

## CHAPTER 5

### 5 DATA ANALYSIS AND CODING

#### 5.1 INTRODUCTION

This chapter contains the data analysis and relevant coding in the form of a cross-case analysis and synthesis of the data in relation to the first two research objectives for the study.

The chapter firstly positions the five cases in relation to each other, especially in terms of their implementation of virtual work policies and guidelines, and their general approach to performance management. This case-level data is also presented in a cross-case format, summarising the analysis across the cases, and showing where divergence and convergence was found.

RO1: To critically review the current state of knowledge and understanding of how the performance of virtual knowledge workers is managed.

To achieve Research Objective 1 (RO1), the data analysis looks firstly in more detail at virtual work reasons, arrangements and advantages, and also limitations and challenges. Secondly, the management of performance where individuals are working remotely from their manager (i.e. virtual performance) is described in terms of how managers manage virtual performance; specific deliverables and their metrics; technologies assisting with the management of virtual performance; and the main challenges in managing virtual performance. The concepts of quality and knowledge work are also redefined in the context of the five cases.

RO2: To analyse and describe how the organisational context and the approach of managers affect the performance and outputs of virtual knowledge workers.

Lastly, to achieve Research Objective 2 (RO2), the analysis and coding of the parameters affecting the management of performance from an organisational, managerial and individual level are discussed.

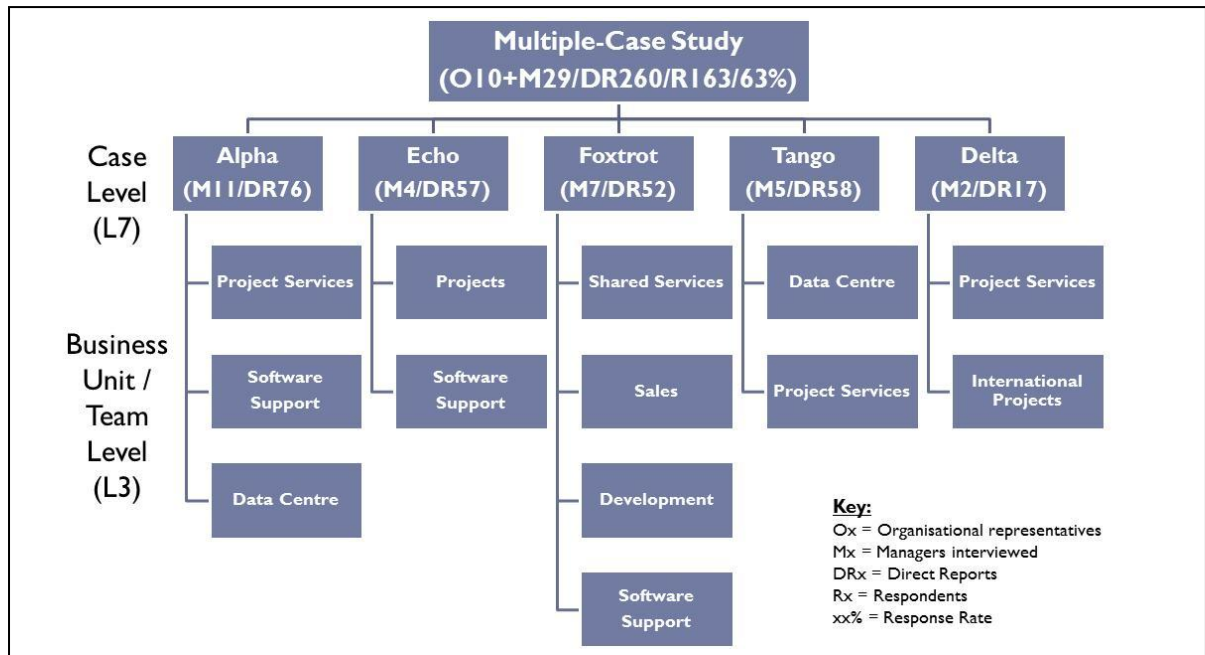
The complete case studies for each company can be found on the additional disk provided, as explained in Appendix G – Supplementary documentation. The initial code list and network diagrams are provided in Appendix E – Initial Code Lists and Network Diagrams, with the detailed code lists also part of the supplementary documentation. All relevant code tables and their descriptions are provided as part of Chapter 5.

## **5.2 CASE LEVEL SUMMARIES**

### **5.2.1 Introduction to the Companies**

As mentioned in Chapter 4 on the execution of the study, five companies were included as cases for the multiple-case study. For anonymity, they were named Alpha, Echo, Foxtrot, Tango and Delta. Figure 5-1 shows the combination of teams in the individual case studies. The numbers in the diagram are used to give the number of organisational representatives interviewed (O=10), the number of managers interviewed (M=29), the total number of direct reports (DR=260), the total number of respondents (R=163) and the final response rate as a percentage (63%). This is shown graphically in Figure 5-1 on the next page. To set the context of the different cases, each company is described after the figure.

Figure 5-1: Companies, teams and study size



Alpha is a company that provides information and communication technology (ICT) outsourcing services in a broad range of industries, nationally and on the African continent. The company has been in existence for more than 30 years. At the time of the study, Alpha employed around 4500 individuals. The study covered three business areas in one of the divisions, and included a total of 11 teams and their managers. Questionnaires were sent to 76 individuals and a response rate of 53% was obtained. The coverage of Alpha by the study in terms of managers interviewed and questionnaires sent out was 1.8%.

Echo Group is a group of companies that offers information technology products and services, including outsourcing, in various industry verticals. It consists of a holding company and a group of independent business units or companies that have been acquired over a period of time. The company as such has been in existence since the 1990s, and when the data was gathered in July 2011, the company consisted of about 30 sub-companies, employing approximately 3200 employees. The study focused on one of the sub-companies, namely Echo Services, which had been brought on board in 2003 and had a total of 250 employees at the time. Four teams and their managers, including 57 individuals, were included in the study. This

represented 24% coverage of Echo Services and 1.9% coverage of Echo Group. For ease of readability, the name “Echo” will be used when referring to this case.

Foxtrot is a South African company with global reach that was formed in 2006, and is primarily a software company, developing turnkey software solutions for the enterprise resource planning market internationally. Deployment and support services are also offered, but form only a small component of the company. Foxtrot is part of the Foxtrot Group, which was established in the late 1980s, when its main focus was doing bespoke software development. In 2011, when this research was performed in the company, Foxtrot employed 70 people in seven countries. In comparison, the Foxtrot Group employed 850 individuals. The research focused only on the sub-company, and included nine teams, consisting of nine managers and 52 individuals who received the online questionnaires. The coverage of Foxtrot by the research was therefore over 80%.

Tango is a global company that provides information and communication technology outsourcing to customers across South Africa and the world. The policies originate from the international parent company, and these are then adapted for the specific countries. Tango South Africa, which was established in the late 1990s, consisted of 2500 employees at the time of the study, and the company’s culture was described as being entrepreneurial and fast growing. When acquisitions and mergers take place, the culture of the acquired companies is assimilated into the more flexible style of Tango. The study included five teams in total, from the project services and data centre services business units. Questionnaires were sent to 58 individuals and a response rate of 59% was obtained. The coverage of the total South African company in terms of individuals and managers included in the study was 2.5%

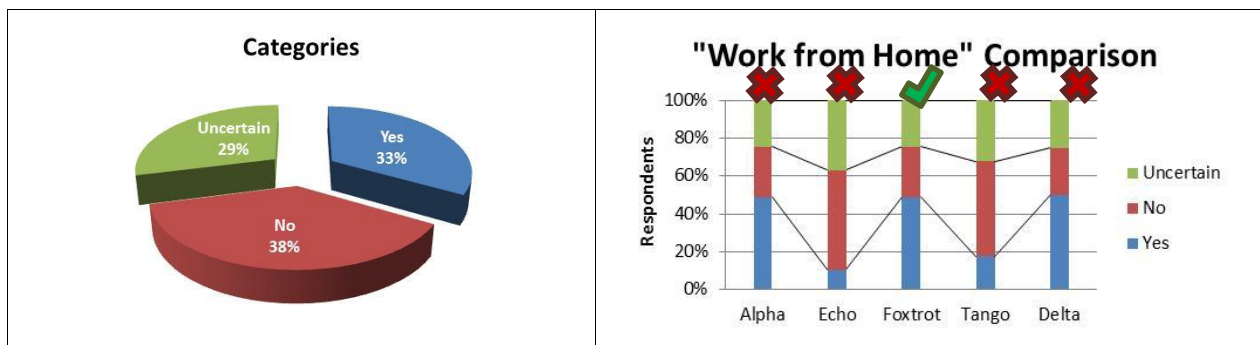
Delta is a global professional services firm with an international administrative parent company. It consists of various member firms or subsidiaries which are each an independent company. It offers its customers advisory and consulting services on various industry and cross-industry fields. This study was approved for one of the subsidiaries in South Africa, consisting of 700 people at the time of the study, but the information regarding the policies obtained was applicable to all the South African companies (3500 employees in total) and their relationship with the parent company.

Only two teams were included. A total of 17 questionnaires was sent out and a response rate of 47% was obtained. The one team was a global team, and did not fall under the South African company. This gave a unique view in terms of global flexibility. The other team fell under the subsidiary under investigation. The coverage for this subsidiary in terms of the one team was therefore 1.3%. This small selection was chosen to determine whether there was any significant difference in relation to the previous four case studies. Although Delta in South Africa does not have a specific policy for work from home, it does have a flexible work guideline that can be used by managers and individuals to assist in identifying the most appropriate flexible work style for the specific situation, including work from home. Examples of these differing flexible work styles were found in the two teams. Overall, performance management in the organisation seemed to require more involvement from various levels of management and was more comprehensive than had been found in the other case studies. However, for virtual work on ground level, the same management approach, limitations and challenges and reasons for virtual work existed. It was therefore decided not to broaden the interviews after the first two had been concluded.

### **5.2.2 Perceptions Regarding Policies**

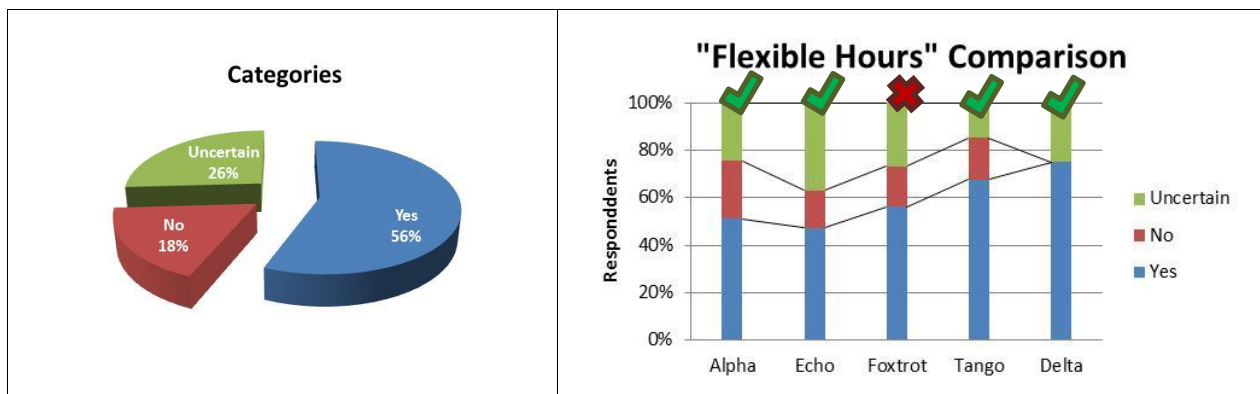
The individuals were asked two questions in the online questionnaires about their perceptions as they related to organisational level. The first question related to the existence of a “Work-from-home” policy. Foxtrot was the only company where an official “Work-from-Home” policy existed in draft format, while Delta had extensive flexible work guidelines which also allowed for the work-from-home scenario. Nevertheless, a considerable number of individuals in all the companies indicated that such a policy did exist. This misperception may have occurred because in all of the companies individuals were allowed a more flexible work style at the discretion of their managers. The comparison between the companies is indicated in Figure 5-2, with the red crosses and the green tick indicating respectively where the work-from-home policy did not and did exist.

**Figure 5-2: Individuals’ perceptions on “Work from Home” policy**



As for the flexible work hours policy, most individuals did agree that the policy existed, which was in fact the case in most companies, except for Foxtrot. In most cases, the employment contract or “Terms and Conditions of Service” policy made provision for spending the core hours at the office, and the rest at home or away from the office, as long as the hours worked made up 40 hours per week. This is represented in Figure 5-3, with the red cross and the green ticks indicating respectively where the flexible hours policy did not and did exist.

**Figure 5-3: Individuals’ perceptions on “Flexible Hours” policy**



Some individuals also indicated in the answers to the open-ended questions that they would prefer more guidelines in terms of virtual work, and that managers should have more power to make changes in policies.

“The organisation must endorse virtual work environment and enable the worker technologically and structural to perform at his maximum level anywhere at any time.” P18 (80)

“Improve the working between line and HR business partners - where line have the empowerment to change policies if need be” P51 (92)

From a managerial level, in Alpha, Echo and Tango, managers seemed to be unsure whether policies actually existed, or the extent thereof, on the organisational level. For these companies, all of the teams had created their own internal rules and guidelines, either documented or non-documented, for managing virtual work. As such, teams were not learning from each other, and it seemed as though there was a lot of duplication of effort. In some cases, managers also called it “remote office”, since it not only included work from home, but working from alternative sites. In Delta, where the guidelines on organisational level did exist, the managers were aware of the policies, and chose to implement them as required in their teams. In Foxtrot, a much smaller organisation, all the managers were fully aware of what was allowed and not allowed, and what policies existed and did not exist. It seems that larger companies have more layers that could potentially obscure the policies and decisions made on higher levels, while in a smaller organisation, the lower levels of management are more in touch with the executive level and what drives the organisation.

The implementation of virtual work in all the case studies (where virtual work was allowed and applied) was very dependent on a senior employee (CEO, COO or Business Unit Manager) being the champion for promoting virtual work.

#### **Senior executive support**

“And I think the great thing about the way we work is that the champion of this whole initiative is our COO. He has been adamant; he said that he has worked differently since he was an audit trainee. I think it’s just that independent nature. But for instance if he wants to watch his kid play cricket it’s in his diary and nothing moves.” P55(82)

### **5.2.3 Performance Management**

The only company in which no performance management policy or formal performance management process existed was Foxtrot. However, there was still an annual process whereby the line or project manager would review the performance with the CEO, in order to decide on increases. (Because the line managers work so closely with the individuals, they have a very good understanding of what the actual contribution of the individual is. In addition, each individual brings his or her own



unique talents to the table, which makes the use of a standard rating sheet impractical.)

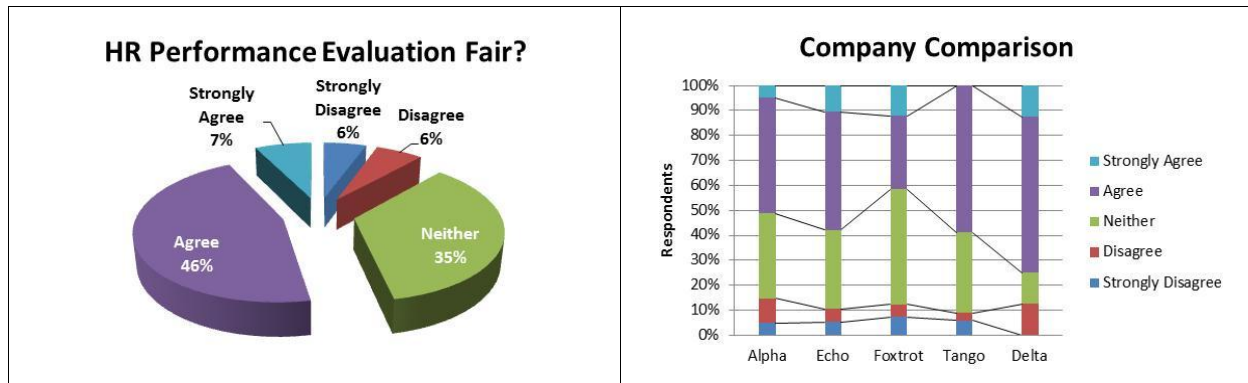
“Having all the different kinds of personalities and people working for us, each one with their strengths is very, very hard doing such an appraisal, and saying this guy did not do that and that, so he does not qualify for a specific thing.” P31 (485)

In Alpha, Echo and Tango, the managers mostly perceived the formal performance management system as additional administration. All the managers had their own internal measures whereby performance was managed on a more regular basis, and directly linked to the deliverables for the customer. (This is discussed in more detail in section 5.4.1 Managing Performance.) In general, managers did not require assistance from HR to define key performance indicators (KPIs) for either co-located or virtual workers. HR managers felt that the formal performance management was necessary, and that the performance management process could assist individuals in identifying development gaps, especially where this was affecting customer service levels. In Delta, the performance management culture seemed to be much more embedded, with multiple layers of reviewers adding inputs to the performance review system, and a formal system of mentors being implemented separately from the line management function.

To further evaluate the relationship between the individuals on operational level and their perception of the organisational level, individuals were asked if they believed that the HR procedures to evaluate their performance were fair. Just over half (53%) of the individuals across the cases did agree, but there was large group that was uncertain (35%), while 12% disagreed. The answers per category (Likert scale) and the company comparisons are given in Figure 5-4.



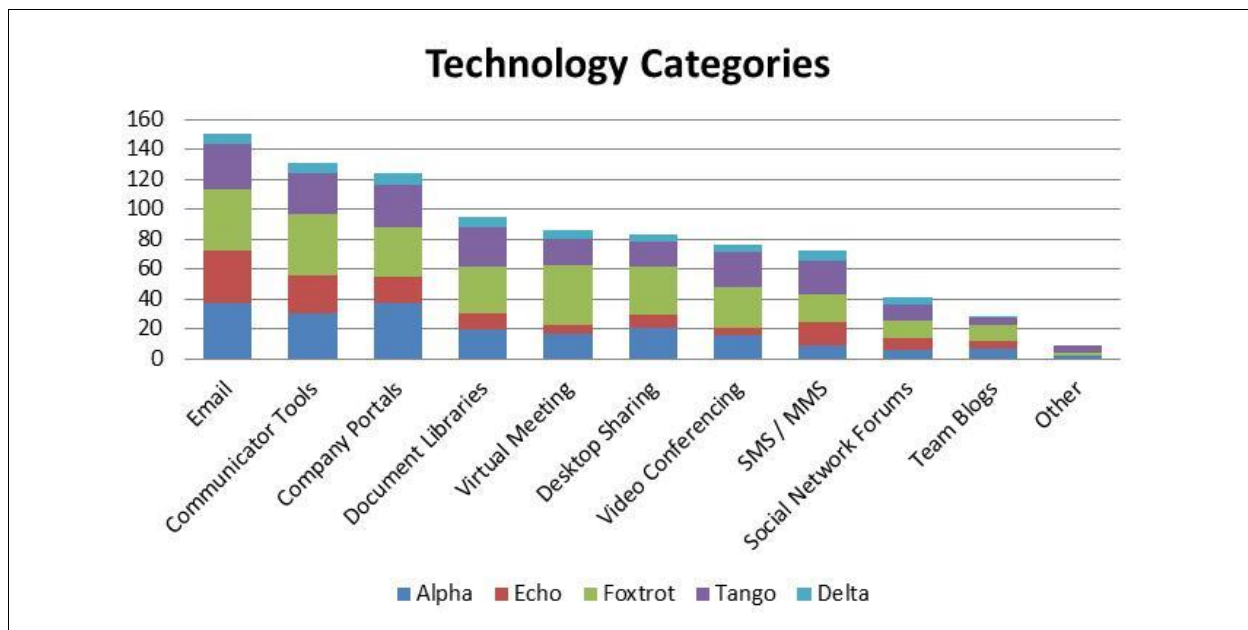
Figure 5-4: Are HR procedures to evaluate performance fair?



