerment was higher in the more virtual project teams, making the project manager more effective.

"I think that's probably the key thing is that it's the old productivity argument about Theory X and Theory Y, you know, if you brow beat someone and you know, stand over their shoulder you are going to get exactly what you ask for out of them, but if you enable them and empower them, and support them, you can get so much more. You know, you're not capping their potential." P35 (220)

Although team cohesion was important, the literature showed that team diversity should be embraced, and that managers needed to leverage off this diversity in order to improve team performance (Malhotra *et al.*, 2007:61). Lojeski and Reilly (2010:109) refer to this as "glocalisation" or living locally and producing globally. DasGupta (2011:1) included having a multicultural global mindset as a new skill for e-leaders, to overcome challenges in geographically dispersed teams. These concepts are comparable with the current study, in that the managers needed to create teamness between individuals with different personalities and in some cases from different countries, and also needed to ensure that teams could produce in relation to the worldwide mission where international parent companies existed. So it is not only the relationship within the team, but also the organisational context that becomes important.

Various studies have also referred to the importance of the relationship building component for virtual leaders (Joshi *et al.*, 2009:249; Lojeski & Reilly, 2010: 97; Malhotra *et al.*, 2007:61; Mogale & Sutherland, 2010:21). Relationships in the team allow individuals to benefit from the team and create a sense of belonging. Lojeski and Reilly (2010:97) specifically refer to “cultivating community”, while in the study by Mogale and Sutherland (2010:21), enabling relationships was one of the three highest-ranked soft skills identified for virtual leaders, and was related to the role of manager as “energiser”, which was found to overlap with transformational and symbolic leadership. Joshi *et al.* (2009:249) reviewed the role of inspirational leaders and found this role to be especially important in dispersed teams for building trust and commitment, since these perceptions of trust and commitment predicted team performance. The current study shows similar findings in terms of relationship building and underscores the importance of the manager’s creating a shared reality for the team. The current study also emphasised the role of the manager in building trust, not only with individuals but also between individuals within the team context.

The responsibility of the manager to look after the well-being of an individual is comparable to the new skill identified for e-leaders by DasGupta (2011:1), namely the awareness of an individual's emotional state. In addition, rewards are important and should be based on output, quality, deadlines met and value added for client, and should be according to the individual’s needs (Cascio 2000:88; Geldenhuys, 2010:182). Managers in the current study did not always feel that they had the authority to give monetary rewards. Therefore working virtually (or more flexibly) was often seen as a reward in itself.

#### **6.4.6.3 Manager involvement and support**

The category for involvement and support included elements of technical guidance, awareness of work being performed, support and accessibility, elements of training and coaching, making sure site visits were performed, creativity and willingness to change procedures if they were not optimal. The importance of most of these elements was confirmed in the additional literature review.

Various studies have pointed to the importance of managers' providing training for or coaching their individuals, and setting a personal example. Fisher and Fisher (2001:10) talk about the manager as coach, living example and facilitator. Lojeski and Reilly (2010:34) also describe co-activating leaders that share the leadership roles in the team and become influencers. This can also be linked to the concept of the individual becoming the liaison on site and the management panopticon, as found in the current study. Mogale and Sutherland (2010:21) classify this component under the interpersonal skills of the manager and link this to previously defined concepts of situational leadership and the HR leadership frame. Geldenhuys (2010:182) confirms the importance of the manager training the individual, while Cascio (2000:86) states that both the manager and the individual need to receive training in technologies and effective use of the virtual work place. The initial literature review further mentioned the concept of coaching (Carney, 2007:51; Williams, 2007:30), which was also mentioned by managers in the current study, especially in the context of correcting non-performance.

The importance of using the right technologies and providing training in their use was also found in the additional literature review. Mogale and Sutherland (2010:21) found that the second-highest ranked enabler for managing multi-national teams was having the right technologies and data systems in place, while Lojeski and Reilly (2010:103) refer to this as "techno-dexterity". As already mentioned under the category of communication, it is important for the manager to use the right technology for the right purpose. In the current study, it was found that too little emphasis was being placed on demonstrating the advantages of new technologies or explaining how they could assist in managing the performance of virtual knowledge workers. The lack of sufficient bandwidth in South Africa is also a very limiting factor. Individuals in this study did not always feel that all the right tools existed.

DasGupta (2011:1) also included an "always online" orientation as part of the new skill set for e-leaders. This came through very clearly in the current study in terms of managers always being available for the individuals to contact them, and customers expecting service over longer hours. Allowing individuals flexibility in terms of personal time during the day enabled the manager to expect additional hours worked

after hours, without the extra cost of overtime. Both managers and individuals needed to be flexible in this regard.

#### **6.4.6.4 Interface management**

The fourth category of manager responsibilities was interface management. This included aspects of setting client expectations, managing interfaces with other teams and suppliers inside and outside the organisation, as well as reducing distractions. So, as interface manager, the manager has to keep in mind both an internal and an external view.