### 5.2.4 Perceptions Regarding Technology

Individuals were asked what IT systems their company provided to enable their performance while working remotely. The top three systems selected were email, communicator tools and company portals. Tools supporting virtual meetings were also selected by many respondents in Foxtrot. This is shown in Figure 5-5.

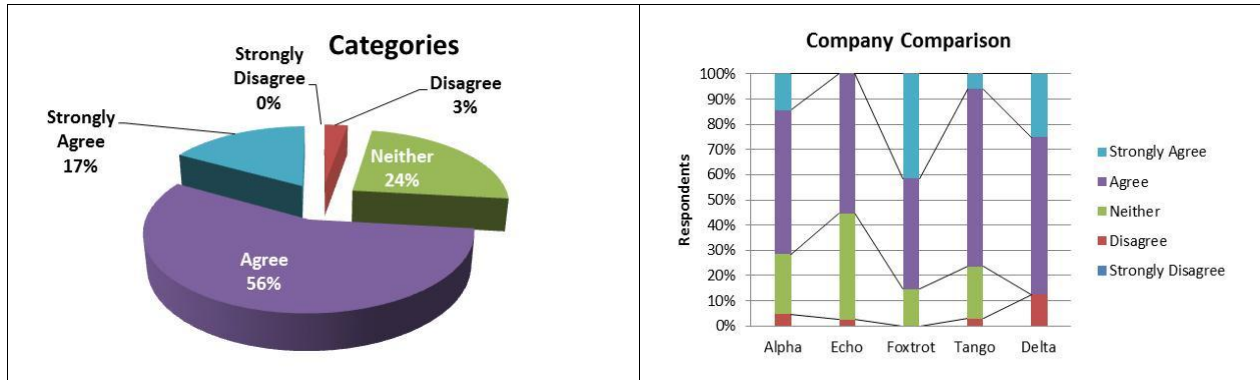
Figure 5-5: Technology for virtual workers (Case comparison)



In a further question, individuals were asked if the IT systems provided were sufficient to support virtual knowledge workers. Most individuals agreed (56%), with Echo having the most respondents who neither agreed nor disagreed, because they

felt that desktop sharing and video conferencing were not supported sufficiently. The onsite network was also mentioned as a technology aspect that needed attention. This is shown in Figure 5-6.

**Figure 5-6: Organisational technologies supportive of virtual work?**

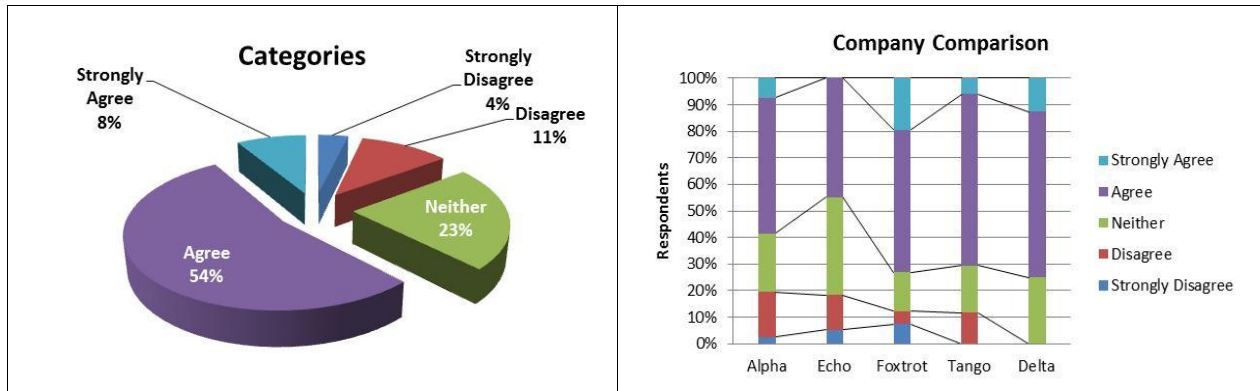


The major requirement mentioned by managers across the companies for IT systems was the need for additional bandwidth, to allow for more effective video and voice conferencing over the internet. The element of video was mentioned as especially important, enabling managers to see the individual in cases where a personal visit would not be possible. High-quality video is often needed to see specific expressions of individuals. Unfortunately, this is not only a company limitation, but a general South African limitation. Managers also indicated that they needed more integration between different systems, such as call management and billing systems, to make the tracking of time in relation to billing much easier and reduce administration time.

Even though the perception of the IT representatives was that everything was in place for virtual workers, the managers often felt that they were getting only basic support. This could be due to the complexity of IT technologies and interconnectivity requirements between the company's private network, the customer networks, where individuals are often working on a permanent basis, and the internet, which is used when connecting from home via ADSL or 3G. In this regard, individuals also mentioned the requirement for better connectivity. In some cases, individuals even felt that they had better connectivity and facilities when working remotely than when working on the company's network. On the company networks, there are always additional security policies in place regarding social sites, external connectivity, and protecting the limited bandwidth that is available.

Individuals were also asked whether they had received any training from the organisational side on the use of tools that support virtual work. As can be seen in Figure 5-7, of the total respondents, 62% agreed, while 15% disagreed and 23% neither agreed nor disagreed. Echo showed the most individuals that disagreed.

**Figure 5-7: Training received for use of IT technologies?**



Through the interviews it was established that in most cases, companies were not giving technology training, since these were all technology-based companies, and individuals were expected to be technology-literate. How to use the technology would normally be documented, and then this training manual would be made available for perusal.

**Training not needed:**

“Because it’s a IT company people are used to using IM *<instant messaging>* for instance on the internet and they’re all technical, most of them, and we work on the assumption that they’ll be able to use the tools that we roll out.” P14 (58) (IT Representative)

“I’ve never trained any of my guys on stuff like that. And I think my expectation is that if you’re in the Software Support business scene you should have an understanding of the new technologies coming out.” P8 (250) (Manager)

Although most managers believed that training was not required, there were some cases where the use of the tools could have become more pervasive had the individuals known about it sooner. Also, technology training might benefit the company by making virtual workers more effective. Some managers provided their own regular training sessions with individuals and would include technology training as well.

**Training needed:**

“I only just discovered OCM <Office Communicator> myself last year for the first time when I attended a company meeting here in Johannesburg and the guy said, “Listen, are you on OCM?” I said, “OC what?” And then I discovered OCM.” P5 (272)

**Individual confirmation (open ended questions):**

“People in the organisation need to be trained understand the concepts of working from home and giving people accountable deliverables, rather than micro-manage people.” P57 (42).

**5.2.5 Company Summary**

As a summary of the companies, the pertinent parameters describing the companies have been listed in Table 5-1. The companies do differ in size and in terms of the elements covered by the research (refer to “Research Coverage” in the table below). The specific differences between the companies are that Tango and Delta both have international parent companies. Delta is the only company with additional and extensive virtual work guidelines. Foxtrot is the only company with a virtual work policy, although this is in draft and only for its US branch. Foxtrot is also different in other ways because it is a small company, therefore the HR and IT functions are small and focused; no performance management policy exists, although the company as such is performing well; in terms of systems it is the only company included that makes extensive use of enterprise versions of various cloud software, and it gives an allowance for laptops.

**Table 5-1: Company summary and comparison**

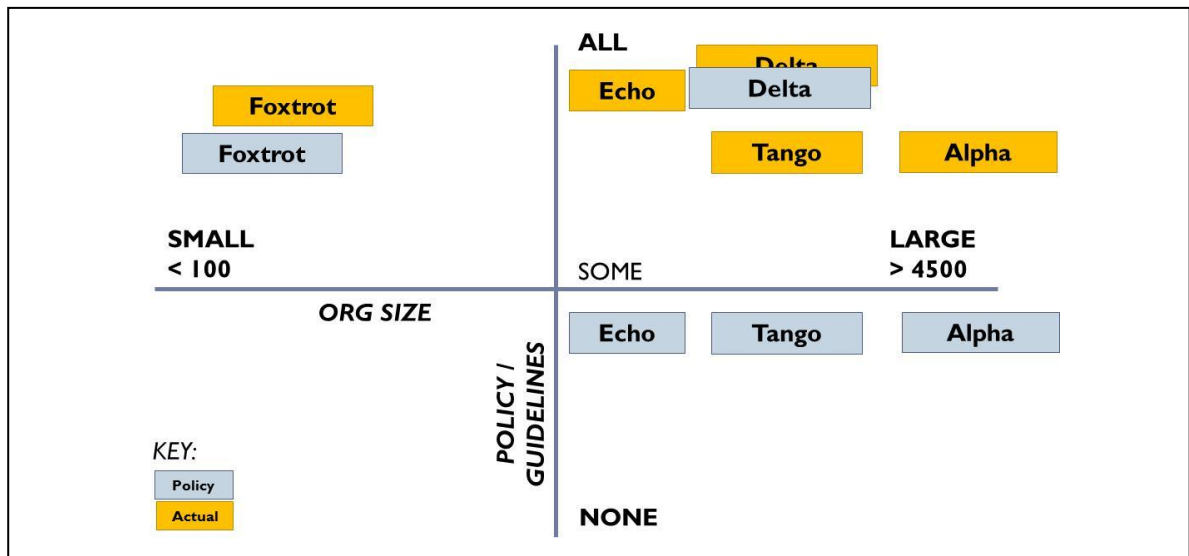
Parameter	Alpha	Echo	Foxtrot	Tango	Delta
<b>Strategy</b>					
<b>Industry</b>	Outsourcing	Outsourcing	Development	Outsourcing	Consulting
<b>Design</b>					
<b>Parent Company</b>	South Africa	South Africa	South Africa	International	International
<b>Number of Employees</b>	4500	3200	70	2500	3500
<b>HR Function</b>	Shared Service	Shared Service	Central	Shared Service	Shared Service
<b>Performance Management</b>	Formal	Formal	Informal	Formal	Formal
<b>IT Function</b>	Shared Service	Shared Service	Distributed	Shared Service	Shared Service

**Table 5-1: Company summary and comparison (Continued)**

<b>Parameter</b>	<b>Alpha</b>	<b>Echo</b>	<b>Foxtrot</b>	<b>Tango</b>	<b>Delta</b>
<b><i>Policies</i></b>					
<b><i>Performance Mng policy</i></b>	Yes	Yes	No	Yes	Yes
<b><i>Work from home policy</i></b>	No	No	Yes	No	No
<b><i>Flexible work hours policy</i></b>	Yes	Yes	No	Yes	Yes
<b><i>Flexible work guidelines</i></b>	No	No	No	No	Yes
<b><i>Laptop policy</i></b>	Corporate	Corporate	Allowance	Corporate	Corporate
<b><i>Corporate Systems</i></b>	Enterprise	Enterprise	Cloud	Enterprise	Enterprise
<b><i>Organisational level supportive of virtual work (% Agree)</i></b>					
<b><i>Organisational culture</i></b>	51%	66%	90%	65%	88%
<b><i>Technology</i></b>	71%	55%	85%	77%	88%

In summary, the policy in relation to the actual way of work has been plotted per company on Figure 5-8 and combines the existence of organisational policies regarding virtual work in relation to the size of the company. It shows the company in terms of the policy existence (light blue block), as well as the company in relation to its actual way of work (orange block). Where the blocks are close together, there is little difference, and where the blocks are further apart, there is more difference between the way of work and policy.

Figure 5-8: Organisational positioning: Policies, actual way of work and size



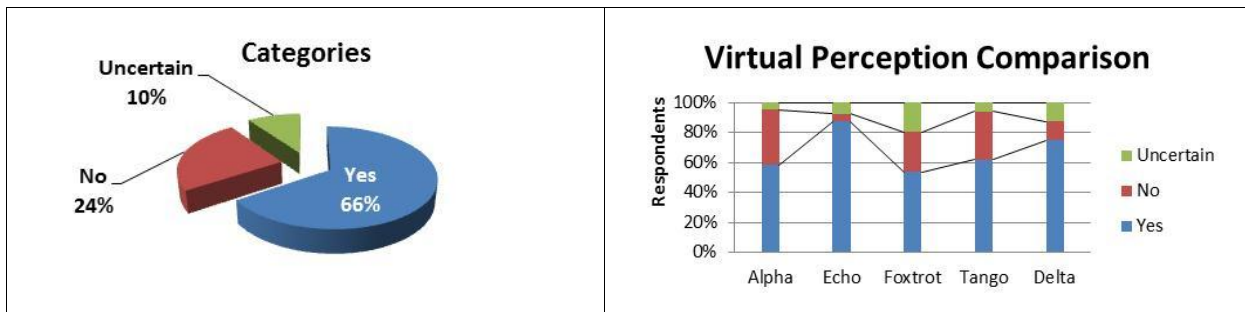
### 5.3 VIRTUAL WORK (CONTEXT)

*RO1: To critically review the current state of knowledge and understanding of how the performance of virtual knowledge workers is managed.*

#### 5.3.1 Virtual Status in Companies

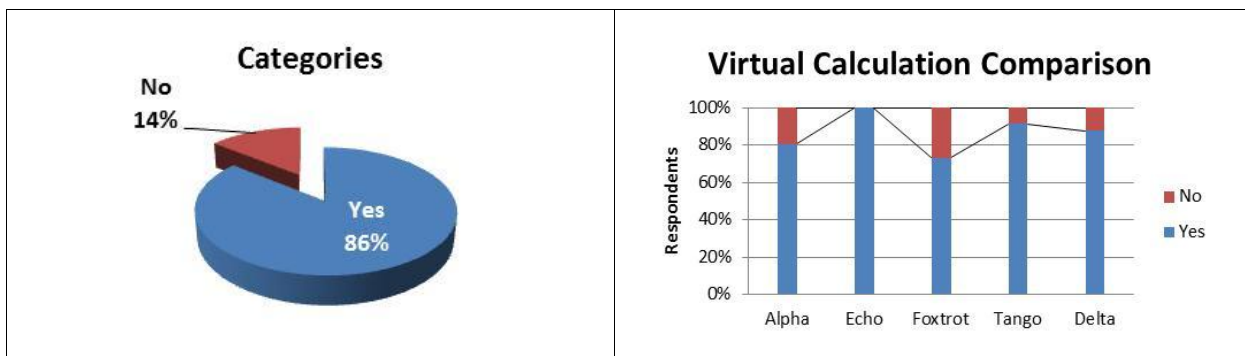
The individuals were asked (in the online questionnaires) if they deemed themselves to be virtual workers. The graphic representation is given in Figure 5-9 and shows that in Echo proportionally more individuals agreed that they were virtual workers. All four Echo teams included were spending minimum time in the office, and the managers were giving them freedom to choose their location and hours of work, without the individuals having to ask permission on a daily basis. In the other companies the perception of virtual status differed per team, depending on the type of work. In addition, individuals working on customer site did not necessarily deem themselves to be virtual workers.

**Figure 5-9: Virtual status perception**



In terms of the calculated value for virtual work status, as shown in Figure 5-10, over 80% of the individuals across all companies qualified as virtual workers. The virtual status was allocated where individuals were working away from their manager more than one day per week. Echo was the only company where all of the individuals could be regarded as virtual workers, while Foxtrot had the most individuals that did not qualify as virtual workers. These were specifically in the development teams that spent most of their time at the main office location.

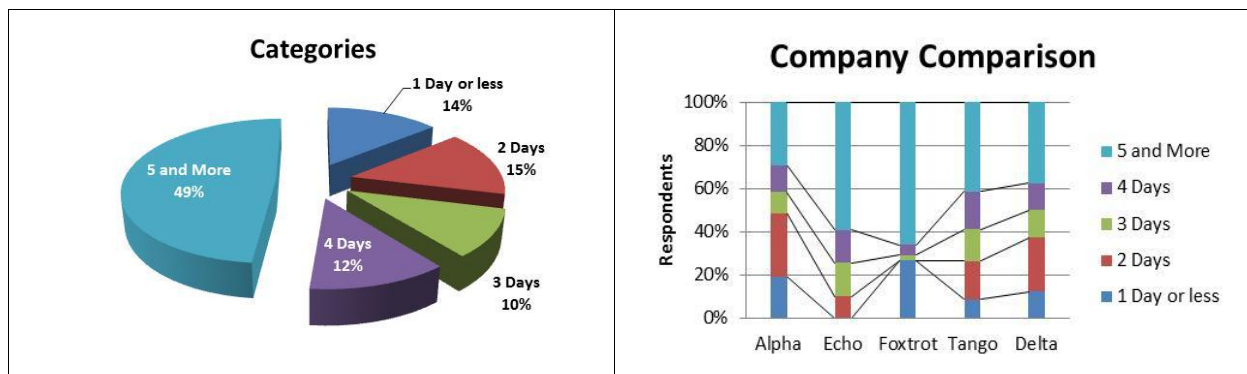
**Figure 5-10: Virtual status calculation**



When comparing the number of days per week that individuals spent away from their manager, 49% of all the employees spent five days and more (some individuals may work over weekends as well) away from their manager per week. This was especially true for Foxtrot and Echo. The category spread and company comparison is given in Figure 5-11.

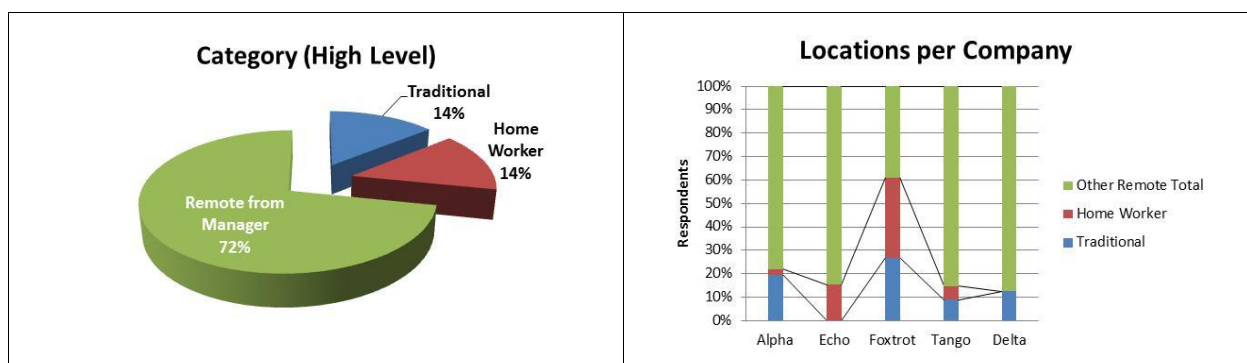


**Figure 5-11: Days away from manager per week**



An analysis was done to determine where individuals spent most of their time. This showed that 14% of all individuals fell into the “Traditional worker” category, in other words spending most of the time in the same office location as the manager, which is normally the main office location. When respondents spent four days or more per week at home, they were classified as *home workers*, and 14% fell in this category. Foxtrot had the highest percentage of home workers. The remaining “Remote from Manager” individuals amounted to 72% of the respondents. So in total 86% (72% + 14%) of individuals actually worked remotely from their manager. This is represented in Figure 5-12.

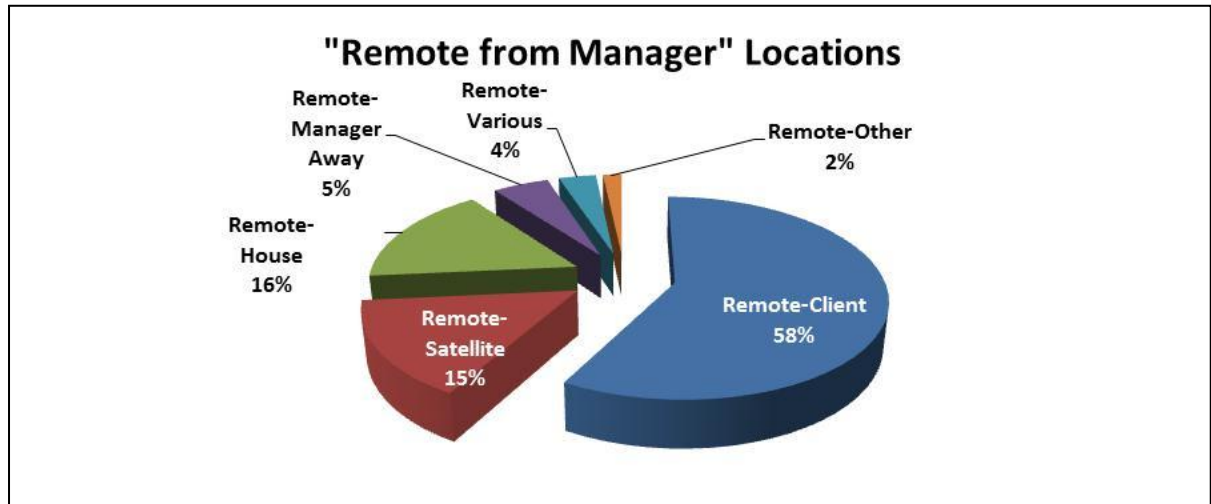
**Figure 5-12: Locations per company**



The “Remote from Manager” category was further analysed (Figure 5-13), and it was found that most of those individuals would be working on the client site. Then there were individuals working from satellite offices. The individuals classified as “Remote-House” worked from home two to three days a week. There were also some individuals who were classified as “Remote-Manager Away” because their manager actually worked in a different country or province. This was the case with both Foxtrot

and Delta. “Remote-Variou” was used where individuals used more than one location to work from, and “Remote-Other” included own office or was unspecified.

**Figure 5-13: Remote locations for individuals (detail)**



### 5.3.2 Virtual Work Reasons and Advantages

During the interviews, the question was asked as to why the manager allowed individuals to work virtually. The common view of working virtually seemed to be allowing individuals to work from home, although the definition of virtual work makes provision for a much broader range of work away from the manager and colleagues on a more regular basis (Ashford *et al.*, 2007:69; Luyt, 2007:13, Jackson *et al.*, 2006:219). The reasons given for virtual work in this section combine the findings of the individual cases, and look at virtual work from the broader perspective of individuals working remotely from their manager. This includes individuals who are allowed to work from home, working from another site and working on the client’s site. In Table 5-2 the code for “Virtual work: Reason” has been further categorised for location, as well as whether that scenario is deemed to be a privilege or a necessity. In addition, the codes for “Virtual work: Reason” and “Virtual Work: Advantage” have been linked, to show that specific scenarios of virtual work give specific advantages. The reasons for virtual work are described in more detail after the table.

**Table 5-2: Code list: “Virtual work: Reason” and “Virtual work: Advantage”**

Description	Code for “Reason”	Location	Privilege / Necessity	Codes for “Advantage”
Giving the individual flexibility, work-life-balance, cost and time saving.	Individual: Benefit {33-1}	Home	Privilege	Personal Flexibility Productivity Saving Money Saving Time
The type of work allows working remotely.	Work type: General {7-1}			
Customer in different time zone from organisation. Work supported centrally.	Customer: Time Zones {7-1}		Necessity & Privilege	
Customer working day longer than 8-to-5 Customer expectations changing.	Customer: Working day {6-1}			
Availability after hours.	Work type: Standby {3-1}			
Individual working in different location from organisation’s office. Individual relocated.	Individual: Location {5-1}	Home Other Office	Necessity	Extra skills available Staff Retention
The organisation trying to save costs by allowing individuals to work remotely or not visiting remote individuals that often.	Organisation: Cost Saving {11-1}			Saving Money
Multiple customer locations. Remote from organisation’s offices.	Customer: Geography {19-1}			Manager mobility
Global company distribution. Following customer distribution.	Organisation: Company Structure {9-1}			Manager mobility; Extra skills available
Customer wanting the individuals on site.	Customer: Service requirement {4-1}	Client Site	Necessity	Manager mobility.
Activities on projects that have to be performed on the customer’s site.	Work type: Projects {10-1}			

Example Codes: “Virtual work: Reason: Customer: Geography”; “Virtual work: Advantage: Manager Mobility”

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

One of the key reasons for allowing individuals to *work from home* is the benefit and flexibility that it gives to individuals, given that the type of job allows this. In this regard, it is given as a type of reward or incentive, and may be seen as in some way compensating for the long hours the individual is often expected to work. In Foxtrot and Tango it has also been seen as a strategy for retention, where there were examples of individuals who relocated but still wanted to work for the company.

Advantages benefit both the individual and the organisation, and include cost savings for the individual, flexibility in hours, increased productivity at home, staff retention and being able to use it as an incentive.

P53 (226) “If the client and the project allows for it, I do have people working from home at times. Because sometimes also in the client environment and the open plan office environment, especially if you are doing number crunching and a lot of analysis and data analysis, it’s actually more beneficial when you are not in a noisy or busy environment, and I send them home to go and do it there. Then they are staying in contact by mainly email and telephone, it’s not really anything else.”

A second reason for allowing individuals to *work from home* is the customer requirements which are driving the requirement for longer working days. This includes the customer’s expectations around extended business hours, requirement for support on critical systems after hours, work that can only be done in customer off-peak times, as well as operational activities that need to happen before the business day commences. In most of these cases, work outside of traditional office hours is needed, which can more easily be done from the comfort of an individual’s home, provided that the necessary connectivity exists. The advantages of allowing individuals to work from home when there are customers that need service in extended hours include the fact that the individual can manage a more flexible personal schedule during the day, and be available after hours when the additional requirements arise, and that the organisation can save costs on travel and office space. For Foxtrot and Tango, there are also customers in multiple time zones that need to be serviced from a central location. In addition, in the case of Foxtrot, individuals would be working from home on a permanent basis to service customers in the different time zones, since it would not be cost effective to set up an office in each country where there are customers. An additional advantage of allowing individuals to work from home when there are customers in multiple time zones is that individuals can be appointed on the basis of their skill and not their location.

“I don’t think it’s only that. If it was only for me, I could get up at 4 o’clock I could get up and support wherever that may be. It is just, Foxtrot is a global company, and I am the manager, so it’s not like I can only hire; so it’s only partly the reason. But you cannot hire in Atlanta and sit in an office, or hire in SA. We are a global company and we hire people everywhere.”  
P34 (77)

Individuals *working remotely from their manager* and not necessarily at home included those working on the *customer site or those working in regional or satellite offices*. The customer site is normally a requirement from the customer, and could include the type of work to be performed, customer projects being completed or the fact that the customers want to see what they are paying for. Individuals working in regional offices are based on the organisational structure, which in many cases follows the customer geography. In this case, when managers are working at the main office location, and regional visits are reduced, the advantages for the company include cost saving.

An important *distinction for virtual work reasons*, especially where the individual is being allowed to work from home, is whether it is a given as a *privilege or a necessity*. This distinction is also shown in Table 5-2. Where the code has been marked as a necessity, it implies that there are customer requirements or geographic implications that necessitate individuals working virtually. In the case of a privilege, the manager could more easily recall the individual should non-performance become evident, while in the case of a necessity, it is often not possible for the manager to recall the individual, and other means would need to be found to ensure the individual's performance is up to standard. Management of non-performance is also explored in more detail in Section 5.4.2 Managing Non-Performance.

|| "Why it has become virtualised, because we had no choice. Europe is a big continent, and people travel a lot, and you know, I mean in our line where there is a traditional office, where everyone is in the office, it won't work." P36 (383)

In the case where it is *both a necessity and a privilege*, such as for code "Work type: Standby", managers are making a trade-off. The individual should or could actually come into the office, but because it may be in the middle of the night or the customer is expecting longer coverage (e.g. early morning or later in the afternoons), it makes sense to allow individuals to do this work from the comfort of their homes, rather than drive into the office at odd times of the day, which might also be a security risk.

### 5.3.3 Virtual Work Arrangements

Virtual work arrangements concern the agreements, activities and performance measures that relate to working away from the manager. They are linked to the reasons and locations identified under “Virtual work: Reasons”, but the processes that the manager has associated with the arrangement are now added. The types of arrangement include work from home, regional or satellite offices, at a client site, at various locations and not being able to work virtually. The list of codes and their groupings are shown in Figure 14-1 (Appendix E), which indicates how the codes have been related to each other using the ATLAS.ti analysis tool. The detailed descriptions of the five different scenarios are given below.

The *work-from-home arrangements* include schedules for fixed days, fixed hours, occasional instances or permanent work from home. For *fixed days*, a schedule would be set up and individuals could choose two days between Tuesday and Thursday to work from home. The days normally need to be agreed up front, and specific tasks or deliverables need to be achieved for those days. Individuals pre-book the days on a calendar or schedule. Detailed task lists are set up in most cases and individuals need to show progress against the task list when returning from the home-work days. The *fixed hours from home* is also a once-off agreement that is set up when the arrangement starts, and does not have to be re-agreed per occurrence. This relates to a specific number of hours per day that an individual will work from home, normally due to operational requirements or to cover customer time zones. This arrangement also includes specific tasks that need to be performed while working from home that will be checked by the manager, or will show in service level reports. This arrangement is also often used to miss peak traffic. In general the individual is still expected to be in the office on a daily basis. The “in-office” hours are also normally captured on a roster.

The third option in working from home is the *occasional model*. Here the individual needs to obtain permission for each instance of working from home, and reasons could include looking after a sick child, or some other personal matter that needs to be attended to, or completing a project that needs more focused attention. The last option for working from home is the “*permanent*” model, where the “place of work” is



the individual's home. Here it is important for the individual to remain in contact through regular meetings and other collaboration tools, and in the organisations where there are examples of this type of arrangement, the individual normally needs to visit the main office location once a month for a three- to four-day period. For all cases of working from home the individual needs to show that he or she is online (e.g., through Office Communicator) and must be reachable by telephone or email. Where fixed customer support hours exist, the individuals also need to be available at home for those fixed schedules, and may not plan their day in a flexible way.

"We have a fixed arrangement with a couple of people that can work from home. There are people that work from home permanently that come in once a week for a meeting, there are others that only spend 2 or 3 days a week at home. For example on Mondays and Fridays they have to be in the office. They can work from home Tuesday, Wednesday and Thursday." P46 (97)

"No, there is no rule. People need to be available, whether you are doing your work from home or from somewhere else, you need to be available. And if you are on standby, you need to be in half an hour's travel from the office or from the client that you support. So you cannot go a 1000 km away and try and work from the beach, because sooner or later; you might get away with it for a while, but sooner or later you are going to be caught out. If you break that trust then you have a major issue. But then again it comes back to responsibility and ownership." P46 (355)

For individuals *working in regional or satellite offices*, the agreement is normally done once-off, and there are less strict rules on task lists and other measurables, since there are normally other managers at the office where the individual is working. Individuals working in the main office location while their manager is working from home or in a different country are also managed through tracking tasks on process lists, or tracking of calls on the call management system.

"I think the fact that a project manager doesn't work on one project at a time. They work at different clients and on different projects, so, the assumption would be that, because of that, they have to deliver something and it's impossible to look over that person's shoulder all the time, because where is he? He's today here, tomorrow there." P4 (64)

"...we obviously got additional customers in the Johannesburg area that we manage remotely in any case. So the consensus was that if we had a team lead up in the north to manage all of the clients up there, it would work well, and that is how the structure started forming." P47 (65)

There are also arrangements where the *individual works in multiple locations*, in other words a combination of home, client and satellite offices. This is dependent on the type of work, such as projects, or where the individual needs to service multiple



customers, and is normally reserved for more senior resources. The expectation is that the individual will be contactable at all times, and that regular feedback is given in terms of activities. In one case (Foxtrot), a central calendar needed to be updated by all individuals to indicate their location at all times. (Feedback as an individual responsibility is discussed in more detail under Section 5.5.3 Individual Parameters (RO2c).) Flexitime has also been grouped under “Various”, since the individual could either start working from home until a certain time, and then travel to the office, or all of the work could happen at the office, but at times when the manager might not necessarily be there.

“If the client and the project allows for it, I do have people working from home at times. Because sometimes also in the client environment and the open plan office environment, especially if you are doing number crunching and a lot of analysis and data analysis, it’s actually more beneficial when you are not in a noisy or busy environment, and I send them home to go and do it there. Then they are staying in contact by mainly email and telephone, it’s not really anything else.” P53 (226)

*Non-virtual, flexible work arrangements*, in which individuals do not necessarily work from home or away from their manager, include reduced work hours, resulting in a corresponding drop in salary. This arrangement might also imply the same work hours but a reduced working week, implying that the individual works longer hours Monday to Thursday, and then takes off Friday or part thereof. There are also certain cases where individuals would not work virtually, depending on the kind of role they are fulfilling, their own preference for working in the office, or where the privilege of remote work has been revoked (or never allocated from the beginning) by the manager.

**Other: Reduced Portfolio**

“We only ask for that if there is going to be a reduction in pay, somebody is taking a reduced portfolio, then definitely we have a contract.” P55 (52)

**Other Flexi- days: Process**

“I think where we formalise it more is some people for instance work from Tuesday to Friday, but, and they tend to be in a more structured role, where they would be required to put in the 8 hours a day. So what they would do between Tuesday and Friday is put in 40 hours, because obviously we also have timesheets. So people work longer hours and then take half-day. So it really is around flexibility.” P55 (46)

#### **5.3.4 Virtual Work Limitations and Challenges**

During the interviews, managers mentioned various limitations and challenges for virtual work in general, without necessarily being prompted to do so. These were split into two categories: firstly limitations that prevent virtual work and cannot be overcome, and secondly challenges that could potentially be overcome through specific interventions, additional effort or a change in mindset.

As a summary, Table 5-3 first lists all the codes that were used for challenges where it should be possible to overcome these (marked in the column “Possible” with an “X”). These are further divided into four categories. The first are issues that managers should address, such as building relationships and additional communication; secondly issues that individuals could address by being more participative or sensitive to the fact that remote management and work need more focus on accurate feedback; and lastly items that need to be addressed on organisational level such as additional bandwidth and resolving connectivity issues (which is also inherently a South African problem). The fourth set of challenges, such as increasing the frequency of contact, eliminating misunderstandings and the duration employed, the manager and individuals should address together. (Refer to Appendix E for the code network in Figure 14-3.)

The second part of Table 5-3 shows the codes that are classified as making virtual work impossible, marked in the column “Impossible” with an “X”. These include when there are specific customer requirements, when the infrastructure and connectivity does not allow it, or when the individual’s job is of such a nature that physical presence is required. The code for “Collaboration needed” has also been included in this grouping, since managers in all the companies agreed that when close collaboration is needed between individuals, such as on projects, for development, or in resolving problematic issues, it is preferable to have the individuals together in one room. The bandwidth in South Africa is also not supportive enough to allow these types of activity to be done through interactive video and voice-over-IP (VOIP). (Refer to Appendix E for the code network in Figure 14-3.)

**Table 5-3: Code list: “Virtual work: Limitations and Challenges”**

Description	Code	Impossible	Possible	Addressed by
Not feeling part of the organisation.	Belongingness {8-2}		X	Manager
Challenges with building and maintaining a relationship.	Building Relationship {11-3}		X	
Difficulty in getting the same message to everybody at the same time and making sure it is understood.	Change Management {6-3}		X	
The organisation (and others) tending to forget the individual.	Forgotten {4-2}		X	
Manager at home and individuals at the office.	Manager availability {2-2}		X	
Mindsets of managers that people who work from home do not deliver.	Mindset {1-1}		X	
Making work visible to next level management.	Visibility of work performed {1-3}		X	
After-hours work expected Workaholic syndrome.	Always online {12-1}		X	Individual
Reduced availability when remote.	Availability {4-1}		X	
The manager feeling less in control by working remotely.	Control {1-6}		X	
Indication that there are too many distractions at home that can decrease productivity.	Distractions at home {1-1}		X	
Always easier when seeing other person's expression.	Handling of issues {10-1}		X	
More management time needed when individuals work remotely.	More management needed {5-17}		X	
Extra work created due to individuals not communicating correctly.	Written communication skills {1-1}		X	
Too much data to transfer.	Bandwidth {3-1}		X	Organisation
Limited network connectivity.	Connectivity {14-1}		X	
Corporate culture not supportive of remote workers.	Corporate Culture {2-1}		X	
Issues relating to extra costs (e.g.. communication, printing, etc.) Need "Give and take" vs. policy.	Extra Costs {6-1}		X	
Not sufficient workflow in the systems.	Workflow {1-1}		X	

**Table 5-3: Code list: “Virtual work: Limitations and Challenges” (Continued)**

Description	Code	Impossible	Possible	Addressed by
Difficulty in establishing regular contact when individuals are working remotely.	Frequency of contact {3-3}		X	Manager Individual
Misunderstanding when communicating.	Misunderstandings {1-2}		X	
Issue when individual has not been employed long – relationship.	Short duration employed {1-2}		X	
Combined problem solving, design or development needed.	Collaboration needed {19-1}	X		Impossible (Cannot be addressed)
Customer wanting individual on site.	Customer Requirement {24-4}	X		
Preference of individual not to work virtually.	Individual preference {5-1}	X		
Printer and scanning requirements, office space.	Individual's Infrastructure {5-1}	X		
Physical interaction with devices or people required.	Type of work {19-1}	X		