Malhotra *et al.* (2007:61) agree that one role of the virtual leader is to "enhance visibility of virtual members within the team and outside the organization". Mogale and Sutherland (2010:21) refer to this competency as the "networker and alliance builder", where sharing of knowledge and information is important, and they link it to the original leadership theory of the Networker Frame (Beaty in Mogale & Sutherland, 2010:21). Lojeski and Reilly (2010:108) write about "traversing boundaries" which is defined as "crossing over disciplinary, organisational, geographic, and cultural divisions to bring people and groups together".

The concept of interface management also links to the competencies of "barrier buster" and "business analyser" that Fisher and Fisher (2001:10) mentioned as two of the seven competencies of a "boundary manager". The "barrier buster" needs to remove any obstacles to team performance, while as "business analyser" the manager needs to understand and communicate needs from the organisational level as well as needs from the customer, so that the team performance is aligned with these.

#### **6.4.6.5 Management of performance: Direction and co-ordination**

Although one of the categories for "Manager Responsibilities" is called "Management of performance", this category is tends towards elements of direction and co-ordination, rather than towards "command and control". Setting of specific measures, assisting with reprioritisation, and giving guidance where things are off track are all

part of this category. These elements all help to lead to effective performance or results; Fisher and Fisher (2001:10) call this competency the “result catalyst”. The elements of direction and co-ordination are also consistent with two of the six leadership practices distilled by Malhotra *et al.* (2007:61), namely to “effectively manage work life cycles” and to “monitor team progress using technology”. Managers in that study used meetings to consolidate information gained in one-on-one and off-line discussions. Managers in the current study also used individual and team meetings extensively, but did not make much use of team dashboards when individual performances were being compared. Incorrect behaviour can be encouraged if the dashboards show and measure the wrong performance indicators.

The direction and co-ordination is always given in the context of the objectives that the team needs to achieve, and the requirements of the customer. In the study of Mogale and Sutherland (201:15) the highest-ranked enabler for managing multi-national teams was to create a shared vision for the team and build a unique identity. This can be linked to the role of context building as identified by Lojeski and Reilly (2010:95), where the vision of the organisation, the goals set for the team and awareness of the individual’s frame of reference create the context in which messages are transferred in a virtual situation, and is similar to the “leader competency” of Fisher and Fisher (2001:10).

One can also link the "decisive" role as identified by Mogale and Sutherland (2010:21) to this category, especially in cases in the current study when assistance on re-prioritisation had to be given, or where multiple managers were requiring the time of the individual. The “decisive role” is defined as being a good decision maker in the face of conflict and was linked to that of the Structural Leader.

Overall, managers in the current study deemed it important, especially in the virtual context, to set expectations, clear objectives and measurements and show how these fit in with organisational and team strategy.