## 5.4 MANAGING VIRTUAL PERFORMANCE (RO1)

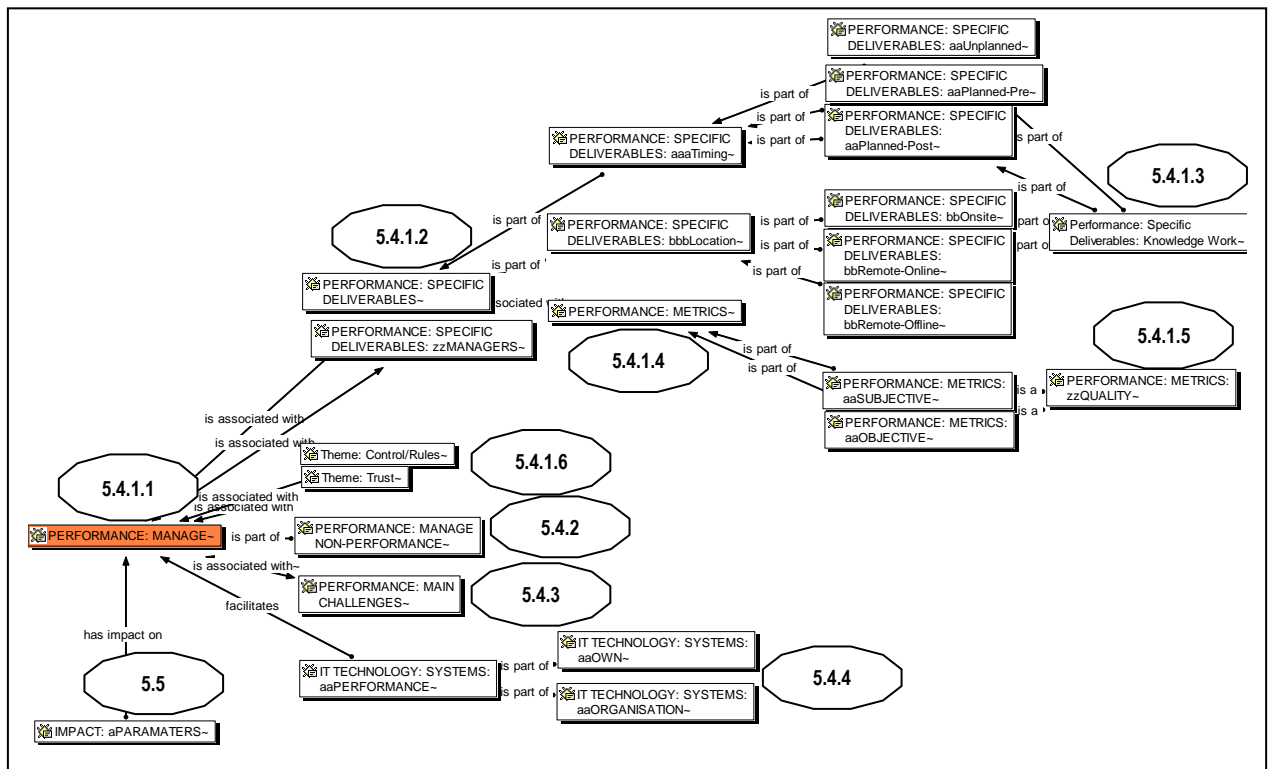
RO1: To critically review the current state of knowledge and understanding of **how the performance of virtual knowledge workers is managed.**

### 5.4.1 Managing Performance

In this study the managers were asked questions about how they managed the performance of the individuals in their team, especially those working remotely. The code network in Figure 5-14 shows how the management of performance starts with the general process that managers use to manage performance (Performance: Manage) and then splits into deliverables with their related metrics (Performance: Specific Deliverables; Performance: Metrics; Performance: Specific Deliverables: Managers) and tools used to monitor and measure (IT Technology: Systems: Performance). In addition, the importance of managing non-performance was also highlighted (Performance: Manage Non-Performance). Challenges encountered while managing the performance of remote or virtual employees were shared

(Performance: Main Challenges). There were also various contextual and external parameters that impacted on performance and the management thereof (Impact: Parameters). The numbers in the diagram indicate the section number in which the specific set of codes is described in more detail.

**Figure 5-14: Code network: Managing performance (High level)**



#### 5.4.1.1 Code category: “Performance: Manage”

Managers were asked in the interviews specifically how they managed the performance of individuals working remotely. As a starting point for categorisation of the way managers manage, the codes that were used for the interview data that related to the management of performance have been linked to the four phases that Deming proposes as part of his Total Quality Management theories, namely “Plan-Do-Study-Act” or PDSA cycle (Moen & Norman, 2006:8). The importance of the Deming PDSA cycle is that it is a cycle, and the last step needs to feed information into the first step to ensure improvement. A similar type of process can be found in the project management process groups proposed in the Project Management Body

of Knowledge or PMBOK (PMI, 2004:42), namely initiate, plan, execute, as well as monitor and control.

The following mapping from PDSA to the PMBOK process groups applies, with the numbering showing the sequence of activities (Network diagram in Appendix E Figure 14-4):

- (1) Initiating (PLAN)
- (2) Planning (PLAN)
- (3) Executing (DO)
- (4) Monitoring (STUDY) and (5) Controlling (ACT)

According to the first set of codes, namely initiation (detail in Table 5-4), most managers buy into and use the organisational performance management process to create individual performance appraisals for their employees. This is ultimately linked to the strategy of the organisation. One manager in particular said that he followed a very detailed process to arrive at the objectives, deliverables and performance measures for his team. There were, however, some managers who did not agree with the time having to be spent on the formal IPA process. They did not necessarily use this as a starting point for setting of performance measures, but rather kept measurements fluid in terms of customer requirements. Standards and the standard way of work that the individuals should be achieving were also important during the stages where the overall objectives or goals were defined, especially when the quality of work needed to be evaluated when individuals were working remotely. One manager went through an especially detailed process to align the team goals with the goals of the organisation and make sure that individuals bought into that. This process in itself was a very positive experience for the team members, as reflected in these two quotes by the manager.

“So the third exercise we did, or process that we went through was to set goals for each and every team, so it was surprising when we did a survey and how few people knew what the goals of our team should be or are. So that was important too, because without goals there are no ways you can setup a proper KPI or proper performance agreement for the team.”  
P12 (29)

“But what did come out of this thing is that people actually went to the trainer or they phoned me and asked can they speak directly to the trainer. They said, first of all, the willingness to go through this programme - and myself, I initiated it, and the Senior Manager approved it and the trainer conducted it - was just amazing that they thought that the company was just

the next best thing since sliced bread. I chased a little bit, because of decisions, but it has changed people's personal lives, which I was quite chuffed about. And the confidence with which they went about their daily tasks.” P12 (47)

**Table 5-4: Code List: “Performance: Manage: Initiate”**

Description	Code	Category
The relationship of the day-to-day performance management with the IPA.	IPA Link {71-2}	IPA
Do not like the formal performance systems.	IPA Link: NOT {16-1}	
A process followed to establish all aspects of performance management	Process {26-3}	Process
Strategy identified or confirmed as part of the performance management process.	Process: Strategy {14-3}	
Goals identified as part of the performance management process.	Process: Goals {14-3}	
Reference to standard way of work.	Standard WOW {5-2}	

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

The second set of codes relate to the step of planning (Table 5-5). They are an extension of the “initiate” codes, in that this is the next level of creating a more detailed framework of objectives, tasks, checklists and deliverables, as well as targets or measures that the individuals should be achieving in general, or specifically while they are working remotely for the agreed period. Deliverables are normally closely linked to the customer service and service level expectations, or project deliverables, and assist in the “output-based” management approach that various managers support, especially for remote employees. Most of the managers have expressed the importance of the initial and planning stages in being able to create the framework and setting of specific measures for team members working in a remote situation. In Foxtrot, during the planning stages, the allocation of project tasks is done in collaboration with the developers, so that it is not only the manager who decides on who will be doing what work. Also, once the deliverables have been set, the manager needs to trust the individual to deliver according to the agreement.

“So I believe, and that is perhaps more the way that I work as well, and how I would like to be managed as well. I believe that if you assign a deliverable to somebody and you are clear what your expectations are, and what your deliverable dates need to be, and that you need to trust the person to do that what they need to do to actually accomplish that.” P44 (68)



**Table 5-5: Code List: “Performance: Manage: Plan”**

Description	Code	Category
Right management structures in place	Implement optimal structure {2-1}	Structure
Creating lists for monitoring later	Checklists and Evidence {15-2}	Framework
Framework for performance management	Framework	
Customer impact on planning	Customer requirements {13-3}	Customer
Softer issues and process agreement	Set Expectations {14-2}	Expectations

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

The third element of execution is small (detail in Table 5-6), since the manager responsibilities have been coded and analysed separately. The first code linked to “execute” is involvement. The level of involvement of the manager differs depending on the situation. For example, the manager may get more involved in resolving customer problematic issues, especially if the customer wants to escalate the issue to a higher authority. This is also linked to management by exception, and will become evident in regular reports. Also, the manager will get more involved if the individual’s behaviour or outputs are not acceptable. Hands-on managers may be more involved as a matter of their personalities, and not as a matter of trying to micro-manage. Managers may also make use of peer reviews to make sure that the outputs of individuals are on track, or allow individuals to show what they have been doing. This becomes part of the manager’s panopticon in terms of mechanisms of additional surveillance. Elements of reward and incentives are also linked to the “execute” category, and these were indicated by managers as being important, but not always available or possible to give. Most of the managers also agreed that it was important to differentiate the way in which they managed different personalities. This is explored in more detail under the manager’s approach to virtual management in Section 5.5.2 Managerial Parameters (RO2b).

**Table 5-6: Code List: “Performance: Manage: Execute”**

Description	Code	Category
Level of involvement of the manager in solving problems (customer or individual level)	Involvement {10-2}	Involvement
Ensuring the individuals are allocated correctly and not "bored"	Keep individuals allocated {4-1}	
Only becoming involved if issues are raised. Not monitoring the whole time.	By Exception {8-1}	

**Table 5-6: Code List: “Performance: Manage: Execute” (Continued)**

Description	Code	Category
Using peer review to manage the individuals.	Peer Review {9-1}	Management Panopticon
Performance improved by giving incentives - "enticing" individuals. Setting targets to reach. Paying per instance.	Incentive {3-2}	Incentives and Rewards
What rewards are given for good performance?	Reward {16-1}	
Letting individuals show what they have done.	Show and tell {1-1}	Individual contribution
Manager differentiating approach based on personality or other differences between individuals.	Differentiation {19-2}	Differentiation
Manager persists with preferred management approach and not necessarily differentiating.	Differentiation: Not {1-1}	

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

The fourth element of *monitoring* contains most of the codes (See Table 5-7). This shows where the focus of the managers currently seems to be, since this is where it needs to be determined whether the individuals are actually working and performing. The category for “monitor” includes obtaining of feedback, reports, dashboards, tracking of tasks and delivery dates, as well as correcting where deliverables are not up to standard. The frameworks and task lists that were previously agreed on are important measures to check against, especially where specific tasks or activities were allocated for the period that the individual would be working remotely, as in the “fixed-days-from-home” arrangements. Some managers use instinct or intuition in terms of knowing that the employees are staying on task, and a strong theme evolved across the cases for the fact that true performance actually manifests itself over time.

“I think gut-feel plays a role, for me, I like to use my gut. I know one of my current reportees is over-allocated and he’s not performing as it should be. It’s now for me to go and try and assist that person.” P4 (142)

“Since I cannot really observe them myself, I have to infer based on conversations and cues, and you know, the ways I can measure them, which are somewhat limited a times over a short term. Yet over a long term, you know it all manifests in a pretty complete picture.” P35 (178)

Also, one manager mentioned specifically that one cannot trust a single feedback element only; one needs to look at the total picture that is being established over the measurement period.

“So over the years I have put a lot of things in place that make it easier to track things, etc. [...]...but also doing this kind of reporting, I go into the tickets, I can see who is getting the compliments, you know. So it's that kind of you get a perception based on many different data points throughout your working year, of how people are doing.” P34 (501)

Managers also monitor individuals by such means as seeing if they are available online, which is facilitated by some collaboration software, or else by seeing a flow of emails, or activities that are happening. Regular communication is also important, to show that the individual is available and busy working. (How individuals would like their attendance to be measured and the link to trust is shown in Figure 5-23.) The manager will also use formal feedback (such as customer surveys) and informal (verbal) feedback regarding individuals, to determine the state of performance. This is once again part of the management panopticon that can be established when individuals are working on customer site or at regional or satellite offices.

“But it's very obvious when someone's busy, usually. As I think I said earlier. Most of the folks that come on, they're busy and it's obvious. Because things just come up. I always call it the dust they kick up. So someone who is very active and they're contacting a lot of companies and talking to a lot of people, and they're doing demos. And you know networking, and “prospecting” and all that stuff. There is just naturally a lot of dust that is kicked up.” P35 (190)

**Table 5-7: Code List: “Performance: Manage: Monitor”**

Description	Code	Category
Monitoring or measuring to compare with other individuals, standards or expectations set.	&Compare {16-2}	Comparisons
Open dashboard to show results of monitoring and measuring.	&Compare: Public {5-2}	
Monitoring and measuring with a view to correcting.	&Correct {16-2}	Action taken Feedback
Written feedback from others.	Feedback: Formal {7-2}	
Subjective feedback from others.	Feedback: Informal {11-2}	
Poor performance cannot be hidden in the long run.	Actual becomes apparent over time {13-2}	Intuition
Manager using perceptions; anything that cannot be measured objectively.	Gut feel {4-2}	

**Table 5-7: Code List: “Performance: Manage: Monitor” (Continued)**

Description	Code	Category
Not monitoring availability, rather using something else (flow of information).	Availability - not {3-1}	Availability
Available = Online = Presence = Contactable.	Availability {14-2}	
Monitoring email flow and content of emails to customers.	Email flow and content {7-1}	
General interaction between the manager and the individual, which could be face to face, email or telephone.	Regular Communication {22-5}	
Specifying deliverable and date, not <i>how</i> or <i>when</i> individual hours need to happen, or exactly how many hours needed to perform the job.	Delivery Dates {5-2}	Tasks and time
Performance managed through task and activity tracking.	Task & Activity tracking {19-2}	
Time tracking of overtime, billable hours, etc. This is very important for (a) reward and (b) customer billing.	Time Tracking {11-1}	

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

Control is the fifth element, and also the second part of “Monitor and Control” in the management cycle (Table 5-8). Even though the “meeting” codes have been linked to the “control” category specifically, the regular meetings are often used to plan new activities, monitor whether they have been completed, and make recommendations for change (i.e. control) where required. The regular meetings with the individuals are also used to link the performance of the individual to the key performance indicators of the individual performance appraisal (IPA). In some cases, where the manager has line managers reporting to him or her, the manager would also prefer to “skip a level” in order to get involved and control the performance and outputs of individuals on the lowest level of execution. Re-prioritisation is also important if there are too many tasks and the individual needs to be assisted in making the choices.

Trust also becomes important as opposed to specific control mechanisms. Managers often mentioned the importance of trust in a virtual work situation. This is explored further in section 5.4.1.6 “Control and trust”.

|| “...I can't micromanage over this distance. So there needs to be a good trust relationship.” P48(271)

**Table 5-8: Code List: “Performance: Manage: Control”**

Description	Code	Category
Formal meetings with individual	Meetings: Individual {30-2}	Meetings
Formal team meetings	Meetings: Team {43-2}	
Manager wants to be involved in one level down.	One level down {4-1}	Involvement
Managing outputs: something tangible.	Outputs {27-1}	Outputs
Re-prioritisation when too many activities occur.	Prioritise {9-1}	Re-prioritisation

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

As part of the meetings, the frequency was also mentioned Table 5-9. The regularity of the meetings and how formal they are depends on how hands-on the manager is, the type of deliverables, imminence of the deadlines, and the seniority and the needs of the individuals. The manager will often use the meetings to build the relationships with the individual and within the teams as well, communicate company changes or use them as an opportunity for training. Both communication and building relationships are important in a virtual world, where individuals could often feel neglected or excluded from the corporate life. As part of the “differentiation” theme, managers also allow their team members to decide on frequency of meetings, especially in the remote situation.

“...So he wanted to talk on a daily basis. It’s a little bit stressful for me, but that’s what he wants. Whereas Joan in Europe, was quite happy touching base once a week. So I was really flexible and I left it up to them. I said, you know what I am here, I prefer to have weekly meetings, but you need to tell me if you want the meeting or not, it’s your agenda. So I definitely had to manage them differently.” P54 (140)

**Table 5-9: Code List: “Performance: Manage: Interval”**

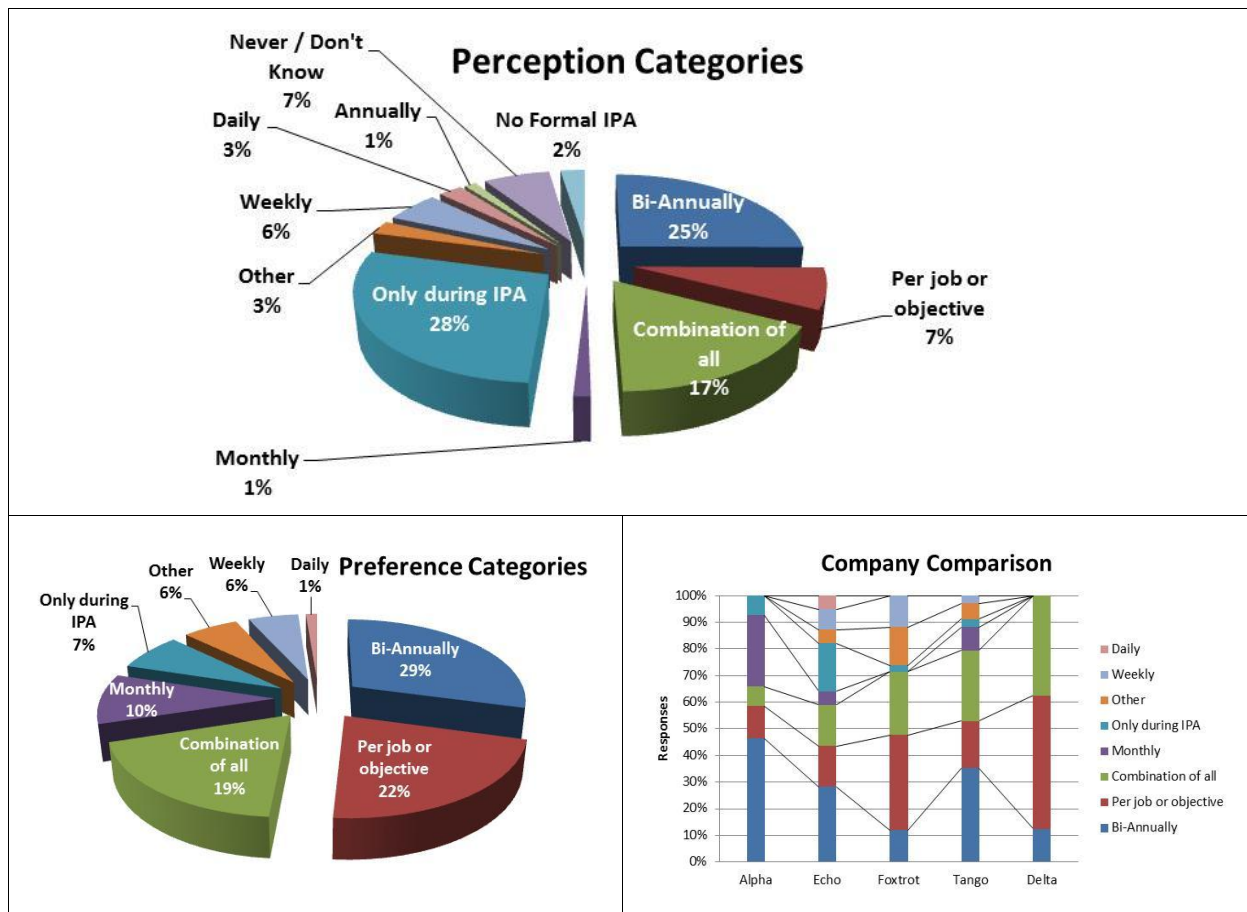
Description	Code	Category
Active involvement with the individual Daily contact (Informal).	Daily/Continual {14-2}	Regular
Requirement for monthly meeting.	Monthly {8-1}	
Once a year.	Annually	
Every three months.	Quarterly	
Spot checks; exceptions.	Intermittently {4-1}	Irregular
Review at end of each project.	Per project {6-1}	Per objective

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

Related to the frequency of meetings which were mentioned by the managers, individuals were asked to select the frequency with which they perceived that their

performance was being measured, and as a second question the preference or frequency with which they would like their performance to be measured. The perception, as shown in Figure 5-15, was generally that this was either done during the individual performance appraisal (IPA), bi-annually or a combination of all. However, some individuals in Foxtrot and Echo felt that they were never measured or did not know when they were being measured. In terms of preference, the preference for being measured during the IPA only was much lower, with more preference for being measured per job objective. In Alpha, Echo and Tango, the preference still remained for a bi-annual review.

**Figure 5-15: Performance measurement frequencies**



In the open-ended questions, many individuals, when asked what could be done to manage or measure their performance on a day-to-day basis more effectively, indicated that it would not be possible or effective to measure daily. This corresponds with the fact that only 1% of the total responses relating to the measurement frequencies were for daily measurement. There were also some individuals who did

see the benefit of daily follow-up meetings or conversations. The difference could be in the understanding of how formal the daily performance management should be; formal or just limited to being in contact on a daily basis.

**Against daily review**

“The nature of my work makes it difficult to measure day to day. A view of daily progress on milestones would be the closest you can get on monitoring performance.” P18 (21)

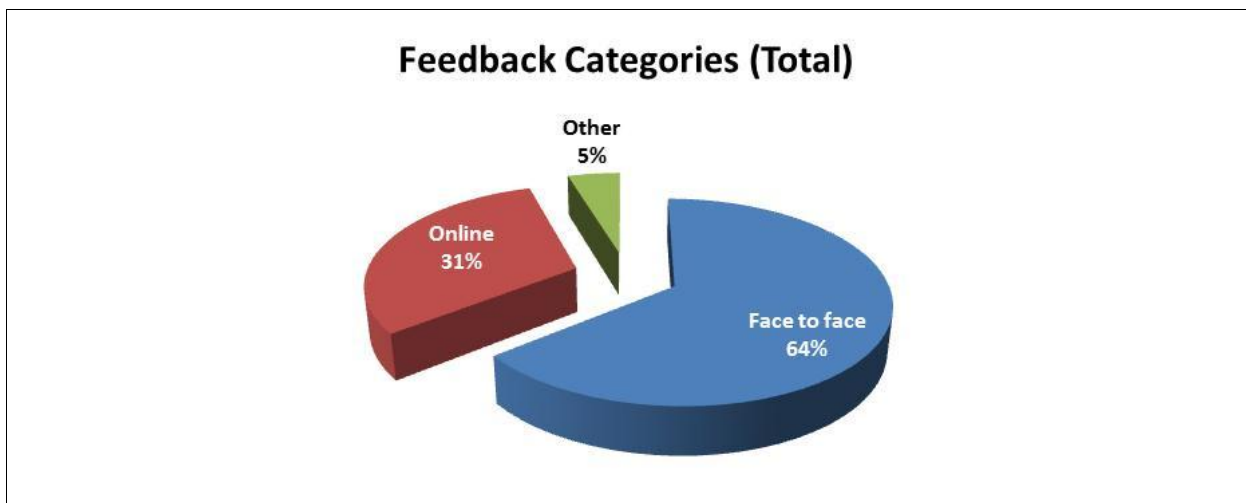
“Don’t believe day-to-day progress is as important as measuring progress on defined tasks. Detailed timesheets as is currently required is counter-productive in my opinion.” P42 (28)

**For daily review**

“Daily follow-up from management level. To ensure management involvement and avoid surprises.” P27 (25)

Individuals were also asked how they received feedback from their manager. The mechanism whereby managers gave feedback was mostly face to face (64% of the responses in the total data set confirmed this as shown in Figure 5-16), even when individuals worked away from their manager.

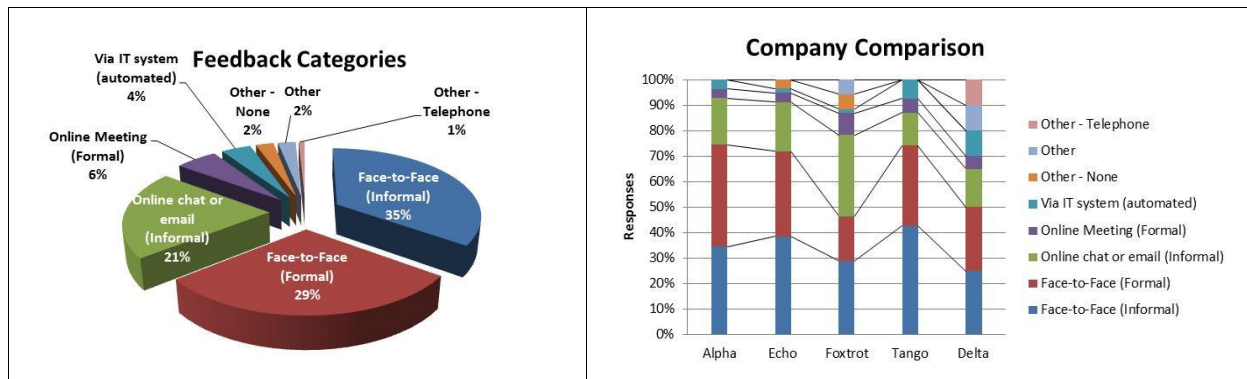
**Figure 5-16: Manager feedback mechanism/location (High-level)**



Managers indicated in the interviews that they preferred face-to-face feedback, and especially the visual clues it gave. It was only when there was no option of face-to-face contact because of geographical distance, or to ensure that contact with large teams could take place more regularly, that managers would hold online meetings. As can be seen in Figure 5-17, online meetings were most prevalent in Foxtrot.



Figure 5-17: Manager feedback mechanism/location (Detail)



#### 5.4.1.2 Specific deliverables

In the context of managing the performance of virtual workers, individuals were required to provide specific deliverables. The actual deliverables did not differ between co-located and remote workers, and could broadly be divided into *technical deliverables* (those that were required to fulfil the customer service from a technical perspective, like software code, projects and operational deliverables), those that were more *administrative in nature* (like timesheets and status reports used for measurement and monitoring), and those that were related to *knowledge work* (documenting new procedures or lessons learnt or so-called meta-deliverables). As part of the code analysis from a virtual work perspective, the codes have been allocated both “timing” and “location” categories. The location and timing elements can be used to assist the manager (and individuals) to plan deliverables for remote work, and categorisation might differ depending on the specific deliverable or situation.

The *timing category* is used to indicate if the deliverable is planned or unplanned, with unplanned activities often being more difficult to do remotely, since they can happen at any time. Unplanned activities include incidents, special customer requests, meetings arranged at short notice and service delivery issues that need to be resolved. “Planned” timing has further been split into “pre-planned” and “post-planned” deliverables. *Pre-planned* deliverables include proactive work according to checklists and pre-agreed task lists, and need to be done on a regular basis. Projects, regular timesheets and following process have also been included in this category. *Post-planned* implies that this can be planned, but is dependent on another

activity to be completed first and does not have its own regular schedule; in other words, a specific date cannot be set beforehand. Examples of this are where a report needs to be written within two days after each incident has occurred, and feedback to the manager after important meetings. (Figure 14-6 in Appendix E shows how the timing aspect is applied to the codes.)

The *location category* is used to indicate where the deliverable can be performed. The main split is between “remote” and “onsite”, with the remote category further split between online and offline type of deliverables. On-site deliverables are such that they cannot be completed remotely, such as interaction with a physical device, or with the customer, while with most of the “remote” deliverables it would also be possible to do them in the office (or on site) as well. For those deliverables being done remotely, some deliverables can be done offline, in other words no connectivity to the organisation’s network is needed, while others need connectivity to a company portal or other resources. Remote offline deliverables include completing documents, writing reports and planning (creating plans) and filling in project management documents.

Where deliverables have been coded as both remote online and onsite, the deliverable could be partially completed remotely (given that connectivity exists) and may have to be partially completed in person (or on site). Examples of the on-site component might be if something breaks to the extent that it cannot be configured remotely any more, and access to the physical device is needed; or if the customer wants to see the individual; or it would be better to give the feedback in person; or if collaboration is required (e.g. with software development or resolution of service delivery issues). (Figure 14-7 in Appendix E shows how the same codes have been split into the location categories in a code network.)

Table 5-10 shows the combined view of how each code relates to location and timing at the same time. The table shows, among others, that it is not a given for any of the unplanned activities to happen only “onsite”. If the right connectivity exists, then even the unplanned activities could be completed remotely. The location was used to sort the table entries.

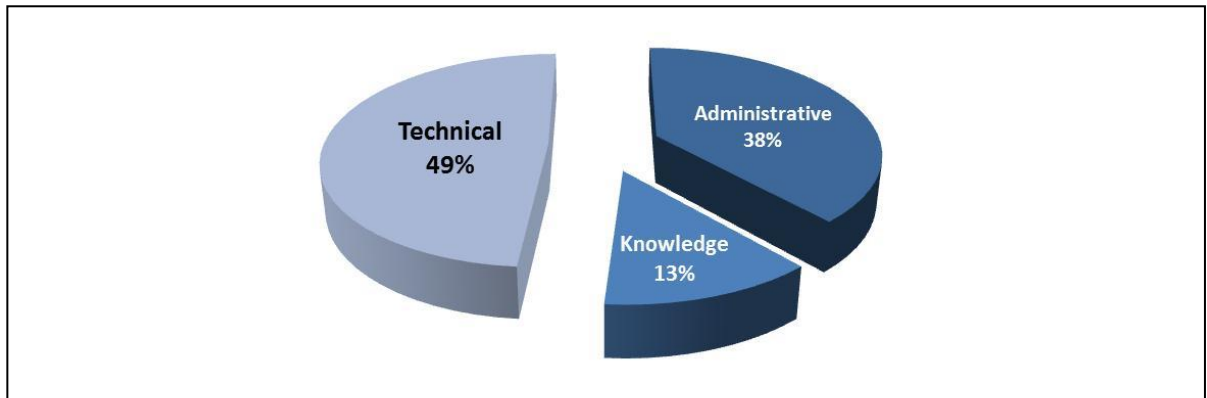
**Table 5-10: Code List: “Specific Deliverables” (Location and Timing)**

Codes	Type	Location			Timing		
		Onsite	Remote-Offline	Remote-Online	Planned-Post	Planned-Pre	Un-planned
Consulting	T						
Intervention	T						
Physical Devices	T						
Project	T						
Manage Supplier	A						
Product (S/W: Sale)	T						
Break-fix	T						
Manage Incidents	T						
Manage Alerts	T						
Manage Service	A						
Follow Process	A						
System Availability	T						
System Capacity	T						
System Quality	T						
Task List	A						
Data Captured	T						
Customer Value	T						
Feedback	A						
Product (Software)	T						
Product (Test)	A						
Optimisation	T						
Knowledge Work	K						
Config Changes	T						
Checklist	A						
Report	A						
Report: Dashboard	A						
Survey	A						
Product Docs	K						
Test Results	A						
Timesheet	A						
Documentation	A/K						
Graphics	T						
Marketing Material	T/K						
Output	T						
Proposal	T/K						
Project Mng. Docs.	A						
Plan	A						

Type key: (A) = Administrative or measurement; (T) = Technical; (K) = Knowledge work

The number of deliverables categorised as technical, administrative and knowledge items have been represented in a pie chart to show the relationship between the types of deliverable used by the managers. From the categorisation, the technical and knowledge deliverables make up 62%, while the administrative deliverables make up 38%.

**Figure 5-18: Split of deliverable types**



There was evident a trend in especially Echo and Foxtrot, but also in Tango, where the managers were both managing a team and doing the technical work. This has both a positive and a negative impact on managing the performance of remote team members. The positive impact is that the manager understands the work technically, and can relate much more easily to the complexity and metrics involved in setting performance measurements for team members. The negative side is that the manager may become “distracted” by the technical delivery, and not spend sufficient time in managing the relationships, performance and communication of the team members, as required in a remote situation. One manager mentioned specifically that the mindset and focus of a manager needed to change to be much more relationship-orientated.

“Have managers focus more on management specific tasks and not have to divide time between development, customer support, sales and actual management. With too many responsibilities management always falls by the wayside and subsequently not every resource is used to maximum potential. Management in itself should be considered a job, management appropriately skilled in people skills and personnel development, and required to collect and process the data required to increase performance without having to focus on other activities concurrently.” P39 (93)

“So it’s definitely different. But also now I’m in a line-management position, so you have to think, it’s a very different mind-set that you have to have, so. Definitely my management

style has changed. [...] I sometimes flip around between the Expressive and the Driver, depending on the situation that I'm in. So, when I'm very task-orientated, when I'm on a project and there's strict deadlines, so I'll go into that mode, but I found myself here, being in this position, I'm completely out of that mode and I'm completely into the Expressive mode and more the people-orientated, managing the people mode. It's a very different, it's actually who I am, actually." P45 (403)

#### **5.4.1.3 Defining knowledge work as a deliverable**

Knowledge work in the context of the study included documents, reports, customer value adds and process improvements. In Alpha and Tango there was also a good deal of focus on process improvement, as well as lessons learnt both in the context of projects completed and problems resolved. The one manager in Alpha also stated quite specifically that this sharing needed to be informal, and that it should be something "fun" or at least not seen as "work". In Alpha and Tango, individuals see knowledge work as "documentation" and in general, technicians do not want to document. They perceive this as outside the scope of what they should deliver. This may imply that one of the *manager responsibilities* would be to sift through the informal "sharing" and formally document the useful pieces in the right location. Also, in these companies "knowledge work" is not necessarily measured or rated as part of the IPAs.

"So they did express that if there is somebody you know some place, or more than a place, because they have access to a file base, but a physical knowledge base - what did you do today. (Interviewer: Something that works.) Yes. And a bit more informal. It's more like chat room, not really a chat room, but a place where you can post "I figured out how to do this". Most of the engineers in the data centre, especially all of mine, hate documentation. Like, that's why I say more informal kind of thing - you chat and you post things - you know, almost a newsgroup, that kind of thing. P10 (288)

In Delta, however, knowledge work, or the delivery of written contributions, is seen as much more acceptable and part of the day-to-day deliverables that individuals are measured on as part of the formal performance reviews.

"Then we have additional things that look around firm contribution. So different things that they are doing inside the firm, and whether it is writing proposals, thought leadership pieces, research, internal projects. We have quite a lot of internal forums and impact days and outreach programmes, whichever of those that they contribute in are also measured. It's basically just whether they are doing it or not. And the measure is really just to determine how engaged they are in the firm. Or are they just here doing projects and nothing else." P53 (91)

Various IT systems are used to save the knowledge deliverables in, such as SharePoint document portals, error databases and configuration management databases. It does not seem that blogs are used extensively for knowledge sharing.

“So putting a blog there, you might, again, only have the 10% passionate project managers who contribute and communicate and use that forum or that type of technology to share information and best practices.” P5 (278)

The code network associated with knowledge work is given in Figure 14-8 in Appendix E, and the list of codes with a short description is given in Table 5-11.

**Table 5-11: Code list: “Specific Deliverable: Knowledge Work”**

Description	Code	Category
Database with error messages.	Database {8-1}	Remote-Online Onsite Planned-post Unplanned
Documented information.	Documents {15-1}	
Creation of pictures in document or for marketing.	Graphics {2-1}	
Process improvement. Continuous improvements. Thought Leadership.	Improvements {5-1}	
Sharing knowledge and information (formal, not necessarily written).	Knowledge share {14-1}	
Fulfilling training. Learning new information.	Learn {1-1}	
Lessons learnt on projects. Building on best practice. Knowledge Article.	Lessons Learnt {7-1}	
Mentoring of others based on your area of expertise. Knowledge sharing.	Mentorship {1-1}	
Using or logging onto the knowledge portal.	Portal usage {3-1}	
Code or software in which business rules are encapsulated.	Software Programs {1-1}	
Creating new ideas as a team.	Team work {2-1}	

#### **5.4.1.4 Metrics and measurement**

To determine whether a piece of work has been delivered according to expectations, it needs to be measured. In this regard, managers have also indicated the importance of measuring the right thing. If you want to measure the team’s performance, make sure that the measures are not on individual level.

“And I found that if you compensate people, and not only compensate, but if you measure people based on for example, the number of tickets etc., that they are processing, then they are always going to go for the easy ones. There is going to be a fight on who is picking up the easiest ones the quickest. So it’s not about the customer, it’s about volume. P34 (519)

Managers also mentioned that when measuring an individual, one must make sure that the quantity is not to the detriment of quality.

“So, I think the main reason we have just not done it again. We wanted to change the metric a bit. We don’t want to; we are ultimately with a development, we are not chasing total lines of code, because it’s easy to write a lot of lines of code, but it could still be absolute rubbish.”  
P32 (181)

The metrics used for measurement of deliverables have therefore been divided into *objective (specific, measurable)* and *subjective (perception)* type of metrics. The manager is often involved in, and expected to set, performance measures for the individuals. The manager should therefore have sufficient experience in the technical field to be able to define “good” measures or to assess the quality and correctness of the measures that the individual might propose. The more measurable the deliverables are, the more easily the manager can allow the individual to work remotely. Items categorised as both objective and subjective are objective if there is a benchmark number that can be used to compare them with. They become subjective if this “benchmark” does not exist and measurement depends on the opinion of the manager or other evaluator. An example is “productivity” and number of products delivered. The definition and measurement of quality will be discussed in more detail in paragraph.

The codes shown in the network are listed in Table 5-12. The codes are linked to the subjective/objective category and then sorted in groundedness order (i.e. the number of times the codes was used in the coding phase). The type of codes most used were “Yes-No” indicators, counts, meeting of service levels, and achievement of delivery dates. (The network diagram is available in Appendix E, Figure 14-5.)