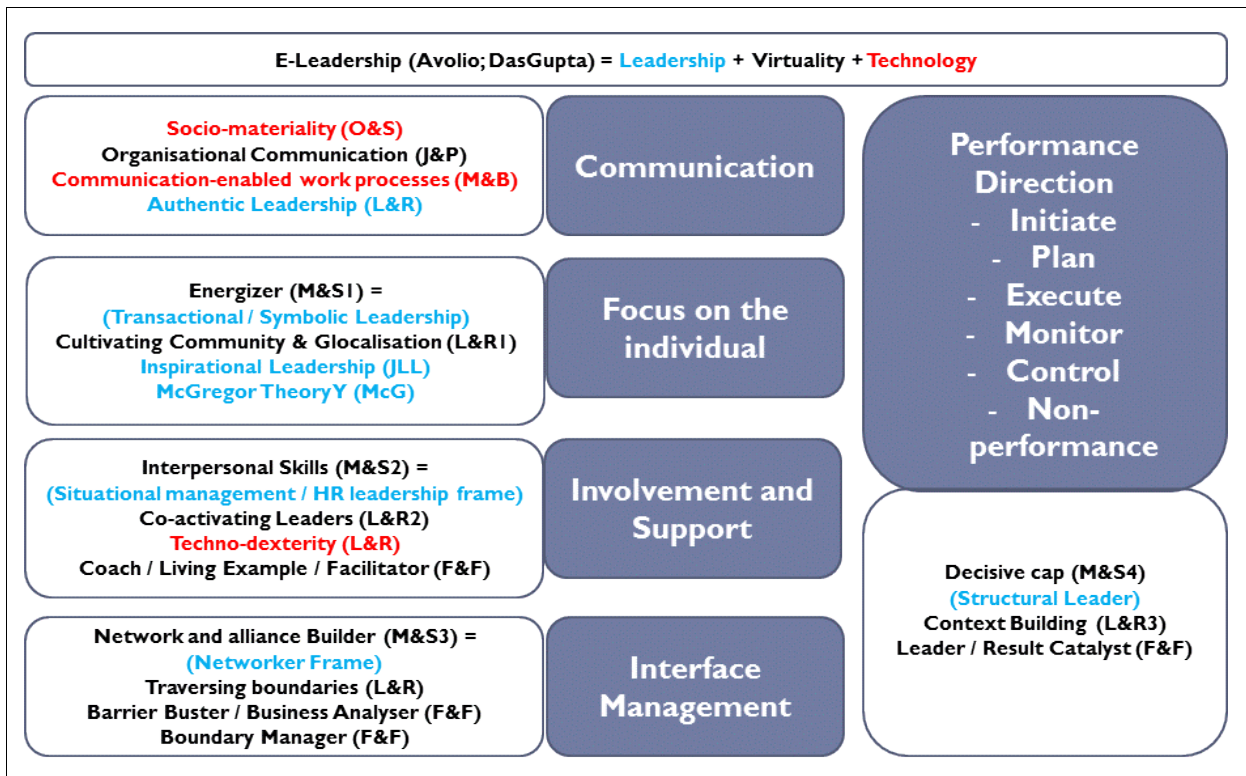


#### **6.4.6.6 Updated impact parameter model: Manager**

This section has shown the importance of the manager as enabler, as opposed to one focused on managing and controlling, and how the concepts found in the current study correspond to those in other studies on related topics. The current study has confirmed many of the manager's responsibilities as identified in these studies, but specifically in the context of managing performance, and has expanded the body of knowledge by mapping all of these elements together, as well as showing how the individual can contribute in each of these areas.

The codes for "Manager Responsibilities", namely communication and organisational change management, focus on the individual, involvement and support, interface management, and performance direction are now shown in Figure 6-14. The elements of the literature review are also mapped against each of these items. These responsibilities highlight how the manager can become an enabler. The current study has in this way combined the inputs from different pieces of research into a more comprehensive model, thereby extending existing theories, rather than creating a totally new theory.

**Figure 6-14: Literature mapping: Manager as enabler**



Sources: Avolio, Walumba & Weber (2009); DasGupta (2011); F&F (Fisher & Fisher, 2001); J&P (Jablin & Putnam, 2001); JLL (Joshi, Lazarova & Liao, 2009); L&R (Lojeski & Reilly, 2010); M&S (Mogale & Sutherland, 2010); M&B (Watson-Manheim & Belanger, 2002); O&S (Orlikowsky & Scott, 2008).

In the Impact Parameter Model, the “Manager Responsibilities” has now been removed from the “Manager’s Approach” element (refer Figure 6-15), and will be shown later in a consolidated diagram.