**Table 5-12: Code List: “Performance: Metrics”**

Description	Code	Objective / Subjective
Activity successful or delivered: Yes/No.	Yes-No {59-1}	Objective
Counting number of items completed.	Count {56-1}	
Service level achievement measured by whether the percentage was achieved. (Total Number - Missed SLA)/Total Number * 100 > 92%	Meet Service Level {32-1}	



**Table 5-12: Code List: “Performance: Metrics” (Continued)**

Description	Code	Objective / Subjective
Planning and setting target dates by which the deliverable should be ready.	Delivery Date Achieved {30-1}	Objective (cont.)
Not exceeding budgeted cost (as in project). Profitability (Cost vs Revenue). Achieving sales targets.	Financial (Profitability) {17-1}	
Formal customer satisfaction surveys. Achieving service levels as per agreement.	Customer Happy: Objective {12-1}	
Percentage plan vs complete. Sales: Year-to-date figures: Planned vs Actual	On schedule {8-1}	
Survey or checklist with calculated rating. All the items on the checklist within the stated parameters (i.e. no errors).	Checklist adhered to {7-1}	
Number of hours used of total hours. How many used for billable work.	Utilisation {7-1}	
Throughput or flow of activity. Movement (emails flowing; calls reducing).	Throughput {4-0}	
"Number of days after promised delivery.	Delivery Date Aging {3-1}	
Number of deliverables in a specified time. The more products in a specified time, OR, the shorter the time to deliver a specific product (compared with a "benchmark" or average team time), the higher the productivity. ; Could be related to hours billed to customer; "Availability" as a measure of productivity.	Productivity {20-1}	Objective / Subjective
Using a pre-agreed scale (e.g. 1 to 5) to allocate a rating to the work.	Rating {19-1}	
Timesheet accuracy. Percentage of devices correctly installed. Completeness - all issues logged, all risks raised, document comprehensive. Percentage of questions answered correctly.	Accuracy Percentage {11-0}	
Specific positive verbal customer feedback. No negative feedback received.	Customer Happy: Subjective {19-1}	Subjective
Informal feedback about the individual from the customer or from others; All is "ok" if hearing nothing.	Noise Levels (Perception) {3-1}	

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

Table 5-13 contains the co-occurrence table generated for the “Specific Deliverables” in relation to the “Metrics” codes. Where the intersection cell in the table has a value (called the co-efficient value), it shows that both the deliverable and metrics codes were applied to the same quote. The magnitude of the value shows the intensity of the match. The table can therefore be used as a look-up table to determine what metric was used for a specific deliverable. The last column in the table indicates if the deliverable was also measured in terms of a quality metric, the detail of which can be

found in Table 5-16. The “Total” column at the bottom of the table is a total for the column of the metric, and shows the total calculated intensity for that metric in relation to all the deliverables. In this regard, it would show that “Accuracy Percentage” has the highest intensity (0.55) in relation to the other metrics in the table. The co-efficient is calculated as  $c := n_{12}/((n_1 + n_2) - n_{12})$ . ( $n_{12}$  = co-occurrence frequency of two codes  $c_1$  and  $c_2$ ,  $n_1$  and  $n_2$  being their occurrence frequency).

**Table 5-13: Co-occurrence of “Specific deliverable” and “Metric”**

Code: "Specific Deliverable"	Accuracy Percentage	Checklist adhered to	Count	Customer Happy: Obj	Customer Happy: Subj	Delivery Date Achieved	Financial (Profitability)	Meet Service Level	Noise Levels (Perception)	On schedule	Productivity	Rating	Utilisation	Yes-No	Quality
Break-fix	0	0	0	0	0	0	0	0	0	0	0	0	0	0.03	N
Checklist	0	0.1	0.01	0	0.03	0	0	0	0	0	0	0	0	0.06	Y
Config Changes	0	0	0.02	0	0	0	0	0	0	0	0	0	0	0	N
Consulting	Only quality metric allocated														Y
Customer Value	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	Y
Data Captured	0.07	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Documentation	0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Feedback	0	0	0	0	0	0.03	0	0	0	0	0	0	0	0.03	N
Follow Process	0	0	0.03	0	0	0.02	0	0	0	0	0	0	0	0.01	Y
Intervention	0	0	0	0	0	0.03	0	0	0	0	0	0	0	0	N
Manage Alerts	0	0	0.03	0	0	0	0	0.03	0	0	0	0	0	0	Y
Manage Incidents	0	0	0.11	0	0	0.02	0	0.07	0.06	0	0	0	0	0.01	N
Manage Devices	Only quality metric allocated														Y
Manage Service	0	0	0	0	0	0.03	0	0.03	0	0	0	0	0	0	Y
Manage Suppliers	0	0	0	0	0	0.03	0	0	0	0	0	0	0	0	N
Marketing Material	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Optimisation	0	0	0.02	0	0	0	0	0	0	0	0	0	0	0	Y
Output	0	0	0.04	0.04	0	0	0	0	0	0	0	0	0	0.07	Y
Plan	0	0	0.02	0	0	0	0	0	0	0	0	0	0	0	N
Product (Software)	0	0	0	0	0	0	0	0	0	0	0.03	0	0	0.01	Y
Product (SW.Sale)	0	0	0	0	0	0	0.05	0	0	0	0	0	0	0	Y
Product (Test)	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	N
Product Docs	0	0	0	0	0	0.03	0	0	0	0	0	0	0	0	Y

**Table 5-13: Co-occurrence of “Specific deliverable” and “Metric” (Continued)**

Code: "Specific Deliverable"	Accuracy Percentage	Checklist adhered to	Count	Customer Happy: Obj	Customer Happy: Subj	Delivery Date Achieved	Financial (Profitability)	Meet Service Level	Noise Levels (Perception)	On schedule	Productivity	Rating	Utilisation	Yes-No	Quality
Project	0	0	0	0	0	0.04	0.03	0	0	0.13	0	0	0	0.04	Y
Project Mng Docs	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	Y
Proposal	0	0	0.02	0	0	0	0.05	0	0	0	0	0	0	0	Y
Report	0.08	0	0.05	0.03	0	0.02	0	0.05	0	0	0	0	0	0	Y
Report: Dashboard	0.13	0	0	0	0	0	0	0	0	0	0	0	0	0.03	Y
Survey	0	0	0	0.13	0	0	0	0	0	0	0	0.09	0	0	Y
System Availability	0	0	0	0	0	0	0	0.06	0	0	0	0	0	0.06	Y
System Capacity	0	0	0	0	0	0	0	0.06	0	0	0	0	0	0.07	N
System Quality	0	0	0.02	0	0	0	0	0	0	0	0	0	0	0.03	N
Task List	0	0	0.01	0	0	0	0	0	0	0	0	0	0	0.03	N
Test Results	0.07	0	0	0	0	0	0	0	0	0	0	0	0	0	N
Timesheet	0.11	0	0.06	0.04	0	0	0	0	0	0	0	0	0.15	0	Y
<b>Total</b>	<b>0.55</b>	<b>0.1</b>	<b>0.44</b>	<b>0.24</b>	<b>0.03</b>	<b>0.25</b>	<b>0.13</b>	<b>0.3</b>	<b>0.06</b>	<b>0.13</b>	<b>0.03</b>	<b>0.09</b>	<b>0.15</b>	<b>0.52</b>	

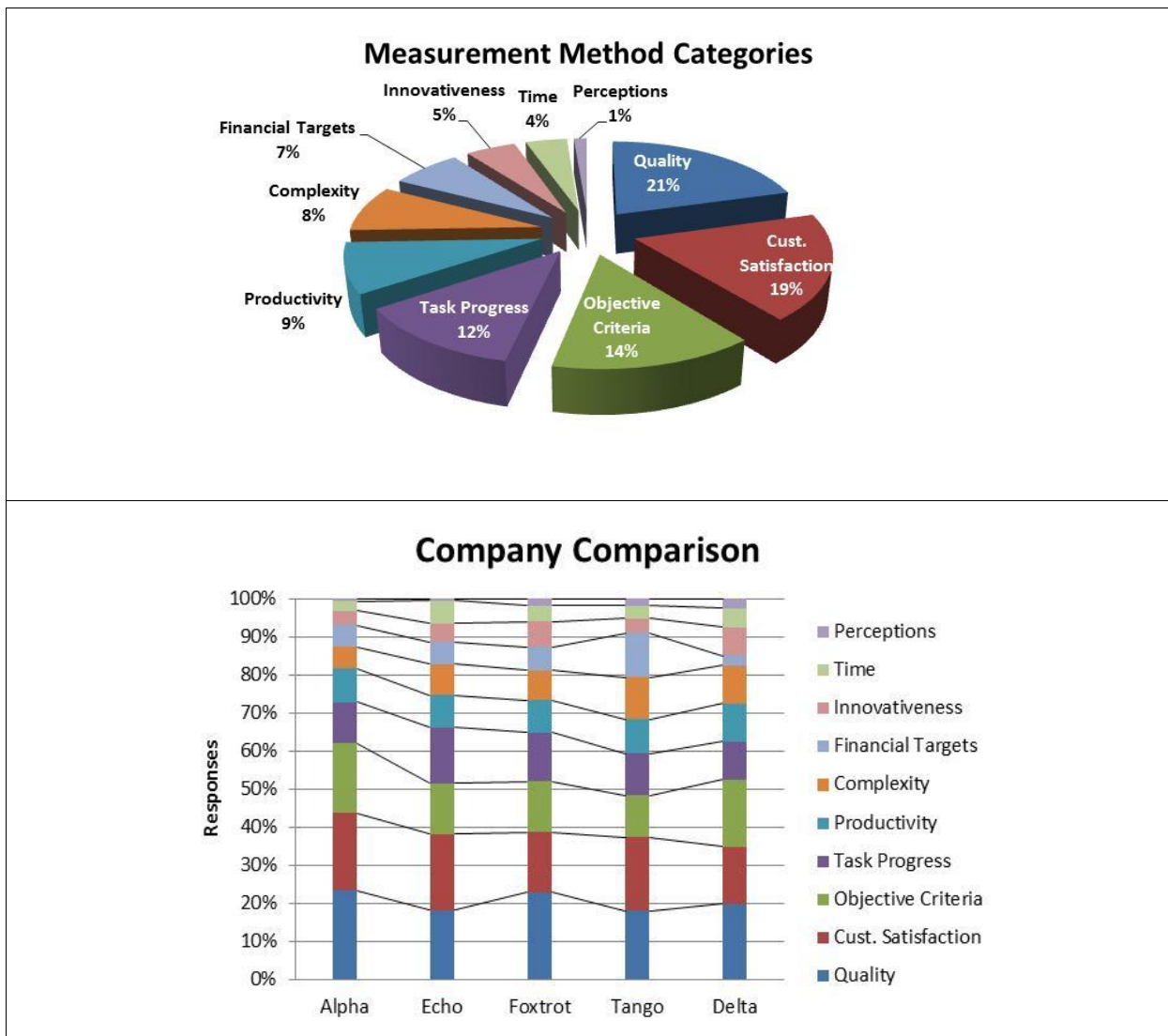
The metric that co-occurred with the code for knowledge work with the highest intensity was “Quality: Perception”. The other codes are listed in Table 5-14.

**Table 5-14: Co-occurrence: “Knowledge Work” and “Performance: Metrics”**

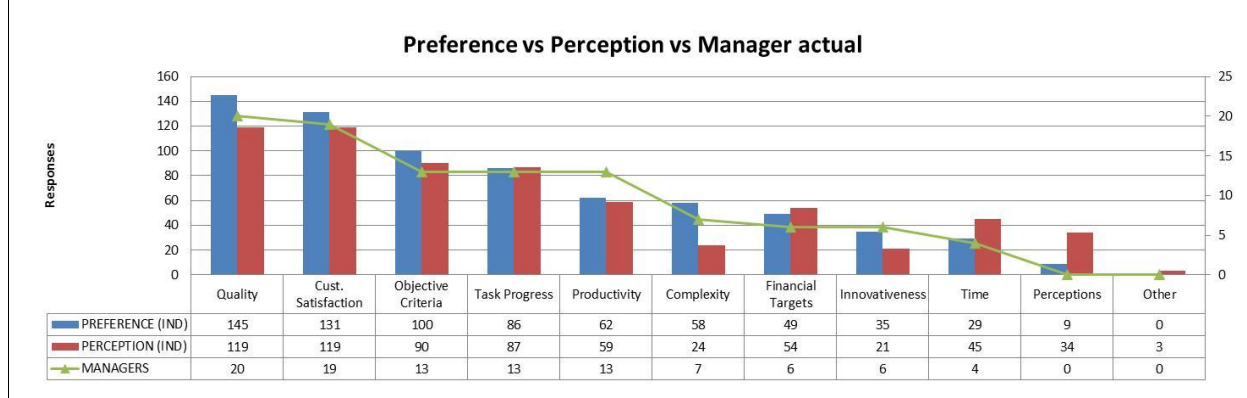
Code: "Knowledge Work"	Accuracy Percentage	Count	Yes-No	Quality: Fit for Purpose	Quality: Knowledge shared	Quality: Perception	Quality: Project
Database	0	0.02	0	0	0	0	0
Documents	0.04	0.03	0	0.03	0	0	0
Graphics	0.07	0	0	0	0	0.25	0
Improvements	0	0.02	0	0	0.14	0	0
Learn	0	0	0.02	0	0	0	0
Lessons Learnt	0	0	0.01	0	0	0	0.06
Portal usage	0	0.02	0	0	0	0	0
Team work	0	0	0	0	0	0.11	0
<b>Total</b>	<b>0.11</b>	<b>0.09</b>	<b>0.03</b>	<b>0.03</b>	<b>0.14</b>	<b>0.36</b>	<b>0.06</b>

In addition to the answers received from managers in the interviews, individuals were asked in the team online questionnaires how they perceived that their performance was being measured (“perception”) and how they would like their performance to be measured (“preference”). In a shortened online questionnaire, managers were asked a similar question on how they measured performance. The preference of the individual respondents, analysed in a single dataset, was firstly to be measured on quality, thereafter on customer satisfaction, objective criteria and task progress, in that sequence. This corresponds to the individuals’ answers in the respective cases. From a visual inspection of frequency mapping, there also seems to be a high correspondence of the preference of the individuals (as a total data set) with the answers of the managers. The three related graphs can be seen in Figure 5-19.

**Figure 5-19: Performance measurement method preference**



**Figure 5-19: Performance measurement method preference (Continued)**



#### 5.4.1.5 Defining the quality of deliverables

Managers were asked how they would define quality of the work being performed, especially in the context of using this as an additional metric or way of evaluating the work of individuals. The codes and their descriptions are given in Table 5-15. In general, managers found it difficult to define quality. In some cases peer reviews were used. On the whole, quality relates to correctness and attention to detail regarding the deliverable; the value add that the deliverable is giving; whether the process was followed or correct templates used; positive feedback from the customers and meeting their expectations; the type of information and knowledge that is being shared by the individual; communication being correct and professional, timing related; embodiment of the values of the organisation; and lastly perceptions. There seem to be many objective and measurable items that form part of quality deliverables. However, when looking at the client requirement in determining a quality contribution, the question arises of determining what the actual requirement is, and how this can then be met or exceeded.

“It needs to meet and exceed the client expectations. The trick is really to find out what is the client looking for and what would meet their expectations. So it’s very much a balancing act between exceeding what the client expects and really understanding what they want. Because often what they say they want and what they do want is not the same thing. So it’s really working closely with the client and then translating that into stream and individual expectations.” P53 (232)

The quality measures should be part of the expectations that the manager needs to set up front with the team members. The different companies differed in the description of quality only to the extent that different products were being delivered.

**Table 5-15: Code list: “Performance Metrics: Quality: Definition”**

Description	Code	Category
Being accurate with predictions - monetary predictions. ; Being accurate with information in a document - cannot necessarily be counted. (Peer Review needed); Incidents addressed correctly.	Accuracy {11-1}	Deliverable correct and attention to detail
Number of requests successfully completed.	Success rate {1-1}	
Attention to detail.	Detail {3-1}	
Correct grammar and language usage. "spick and span" ; Also in written communication - correct addressing of the customer.	Grammar/Language {7-1}	
Enhancing functionality; Informed; well thought-through. ; Adding value (to customer; to service offering); Innovative.	Enhancing {9-1}	Value add
Fit for purpose or in other words "it works". ; Does not over-promise. ; "Proper" documentation. ; Addressing the right target audience (Report).	Fit for Purpose {16-1}	
Performance related to software program running efficiently, or providing result in acceptable timeframe. (Transaction response time.) ; Efficiency in sale process.	Performance {9-1}	
Definition of quality for a project specifically. In time, scope and budget.	Project {12-1}	
Thinking about the total system and not just one instance. ; Coding for all eventualities (good error handling) ; Keeping the total system in mind when designing a solution. ; Complexity of the solution.	Systems Thinking {4-1}	
Following the stated methodology.	Project: Follow methodology {2-1}	Process followed
Checklist or Audit values all above a certain agreed rating ("Green").	Checklist {1-1}	
How is performance benchmarked? Reference to benchmarking. ; Following the processes and standards prescribed by the industry frameworks such as ITIL; Using the framework or document template that was provided.	Standards {39-1}	
Following the process.	Way of work {6-1}	
Building a long-term customer relationship - the customer is willing to interact.	Customer relationship {1-1}	Customer (Panopticon)
Meeting customer requirements or expectations. Customer is happy.	Meet Customer Expectation {13-1}	
Other individuals or peers that review the work giving the go-ahead.	Peer review {8-1}	Peer review (Panopticon)
Number of inputs received. Contributions made to planning.	Inputs received {1-1}	Knowledge / information
Sharing of information, of knowledge specific to one individual, with others. (Could be verbally or via formal documentation.) ; "Customer" could also be the manager (i.e. delivering what was promised).	Knowledge shared {3-1}	

**Table 5-15: Code list: “Performance Metrics: Quality: Definition” (Continued)**

Description	Code	Category
Professional in communication, timeliness, and returning calls.	Professional behaviour {2-1}	Professional / Communication
Engaging with the right parties; Inclusivity. Including documentation and reporting.	Right communication {5-1}	
If less time is taken then this is seen as higher quality. I.e. quality = productivity. (Especially if the solution is complex); Delivering in a timely manner or on time. (Keeping the same code) ; Meeting deadlines (Does not show difficulty in setting and then achieving those deadlines).	Time {10-1}	Timing
Company values - adherence to and feeling comfortable with the values.	Values {1-1}	Values
Not first-hand, feedback received. ; General perception or gut feel.	Perception {8-1}	Perception

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

One can also see that normally not only one quality measure is considered at a time. In the statement below there are many aspects relating to quality. The first entails a basic standard of spelling, grammar and format, and peer reviews are used to check this. Secondly, the contribution must be short and to the point and the key message needs to stand out. Thirdly, this statement embodies the subjectivity of quality, in that it depends on the expectations of the specific manager.

“I have a rule that I don’t get anything that has not been checked by somebody else, specifically around spelling, grammar, format, because sometimes you are too close to it, to the deliverable, to actually see that. And also asking the question ‘So what?’; because we have to get a key message across to the customer in a short space of time. [...] But it often goes through quite a few iterations, especially if they have not done this before, or if they are new working with me. Because each project manager works differently. So it’s also getting used to who you are working with and what they expect.” P53 (240)

Managers were also asked if they made comparisons between team members regarding their quality of delivery. Most managers indicated that no direct comparisons were made, although it did seem to happen on a subconscious level. Moreover, only items that are actually measurable or factual can be compared.

“Each one has a different value in the chain that we do, so it’s a bit difficult to compare them. What I do compare is the common stuff, like the finances, the reporting, the production of a report, not the content obviously.” P47 (200)



While coding “Specific deliverables”, the metric or definition of quality was often used for the same phrase or quote. Those co-occurrences of quality metric and specific deliverable are given in Table 5-16. By selecting a deliverable in the left-hand column, and then looking at the heading of the column against the blocks with values in the table, one can determine the type of quality measurement identified during the interviews for that deliverable.