**Figure 6-15: Impact Parameter Model: Manager’s Approach**

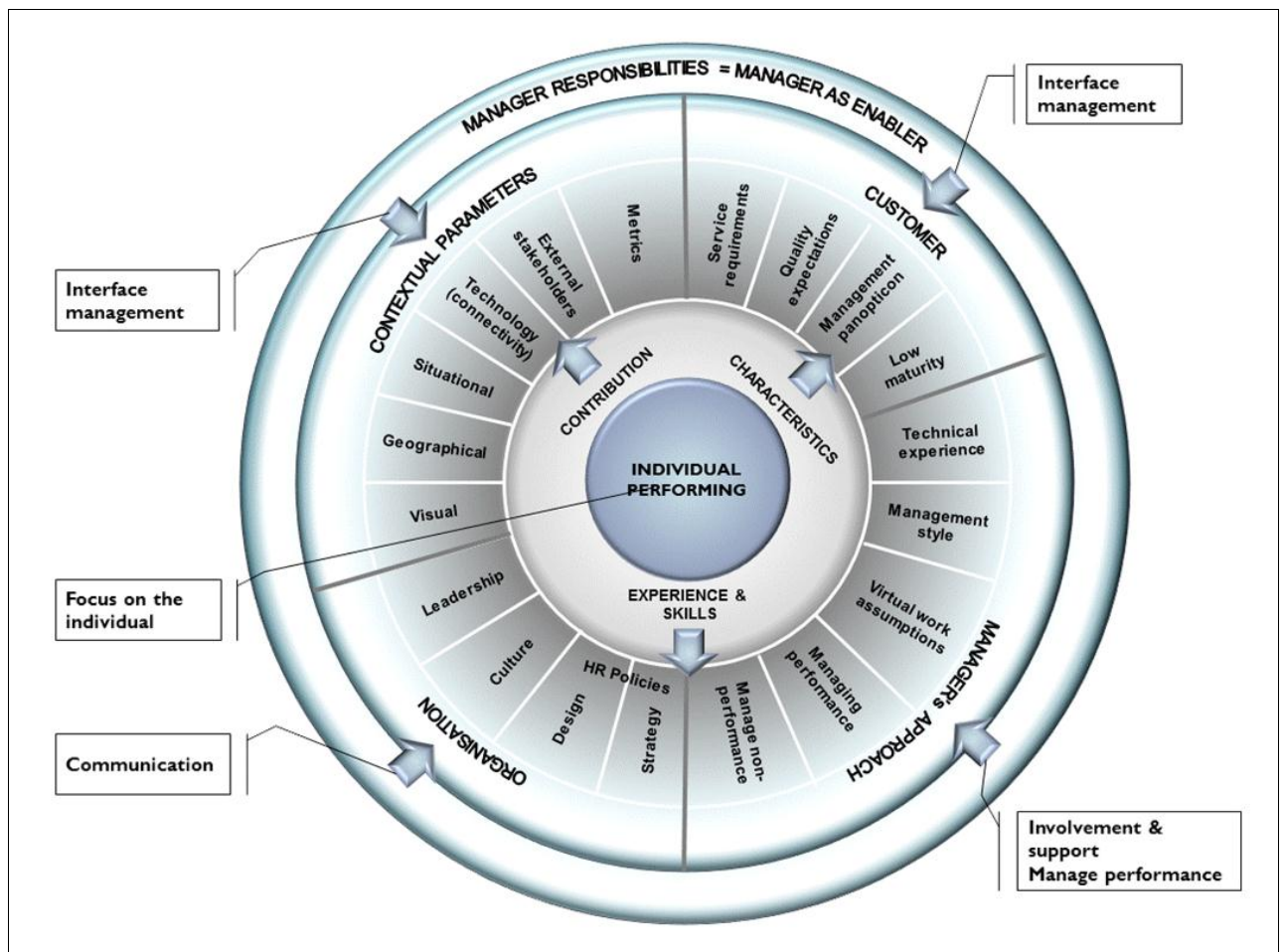


#### **6.4.7 Consolidation of Theme 3 Concepts: Parameters impacting**

All of the adjusted elements are now reconstituted in one consolidated Impact Parameter Model, as shown in Figure 6-16. The manager responsibilities are shown on the outside of the diagram, and are used to address the customer and contextual parameters through the interface management component, while the communication element addresses the organisational impact parameters, and the manager's approach becomes the basis for involvement and support. At the same time, the individual's performance has moved to the centre of the diagram, and shows the importance of the individual's characteristics, contribution and skills to ensure performance. Ultimately, the manager's responsibilities and the individual's contribution may lead to a greater measure of trust, which in itself facilitates performance and in turn facilitates customer happiness. And if the customer is happy, then the ultimate goal of performing the work has been achieved. In terms of all of the parameters impacting on performance, the findings of the current study confirm the findings of the studies referenced as additional literature, but expand the body of literature by creating a more comprehensive and integrated model, based on actual true-life situations, rather than laboratory experiments.

See overleaf for consolidated model (Figure 6-16).

**Figure 6-16: Impact Parameter Model: Consolidated.**



Note: Refer Figure 15-3 in Appendix F for the enlarged diagram

As with the model for manager as enabler, the current study has combined existing concepts in a more comprehensive and integrated model, showing the complexity of managing and enabling the performance of virtual knowledge workers, and thereby extending the current theoretical models.

## 6.5 THEME 4: FACE TO FACE INTERACTION – IMPORTANCE OF THE VISUAL

### 6.5.1 Theme Introduction

Even though the study has researched the management or enablement of *virtual* performance, in other words managing performance where the manager does *not* physically see the individual while the individual is performing the task, the importance of the visual was reiterated on various occasions during the current study.

The theme surfaced in relation to the discussion on challenges while managing the performance of remote employees, meetings and collaboration, requirements for additional visual technologies, and general human connectedness. Also, when the managers were asked what they would like to do differently in future, many of them indicated that they would like to visit or see individuals more frequently.

In a laboratory experiment involving 304 students, Fiedler (2008:1) found that the more information-rich the medium (such as using virtual worlds), the more co-operation is enhanced. However, if the individual has less experience in a particular medium, the communication will be less effective irrespective of how information-rich the medium is. Secondly, Fiedler found that when there is a good relationship and people are striving for the same goals, there is more co-operation. In the current study, relationship building by the manager was found to be important: it would affect the "collective orientation" and also decrease the social distance (Fiedler, 2008:1). The findings in the Fiedler study can also be linked to the fact that when face-to-face visits were not possible in the current study, managers wanted more video and web conferences (to see the individual).

### **6.5.2 Managing Performance: Absence of Visual Clues**

Human interaction uses many non-verbal clues and visual feedback to determine mood, emotion and accessibility of a person. It is therefore not strange that one of the biggest challenges that managers in this study mentioned in terms of managing the performance of remote employees was the absence of visual clues. These visual clues would assist managers to see much more quickly when the individual was experiencing stress or what the emotional state of the individual was. Physical proximity allowed for much more informal sharing of information, giving advice and general communication. Managers also found that seeing individuals helped to motivate them, and aided the conversation, especially when non-performance issues needed to be handled with the individuals. By seeing somebody, you can evaluate the body language and change your approach if necessary. In the absence of visual clues, the managers needed to listen with more awareness, or interpret behaviour (or

the absence thereof) in order to understand the emotional state of the individual or to understand if the work was still on track.

There were, however, managers who felt that communication was aided by having a technology barrier – difficult messages could be conveyed much more easily. Without seeing the expression of the individual, it was possible to deliver the complete message without being interrupted or having to alter the message halfway through. In these cases the type of communication mode also resonated with the managers’ personal styles.

**“For” face to face**

“For me the strength in who I am and what I do lies in my ability to connect and read people and motivate them where they are at, and when I am removed through some barrier <referring to technology> I struggle to make those connections and read them.” P53 (357)

**“Against” face to face**

“To me people stress me out, and I always had this barrier I had email, and I had telephone and it suited my personality style 100%. “P54 (164)

The right-hand column in Table 6-6 shows the circumstances where managers preferred to have visual contact, while the left-hand column indicates where having the team members remote (geographically dispersed) was more acceptable.

**Table 6-6: Parameters impacting on location and need for the visual**

Geographically dispersed	Item	Co-located
SLOW	Changes in requirements / environment	FAST
FAR	Deadlines of projects	CLOSE
SLOW	Rate of implementation	FAST
FEW	Number of items to be communicated	MANY
LOW	Level of collaboration needed	HIGH
FEW	Number of issues that need to be addressed with the individual.	MANY

**6.5.3 Meetings and Collaboration**

The fact that most of the individual and team meetings were still being held face to face (64% of individuals indicated that feedback was taking place in face-to-face situations), also underscores the need for face-to-face interaction. Over and above



general meetings, there were other situations where face-to-face encounter was also the preferred mechanism. These included consulting projects, sales encounters and collaboration needed for problem solving or software development. In particular, face-to-face interactions with the customer were used to build a positive customer experience and enhance trust for other work to be done remotely. Overall, it seemed that co-location was still important when the delivery times were short, the environment was more changeable (affecting communication), and complex problems needed to be solved (high collaboration needed).

Managers often indicated that it was quicker and easier to share information with co-located team members by just “mentioning” something. Additional effort was always required to ensure that all remote individuals received the same message. This links to the importance of the manager’s responsibility for communication and focus on the individual. In addition, individuals would more easily approach managers they could see, which increased the perceived accessibility of managers to the individuals.

Even for individuals who were working from home on a permanent basis (i.e. home workers), there were normally still arrangements for the individual to come to the office at least once a month for a couple of days, for collaboration and building of teamness. One manager stated that face-to-face contact was very important, but would not be needed on a day-to-day basis, given the technologies that were available, and the trust that should exist in this working environment.

Geldenhuys (2010:91) brings in the concept of different virtual workplaces, including tethered or joint workers, home workers and fully mobile workers. She also mentions alternative places of work such as hoteling, telework centres and hot desking, which were previously described by Cascio (2000:85). “Telework centres” resemble miniature corporate environments, but are located in residential areas, with the aim of reducing travel time for individuals staying in that area. These workplace definitions are provided in Table 6-7.



**Table 6-7: Work place definitions**

Work Place	Description
Telecommuters	Occasionally work from home; still have fixed office location. (At least 1 day per week away from main office location)
Hoteling	Office with cubicles or workstations with general office facilities such as network and phone
Hot Desking	Similar to hoteling, multiple employees share same office
Telework Centres	Miniature corporate office environments
Tethered (joint) workers	Can move around in workplace, but report every day
Home workers	Working at home permanently. Office at home
Fully mobile workers	Using mobile technology, work from anywhere.

Source: Geldendhuys (2010) and Cascio (2000) (Adapted)

The implementation of telework centres would address both the limitations and challenges that managers in the current study have mentioned. By implementing telework centres, organisations would resolve the issue of connectivity at home, by creating a microcosm of the organisation. This would also resolve the issue of individuals losing the sense of belonging by not seeing their colleagues, and give more opportunity for collaboration, as long as the members of a project team could utilise the same location. The aim would be for project teams to perform work utilising the telework centre rather than having to travel in to the office.

#### **6.5.4 Video Conferencing Technologies**

The next best alternative for managers who could not physically visit their employees or have face-to-face meetings would have been having at least better or more video conferencing facilities available. This would be in addition to using the telephone, email, instant messaging and chat rooms. The fact that a large part of the non-verbal feedback is missing from most communication technologies should not be underestimated. The study of Fiedler (2008) also confirmed that the information-richness of the communication technology enhanced co-operation, especially where individuals were familiar with the particular medium. Watson-Manheim and Belanger (2002:80) confirm that the type of communication technology chosen also needs to support the type of work process, if the message is to be conveyed effectively.