**Table 5-16: Co-occurrence of “Specific deliverables” and “Metrics: Quality”**

Code: “Specific Deliverable	Accuracy	Checklist	Customer relationship	Detail	Enhancing	Fit for Purpose	Grammar/Language	Inputs received	Knowledge shared	Customer Expectation	Peer review	Perception	Performance	Professional behaviour	Project	Project: Methodology	Right communication	Standards	Success rate	Systems Thinking	Time	Values	Way of work		
Consulting	0	0	0	0	0.1	0	0	0	0	0.07	0	0	0	0	0	0	0.17	0	0	0	0	0	0	0	
Customer Value	0	0	0	0	0.15	0	0	0	0	0.11	0	0.08	0	0	0	0	0	0	0	0	0	0	0	0	0
Report	0.05	0	0	0.03	0.03	0.07	0	0	0	0	0	0	0	0	0	0	0.03	0.02	0.04	0	0	0	0	0	0
Product (Software)	0	0	0	0	0	0.03	0	0	0	0	0	0.05	0.05	0	0	0	0	0	0	0	0	0	0.08	0	
Project	0	0	0	0	0	0	0	0	0	0.1	0	0	0	0	0.07	0	0	0.02	0	0	0	0	0	0	0
Manage Devices	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.17	
Survey	0	0	0	0	0	0	0	0	0	0	0	0	0	0.17	0	0	0	0	0	0	0	0	0	0	0
System Availability	0	0	0	0	0	0	0	0	0	0	0	0	0.15	0	0	0	0	0	0	0	0	0	0	0	0
Report: Dashboard	0.07	0	0	0	0	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Product Documentation	0	0	0	0	0	0.04	0.08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 5-16: Co-occurrence of “Specific deliverables” and “Metrics: Quality” (Continued)

Code: “Specific Deliverable	Accuracy	Checklist	Customer relationship	Detail	Enhancing	Fit for Purpose	Grammar/Language	Inputs received	Knowledge shared	Customer Expectation	Peer review	Perception	Performance	Professional behaviour	Project	Project: Methodology	Right communication	Standards	Success rate	Systems Thinking	Time	Values	Way of work	
Documentation	0	0	0	0	0	0.03	0.05	0	0	0	0	0	0	0	0	0	0	0.02	0	0	0	0	0	0
Manage Alerts	0	0	0	0	0.09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manage Service	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09
Optimisation	0	0	0	0	0.09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Output	0.04	0	0	0	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Data Captured	0.08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Follow Process	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	0	0	0	0	0	0.06
Marketing Material	0	0	0	0	0	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Proposal	0	0	0	0	0	0	0	0	0	0.06	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Product (Software: Sale)	0	0	0	0	0	0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Timesheet	0	0	0	0	0	0	0	0	0	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Checklist	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	0	0	0	0	0	0
Project Mng Docs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	0	0	0	0	0	0
<b>Total</b>	<b>0.24</b>	<b>0</b>	<b>0</b>	<b>0.03</b>	<b>0.51</b>	<b>0.33</b>	<b>0.13</b>	<b>0</b>	<b>0</b>	<b>0.37</b>	<b>0</b>	<b>0.13</b>	<b>0.2</b>	<b>0.17</b>	<b>0.07</b>	<b>0</b>	<b>0.2</b>	<b>0.12</b>	<b>0.04</b>	<b>0</b>	<b>0</b>	<b>0.08</b>	<b>0.32</b>	

Note:  $c := n_{12} / ((n_1 + n_2) - n_{12})$ . ( $n_{12}$  = co-occurrence frequency of two codes  $c_1$  and  $c_2$ ,  $n_1$  and  $n_2$  being their occurrence frequency).

#### 5.4.1.6 Control and trust

During the interviews, the words “control”, “standards” and “rules” seemed to be mentioned very often. Particularly in the companies providing outsourcing services to their customers, strict service levels needed to be adhered to and industry standards in service delivery applied. ATLAS.ti provides a function whereby a word count for all documents included in the hermeneutic unit can be done. Thus it was possible to test the perception regarding the use of these “control”-type words across the different cases. This showed that the word “standard(s)” (with its variants “standardise” and “standardisation”) was used 122 times in the documents that were transcribed. The words “control(s)” and “controlling” were used 94 times and the word “rule(s)” was used 79 times. This is opposed to the total count for the word “choice/choose” (and similar) which was used 27 times, and “free/freedom” which was used 39 times. However, the word “trust” (and variants, including trusted, trusting, trusts and trustworthy) was used 134 times.

The graphs in Figure 5-20 show firstly the word frequency in descending order for control-related words, and secondly how many times the word was used in each company in relation to the other companies.

**Figure 5-20: Counts for “control”-related words**

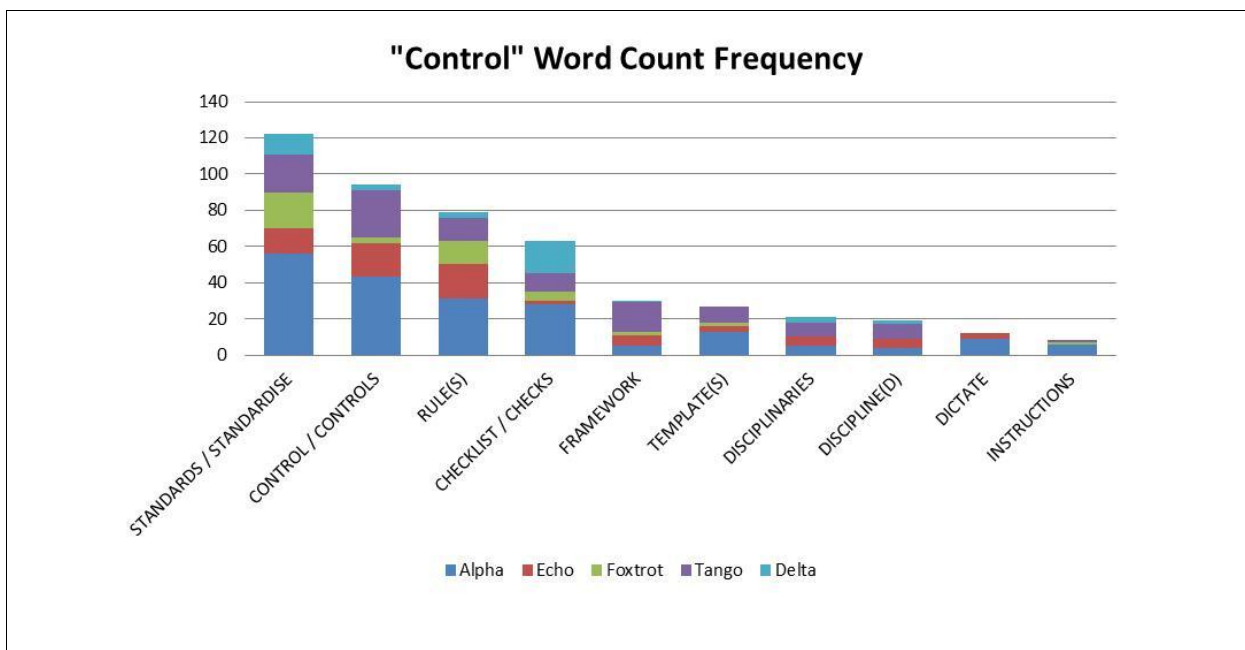
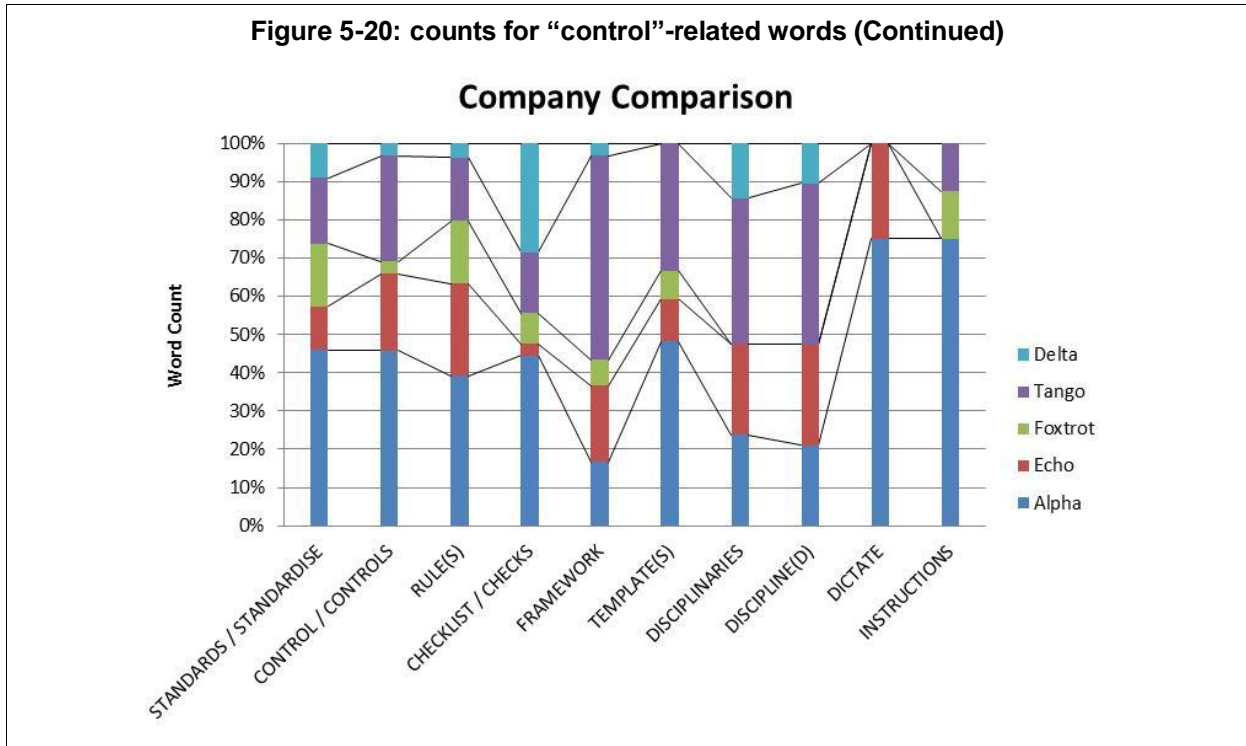
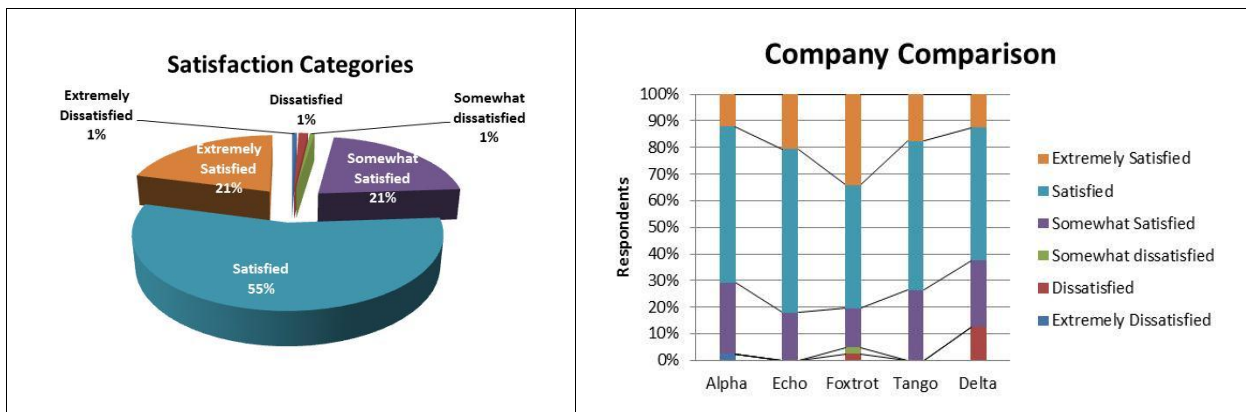


Figure 5-20: counts for “control”-related words (Continued)



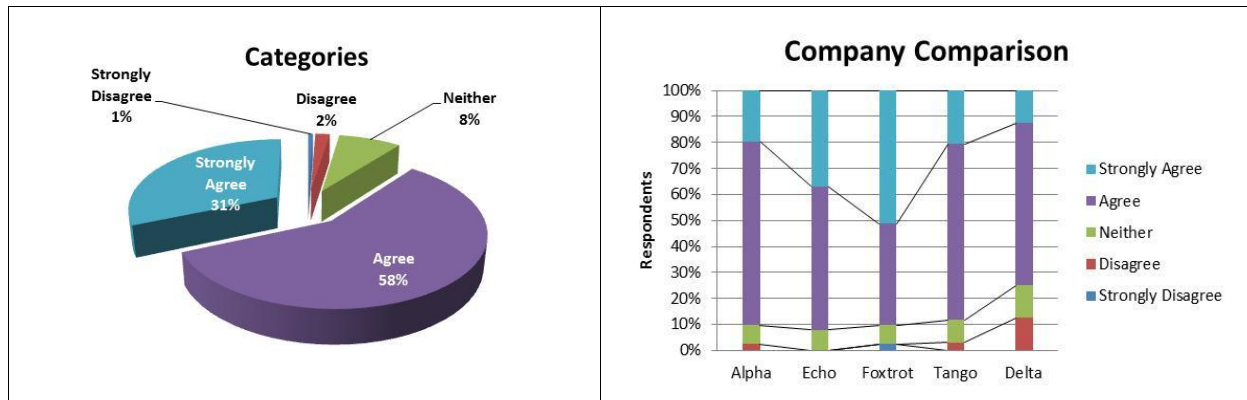
In pursuance of the question of control, individuals were asked various questions on control. Individuals were also asked how satisfied they were with the amount of control that they had over their work. When combining all three categories for “satisfied”, the majority of the individuals were satisfied (97%, of which 76% were “Extremely satisfied” and “Satisfied” combined) and only 3% indicated dissatisfaction. Individuals who indicated dissatisfaction were in Foxtrot and Delta. Echo was the company where most of the individuals were “Extremely satisfied” and “Satisfied”. This is shown in Figure 5-21.

Figure 5-21: “How satisfied are you with control”



The third question on control asked the individuals if the amount of control that their manager exerted over their day-to-day activities was acceptable. Eighty-nine percent (89%) of the individuals agreed, while 8% did not agree or disagree, and 2% disagreed. This is shown in Figure 5-22.

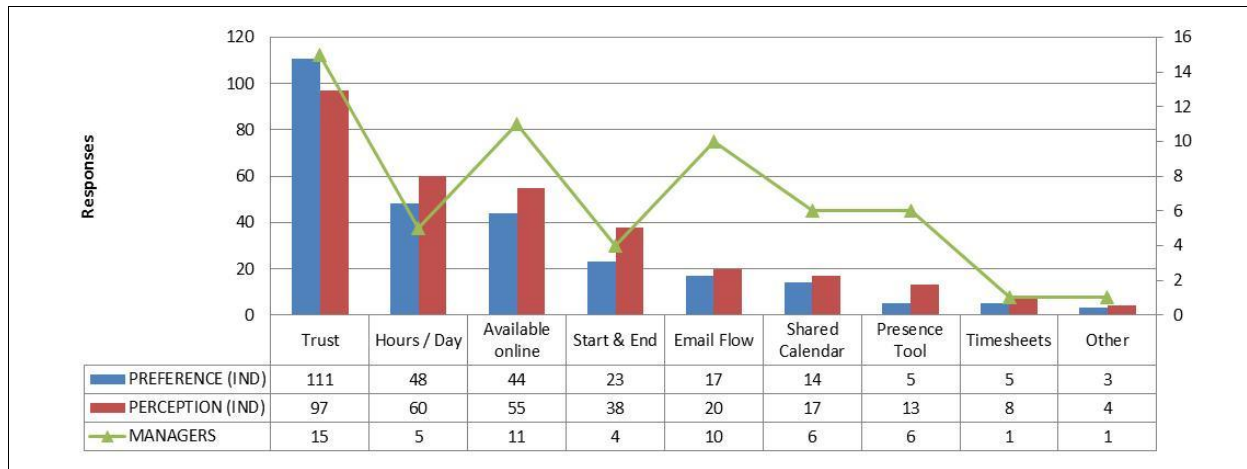
**Figure 5-22: “Control by manager acceptable”**



From these three questions it seems that individuals in general feel that they have control over their work, and that the managers are not exerting too much control, in spite of the number of times the managers actually mentioned the word “rules” and “standards” in the interviews.

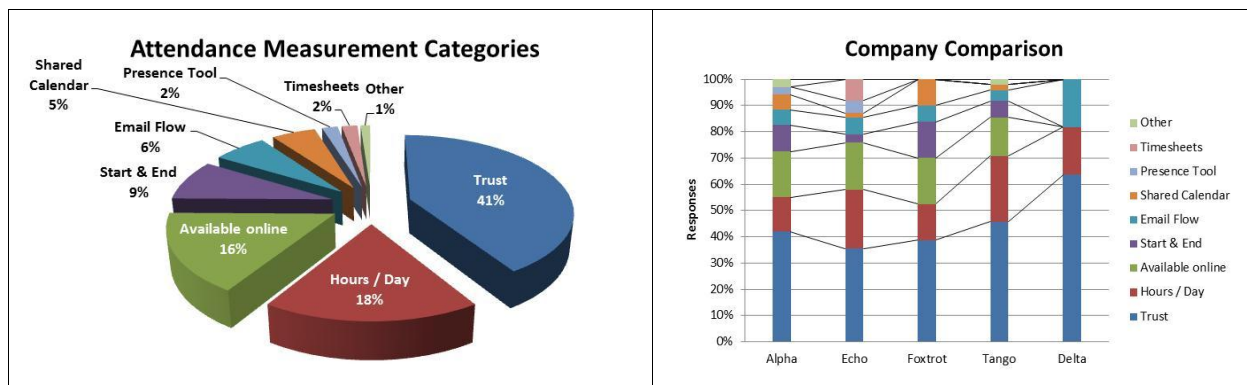
In the online questionnaires, a comparison was also drawn between how individuals would like their attendance to be measured, as opposed to how they perceived that their attendance was being measured. The managers were also asked how they measured or checked the attendance of individuals. The comparison based on the combined dataset across all companies is shown in Figure 5-23. In general, individuals wanted their availability to be measured more on trust and less on all the other categories. Managers said they used trust the most, but also availability online and email flow to determine if individuals were “available” while working remotely.