The biggest challenge in this area is, however, the availability, quality and cost of bandwidth in South Africa. In cases where video was used, it was reported that the quality was so poor that facial expressions were often misinterpreted. In addition, when video and VOIP were used at the same time, the voice quality tended to drop, so therefore video was often not used.

### **6.5.5 Connectedness as Innate Human Attribute**

In the current study, physical contact and face-to-face meetings were also seen to assist in building human relationships. In many cases, additional money would be spent to fly individuals to one global location, not only to participate in collaboration sessions but also to use the opportunity for social interaction and building relationships. Some managers felt that their responsibility was to connect individuals, create a sense of belonging and motivate them, that this was more easily done in face-to-face situations and that connectedness was lost if there was limited or no face time.

“Just that as much as I think it’s a good idea, and conceptually agree with it, I think in reality the risk of becoming so impersonal and so detached, is high. And the people are going to stop connecting. So for me going the virtual removed route, can work as long as the connectedness is not lost in the process. And whether that’s through technology or having some face-to-face forms of interaction. But to me our success as humans lies in our ability to connect, and I think technology and this virtual stuff is breaking down this connectedness for me personally - but maybe I am just getting old in this new world.” P53 (351)

Individuals, in their answers to open-ended questions, also indicated that they wanted to have some form of contact from time to time, even though they felt that they could deliver results independently. One of the individuals related to the study had even joined a group through MEETUP.COM, called “Indy Cowork”. This is a group of individuals who work independently from each other as free-lancers or small entrepreneurs, but who decided to rent office space together, since, among other things, they needed the social contact as human beings. This is exemplified in the answer of one of those individuals.

*What is the biggest challenge you face working remotely or away from others?*

“Certain subtleties of communication are lost digitally, as is much of the camaraderie of working in an office.”

This links closely with the sentiments of Rosenberg (2004:662) who, looking at the social impact of computers, believes that even though it seems that the mind can be completely detached from the body, the body is needed for a deeper sense of connection. This is illustrated in the quote from his book, included below.

"If nothing else, virtual worlds will force us to rethink many of the ideas that we have long held about the unity of self, the notion of presentation, honesty, playfulness, and relationships. It is ironic that this artificial medium, made possible only because of machinery - computers and telecommunications networks - has raised serious questions about what makes us human and how such social animals, as we are, form relationships and communities." ....

"What is most striking is how the body is ignored, as if it were an impediment in the way of really connecting."

"It is felt by some of the most vociferous virtual world or cyberspace proponents that freedom and perhaps even the next stage of evolution will free the mind, the true self, from the constraints of the body. How hundreds of thousands of years of evolution can be ignored, or swept aside, by virtue of a few years of a new, and in the long run rather primitive technology, is perhaps a tribute to the power of the human mind in projecting speculation into the fact and ignoring history and biology, if necessary."

However, as stated by Avolio *et al.* (2009) and DasGupta (2011), e-leadership is specifically about delivering leadership through technological means. The book *Prefiguring Cyberculture* (Tofts, Jonson & Cavallo, 2002:3) defines cyberculture as "becoming through technological means", and describes the concept of post-humanism in the sense of humans evolving as "informatics" beings, in other words "adapting to the flow and control of information". The authors state that technology has extended our ability to be in two places at the same time and in the process the "defining parameters of human nature" have been changed. This is, however, not seen as a once-off transformation but an "ongoing tendency to alteration, a re-configuration of what it means to be human in the context of technology".

In the context of these statements and in terms of our human attributes, the key may not be to understand how we can "be" through technology but to know *how* we are different when we are "being" through technology. The importance of the self-concept and self-understanding of the manager comes into play again.

#### **6.5.6 Consolidation of Theme 4 Concepts: Face-to-Face Interaction**

In general, regular face-to-face meetings remain important to keep contact, build relationships and belongingness, and build trust. For situations where remote work is the only option, listening differently to individuals over the online media, and being more aware of nuances in voice and level of participation becomes important. In this way, it is possible to discern some indication of the individual's mental and emotional state over the telephone. To compensate for not necessarily being able to see the individual, even not in the initial interview, one manager used a combination of elements to pick up additional clues regarding the personality and job-fit of the person. These include written and spoken communication, as well as "reading between the lines" (a) Email with questions (b) Skype interview (c) Personality test through HR (d) Written submission. (e) Actions, such as punctuality for the interview.

Technology is here to stay, and as humans and as managers, we will need to learn how to best make use of the medium. However, in practice, opportunity always needs to be made for the personal interaction where possible, and perhaps some in-between state of connectedness and remoteness can be achieved through office hubs, rather than having individuals each sit alone at home.

### **6.6 SUMMARY**

This chapter looked at four key themes emerging from the data, namely the understanding of what constitutes "virtual" in virtual work; how performance management and management of performance impact on perceived performance in the virtual context; parameters impacting on virtual performance; and the importance of face-to-face interaction.

From the perspective of understanding virtuality, a model was built to indicate how actual virtuality and perceived virtuality need to be combined to identify the individual's true virtuality, and that the true virtuality of individuals in organisations is actually higher than generally believed. This has implications for how performance is managed and what managers and organisations put in place to enable performance

in these situations where individuals have a higher degree of true virtuality. The three virtual status matrices can be used as part of the managerial framework to check the location, frequency and independence of the individual to determine the actual virtuality of an individual.

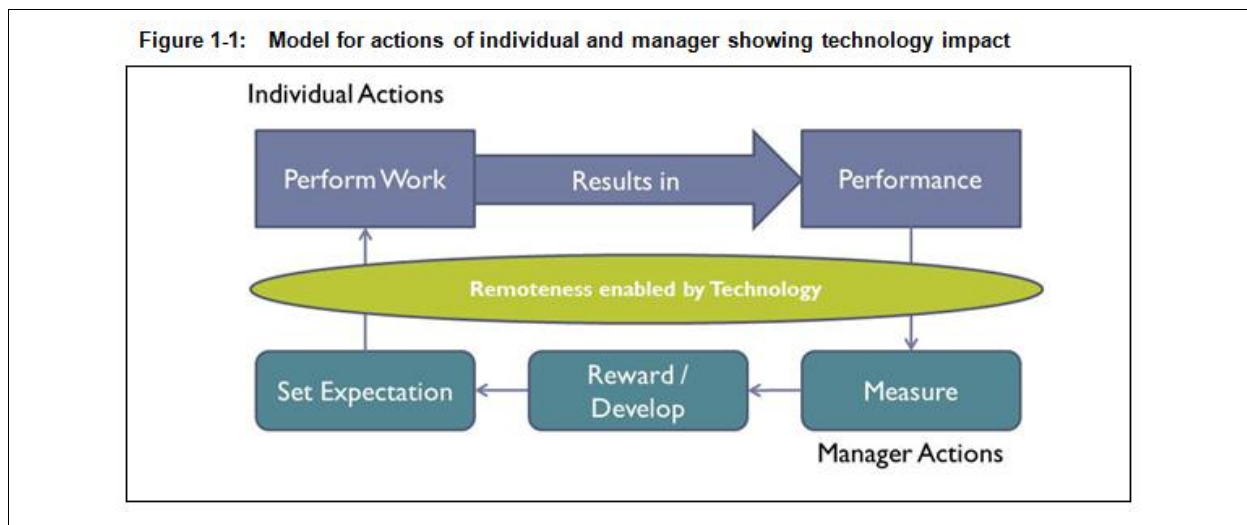
In the second theme, the concept of true performance was created as a combination of actual and perceived performance. The moderators for actual performance and perceived performance were also included in the model. The control categories of Limburg and Jackson (2007), namely “Output”, “Input”, “Self” and “Peer”, were used in addition to the classification of the deliverables as technical, knowledge and administrative deliverables. The dimensions of quality and transparency were classified as “behaviour” deliverables contributing towards perceived performance.

The third theme confirmed a set of parameters impacting on performance, including organisational (such as organisational culture and policies), other (situational and technical), customer and individual parameters, and the manager’s approach. The manager, as the enabler of the performance of the individual virtual worker, acts as moderator for all these parameters.

In the fourth and last theme, the importance of face-to-face interaction for managers, either by visiting the individuals on site, or by having additional video or web conferencing facilities, was explored. This has been linked to the concept of human connectedness as an innate human attribute. A possible solution is to create smaller, organisational telework centres in areas closer to where team members live, and this forms one of the recommendations of the study.

The aim of the study was to build some theory regarding the management and enablement of the performance of virtual knowledge workers. The original model for enabling performance, in terms of the actions of the individual and the manager and the impact of the technology on this, was presented in Chapter 1 and is copied in Figure 6-17.

Figure 6-17: Repeat of Figure 1-1



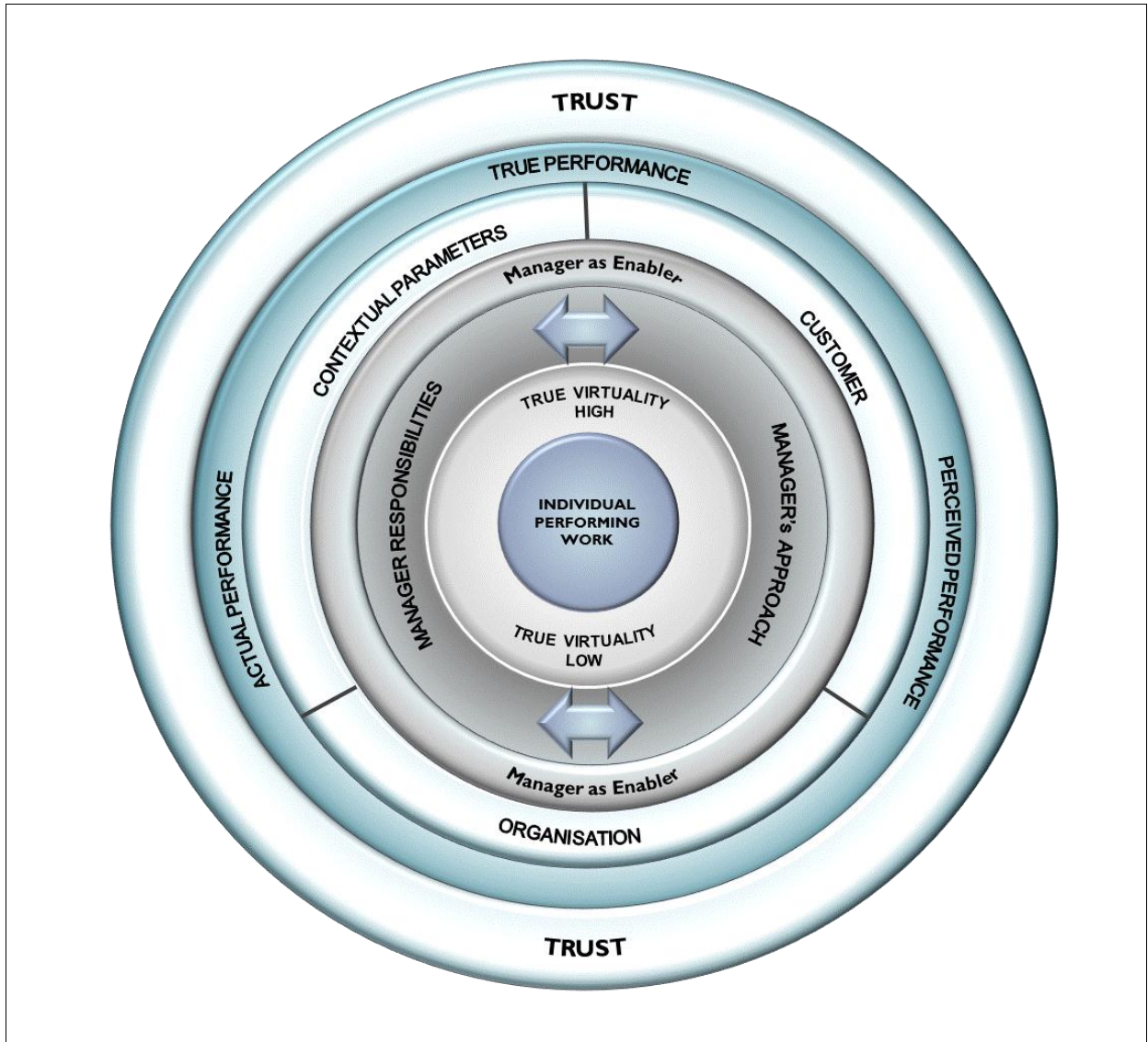
The study has made a significant contribution on a theoretical level by extending existing theoretical models regarding virtual distance and the management of dispersed teams into much more comprehensive models of actual virtuality and actual performance, and has shown how the manager acts as mediator for an extended set of impact parameters. These models have now been integrated with the original gap for enabling performance, into the *concentric performance enablement model for virtual knowledge workers*. This further extends the original theoretical model and is shown in Figure 6-18.

According to the original model depicted in Figure 6-17, the individual performs work. This is now shown in the centre of the new model depicted in Figure 6-18. Performing work ultimately results in performance, now represented in Figure 6-18 in the second-outermost circle as “True Performance”. This was defined as part of Theme 2. The new model now illustrates how the true performance is firstly moderated by the true virtuality of the individual, as was defined in Theme 1. In addition, it is moderated by the manager’s approach and the responsibilities of the manager. The contextual, customer and organisational parameters, as shown in the Impact Parameter Model of Theme 3, become further moderators of performance. These parameters are in turn mediated by the manager. The combination of the manager as both mediator and moderator transform the manager into an enabler of true performance. Trust, as originally shown in the triangle of trust between manager, individual and customer, is



the key element that is needed in all the relationships included in the model. It is therefore represented by the outer circle in Figure 6-18.

**Figure 6-18: Concentric performance enablement model for virtual knowledge workers**



Note: Enlargement of this diagram available in Figure 15-4, Appendix F.

The propositions relating to the concentric circles of this conceptual framework will now be formulated in Chapter 7.