**Figure 5-23: Attendance measurement: Preference vs. perception (Total)**



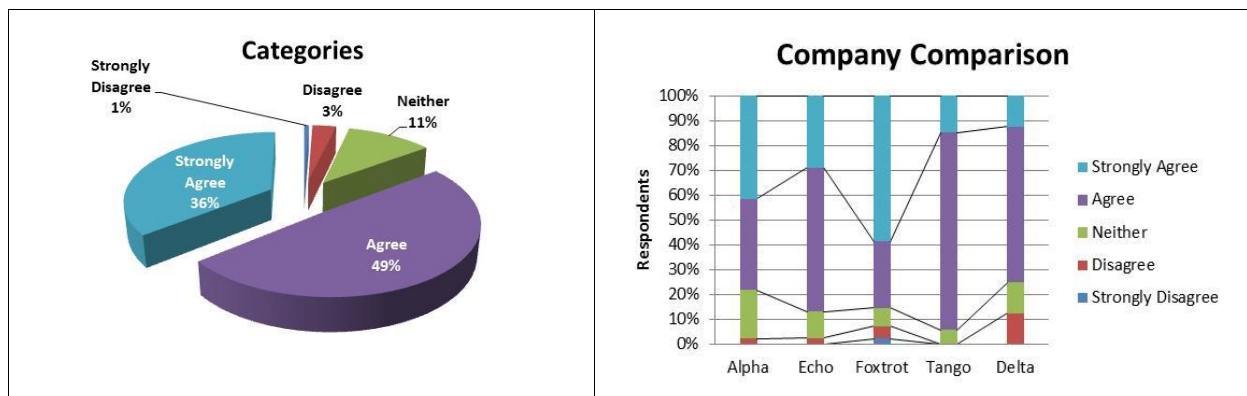
The preference of the individuals was further analysed, with the second-highest preference for hours per day and third-highest on availability online. The company comparison of preference is also given in Figure 5-24.

**Figure 5-24: Attendance measurement preference**



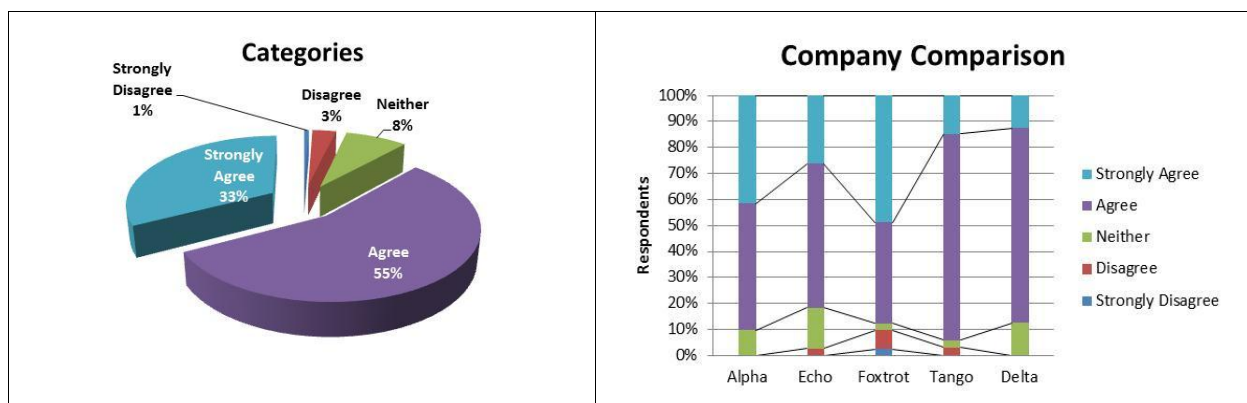
Individuals were specifically asked if they trusted their manager. Eighty-five percent (85%) of all individuals agreed that they trusted their managers. The highest measure of trust was found in Tango. In a similar online question to the managers, all of the managers agreed that their team members trusted them, except for one manager who neither agreed nor disagreed. The answers of the individuals are shown in Figure 5-25.

**Figure 5-25: “I trust my manager”**



Individuals were also asked if they thought that their manager trusted them. Eighty-eight percent (88%) of the individuals agreed, while in a similar online question to the managers, all of the managers indicated that they trusted their team members. The answers of the individuals are shown in Figure 5-26.

**Figure 5-26: “My manager trusts me”**



From these two questions there seems to be a gap between how managers trust (all managers trust their team members) and how individuals perceive this trust (perceived as somewhat less trusting).

Trust also plays an important role during performance feedback. Some managers do feel uncomfortable with the feedback process, and feel that the formal performance appraisal gives the opportunity to bring non-performance and performance items to the table. Here the trust that is built up between manager and individual is important, so that a trusted individual would benefit from open and honest feedback. The manager needs to learn to translate perception (“gut feel”) into objective feedback,

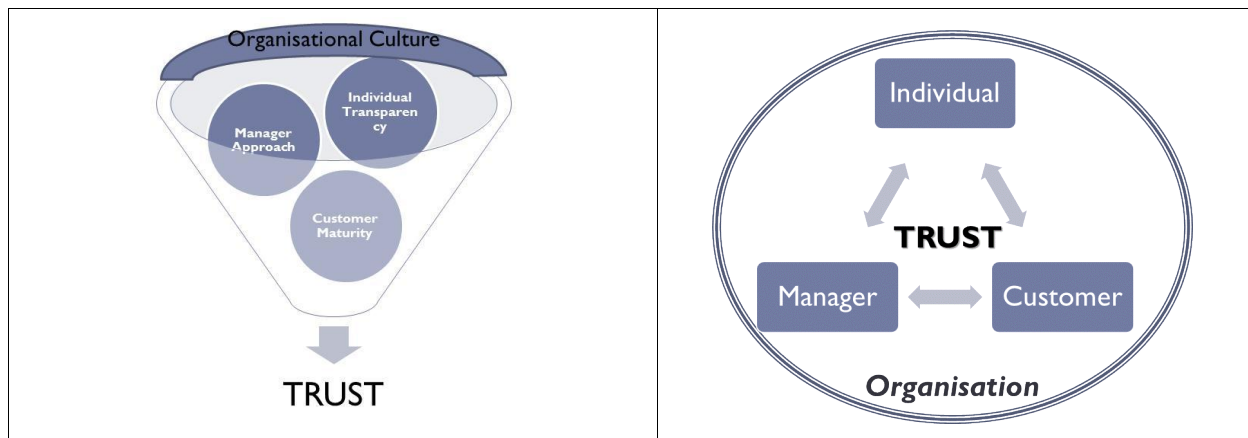


and the individual needs to learn to reflect on comment given, rather than dismiss negative criticism as necessarily untrue.

“I think if we did some kind of a performance appraisal. I am not sure what we would do? Let me put it this way, I think from a performance perspective, I have a relatively good idea of how people are performing. I can tell you who in the team I think is kind of underperforming, and I can probably give you reasons why. I can tell you who is working, and although they are working and working all the time, but their results are not all that good. But I don't think it's easy for me to translate in a way that they would understand that. So I think that some kind of a performance appraisal would probably be good for them to see the results, and for them to see “oh, this is what they think of what I am doing”. P32 (459)

In consolidating the aspects relating to trust, four parties have emerged in the trust relationship, namely the manager, the individual, the customer and the organisation. The manager's approach is important and includes his or her actions as enabler. The customer needs to become mature through experiencing good service from remote individuals. The individual's contribution is transparency in activity through maturity and skill. These three elements exist within the organisational context, which could either enhance or diminish trust through the organisational culture and leadership, as in Figure 5-27.

**Figure 5-27: Triangle of trust (including the organisational impact)**



#### 5.4.2 Managing Non-Performance

Managers also indicated how they managed non-performance. Managers seemed to want to do it as soon as possible, especially if there was a negative impact on the customer's service. In this case the customer would also expect that the individual would be suitably reprimanded. The preference for handling these non-performance

situations was to have a meeting face to face, but it was often necessary to do this via telephone or other online medium. There were, however, some cases in which the manager actually preferred the remote situation when conveying difficult messages, since it was found to be easier to get the message across while not seeing the expression of the individual.

“It’s very nice to sit across a table and see a person’s body language to try and read that. But on a telco it’s quite nice, the part I enjoy is that I don’t know how the people are reacting to what I am saying, which has two things. I have to articulate very well what I want to say so that I am sure that I get my point across. And I don’t really see the guy who would potentially shrug their shoulders or throw their hands in the air. I don’t see that, so I carry on saying what I am saying. So people sense on the receiving end, people seem to listen to someone on the phone rather than interrupt you while you are talking. There are two ways and I prefer that because I think you get a lot more said on a telco.” P47 (239)

“And for the same reason of giving feedback. For example I don’t see you so I can give you constructive feedback and I don’t have to feel guilty about it because I don’t see your face on a daily basis.” P55 (194)

The next step is around resolving problematic issues, in which case the managers would obtain the facts, focus on the solution and involve the team where possible. In these cases it may also be easier to get the team together on site. Issue resolution is also facilitated by individuals keeping the managers informed in general, especially if they notice that something seems to be going wrong. The manager could then also “protect” the individual to a large extent from the customer.

“...within a team one of my mottos is, and I suppose the guys are tired of hearing this: “What I don’t know about I cannot help to defend you.” So if you tell me about something, I can always help or defend you or stand up for you.” P47 (206)

The manager will also assist the individual through coaching to ensure that the individual takes accountability and learns from the mistake made. Other actions include following the formal disciplinary process or doing a performance improvement review, or giving the individual a written warning. This is normally when HR would get involved in the process. In a case where the individual has been allowed to work remotely or from home as a privilege, this privilege would be revoked, and the individual would have to work at the main office location, until he or she has shown improvement. Should the individual not be able to cope with the type of work, he or she would be given an opportunity in a different team.

“My job, I do not see my job as monitoring. If a person does not do his job he will be replaced. I am not going to do it for him, he will do it for himself, or she for herself, whatever the case.” P46 (336)

A major consequence of non-performance is that the managers tend to revert to micro-management.

“However, when there is concern, or when I have suspicion about whether someone is really as active or working as hard as I think they should, then I might start to implement some small things where I can start measuring. Where I will say I’d like a list of: what demos did you do this week? What, how many cold calls or prospecting calls did you make? Maybe give me a plan for next week, what your goals are for next week, and then we are going to discuss how you performed against those. So, I only do that as a remediation step if something is not happening as it should be.” P35 (82)

“So I go in with a “You are competent, you will deliver and I will manager your outputs, until you miss deadlines or you give me poor quality”. Then I start becoming a more input-managed manager. So then I want to know where you are, what you are doing, and then I become a lot more hands-on. I kind of in the beginning throw a few activities out to see where the individuals are, and what their skill level is, and how much support they are going to need.” P53 (246)

The list of codes is given in Table 5-17, with the categories as described above also shown.

**Table 5-17: Code List: “Performance: Manage: Non-performance”**

Description	Code	Category
In some cases, activities need to happen immediately.	Timing: Immediate {14-1}	Timing
Will address later if not that serious. i.e. when have meeting (even if virtual meeting).	Timing: Later {1-0}	
The implication of face to face is that the manager may need to wait before the issue can be addressed.	Face-to-face {7-1}	Location
There is a certain expectation of the customer on how the individual should be handled.	Customer Expectation {2-1}	Customer
When things go wrong, the manager tries to protect the individuals (from the customer).	Protecting {5-1}	
Focus on solution and how to resolve.	Focus on solution {6-0}	Issue resolution
Indication of getting the facts first, before making any judgements.	Get Facts {16-1}	
Whole team is involved to resolve the issue.	Team involvement {3-0}	

**Table 5-17: Code List: “Performance: Manage: Non-performance” (Continued)**

Description	Code	Category
Want to change behaviour - focus on what went wrong.	Behaviour change {5-0}	Action taken
Coaching approach. Guidance.	Coaching {4-0}	
HR is called in to assist with managing performance that is not up to standard.	HR assistance {4-1}	
Less increase or no increase received	Impact on increase {3-1}	
Performance improvement review - formal process of review and improvement plan.	PIR {5-1}	
Following a formal process, called the disciplinary process, which is normally documented in the company's policies.	Disciplinary process {6-1}	
Either written, which would be part of the disciplinary process, or informal.	Warning {2-1}	
The person is removed from the team, either by the manager or by the individual resigning.	Remove from team {8-0}	
Mostly removing of the "Work from home" privilege.	Remove reward {16-1}	
Checking more regularly. More checkpoints.	Micro-manage {9-1}	Consequence
Adding another management layer.	More managers {1-1}	

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

There are, however, certain aspects of the manager’s approach that could cause non-performance, which are listed in Table 5-18. The first aspect is *distrust*. Individuals perceive the fact that managers require more detail on time spent as distrust and their performance will decline. In turn the managers employ more micro-management techniques. The objective would be to find a balance between obtaining sufficient metrics for the manager to feel comfortable that the individual is performing up to standard, and cultivating an environment that works on trust. The question needs to be answered “Why measure?”

“They build in so many controls and mechanisms to make sure that this poor soul is actually working from home, that the poor soul who should be working 8 hours now almost feels compelled to work 12 hours just to prove that I actually really did work. Which is defeating the purpose at the end of the day, because you are not making it easier, you are making it more difficult, but whether you are actually managing the productivity when they sit in the office does not come into play.” P49 (355)

**Individual contribution:**

“Less micro management from team leads and more involvement and compassion from senior management” P17 (132)

“I don't think that doing more of anything can be done for performance to be managed effectively. I would rather see performance management be less intrusive in order for myself to focus more on my work. I find that it can be too much of a distraction sometimes” P17(86)

The second aspect is that if the individual *does not understand the goals and objectives set*, the manager needs to spend more time to ensure that these are understood.

“But, the reality is that even though we have ITIL, people were given tasks by their team leaders and, you know, “Do this” and they wouldn’t know why. They didn’t care about deadlines or timelines. They didn’t care about; it’s a very careless thing to say but it was really an ‘I’ll get to it when I get to it’ instead of having the urgency.” P12 (29)

There could, however, also be a negative impact on service delivery *if the manager is not following the formal performance management process*, and making sure that individuals are suitably qualified according to the customers’ service level requirements. This could result in service penalties that need to be paid on organisational level, but could also impact negatively on the individual if he or she has not been assisted in improving performance.

#### HR’s perception of managers

“So the processes are there to underlie this. But the quality is not in the process because the performance management is not owned by the management. They see it purely as I need to do Performance Agreements for the company. HR wants me to do employee development discussions, so managers don’t own the process in terms of “why am I really doing this discussion?”” P49 (276)

#### Individual’s contribution

“People’s feedback, perceptions or your ignorance in not knowing what others think and feel about you, you might think that you are doing your best but the other end might not see or appreciate the effort being put in and you find out too late that there’s something that you need to work on. For me it would be great that if a manager gets a complaint of one faltering it should be raised immediately with the person or collectively without pointing fingers, so that one knows what’s the expectations of others and how to improve oneself.” P18 (42)

**Table 5-18: Code List: “Manager: Approach: Impact”**

Code	Description
Micromanagement {9-0}	Specific statement of how micromanagement degrades performance. Also too many metrics
Distrust {8-3}	Lack of trust and micromanagement.
Goals and Objectives {4-4}	Understanding or knowledge of the goals, or what is expected of the individual.
Not managing formally {3-0}	Impact on customer commitments if not managing the performance formally (through performance management processes)

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

### 5.4.3 Main Challenges

In addition to the limitations and challenges that managers mentioned related to virtual work, when asked about the main challenges that they faced in managing remote employees, there were three areas that stood out. *The first was communication*, in other words ensuring that everybody was on the same page the whole time. This could relate to the technical deliverables or to general organisational information.

“Communication, I think, is the single biggest issue. Single biggest problem. And I think communication on a personal level more than a; because it’s easy to send out an email. It’s even easy to tweet twice a day, you know, it’s easy to do that. But the sort of communication on a personal level is a challenge for various reasons.” P20 (139)

“So not just the formal business stuff, but the informal. Someone got engaged. Someone resigned, you know, whatever. We had a big win at a customer, and if we don’t over-communicate then you are going to get people that are surprised by news. And it can make you feel desolate sometimes, or kind of remote if you are surprised by that on a regular basis.” P35 (287)

Communication was found to be especially important when there were many remote workers or when the requirements of the customer were changing continuously. When at all possible, and where intensive collaboration was needed, managers would normally prefer to bring the individuals together.

“Also things change so fast. What you think the client meant after a meeting you have had this morning, you suddenly realise it’s not. And then you need to get everybody on the same page in changing course. And if everybody is all over, it’s quite a challenge getting them all back on the right page. So, and it happens often. They, things change daily. So you need to be able to get that message across and have people shift direction, shift gear, shift focus very quickly.” P53 (270)

*Secondly, a major challenge was to build and keep relationships intact*, both between manager and individual, and the relationships between the team members, which the manager needed to facilitate. This required a significant amount of effort from the manager’s side. Relationships build trust and build belongingness. Managers with mainly remote teams would often arrange for more social get-togethers than formal online meetings.

“It’s to keep them, it’s really that non-verbal communication, to have because, if you think about it, for example with all the permutations of person C talking to person A and they don’t understand each other, and they disagree to some extent, so I have to constantly, try and improve relationships among all the combination of the ten people that work for me. That’s what’s complicated. Because I know person A and I know person C. I know they are both great people and hard workers. But they don’t understand each other. So think of all the combinations of 10 people, you know, having to deal with each other. You know, everything cannot go through me, they have to deal with each other, and very, very difficult.” P34 (194)

*Thirdly*, the fact that it becomes *difficult to gauge the individual’s emotional state* when only using telephone or email. Managers indicated the importance of body language to understand the emotional well-being of the individual. In this context, other clues became important, such as a deliverables not being met that would usually have been met, or the fact that managers needed to listen more closely to what the individual was saying (or not saying). Visual clues were also used to assist in building the relationship with the individual.

“I like the interaction. So, I think, my feeling is when you don’t see a person, you don’t really connect to that person, and I’ve, that’s my feeling and I’ve experienced it with myself. If you don’t have that relationship with a person you will work differently. You react differently to that person.” P4 (196)

“But you tend to give more time to the region you are working in. Because now my office is open and anybody can come in. So they will rather come and speak to me here, than somebody that’s working offline. I won’t really know if there is actually a problem. But on this side I can look in somebody’s eyes and see if there is a problem.” P37 (241)

Other challenges mentioned could be categorised as organisational influences, insufficient tools, lack of visibility and differing customer requirements which make a single approach to work difficult.

“We usually have a weekly one-on-one meeting which I have moved to every 2 weeks, and I must say most of the year a lot of the cases, where there is operational pressure, that is the stuff that is the first thing that goes, which is something that we need to address, because it’s a problem. I mean if you weigh up sort of pressure on a delivery side between the client and this, you can always via mail catch up and I ask them to send me a weekly report with just highlighting the status in their areas.” P48 (60)

The list of codes to represent these challenges, are given in Table 5-19.



**Table 5-19: Code list: “Performance: Main challenges”**

Description	Code	Category
Difficulty in getting the same message across and communicating with a dispersed team.	Communication {18-4}	Communication
This is not necessarily a challenge for the manager, but for the individuals reporting to them. I.e. the individual feels the manager is not accessible enough (but also expressed by the manager).	Accessibility by individuals {1-0}	Relationship
When a new manager starts, getting to know everybody, pointing in the right direction, undoing the wrongs of the past, and building new "team culture" Manager reaching out to the individuals and the teams.	Building way of work {3-0}	
Effort to define the deliverables so that there is no misunderstanding between manager - individual – customer.	Defining the deliverables {1-0}	
When trying to meet everybody, the distribution of individuals makes it difficult.	Distance {2-0}	
Importance of selection and that people can work with the manager.	Initial selection {1-0}	
Not possible to get around to everybody and spend the personal time with each individual. Can create social isolation of individuals.	Large team {1-0}	
Motivating individuals and building team spirit. Sense of belonging / organisational culture.	Motivation {5-0}	
This is not necessarily the visual aspect, but the importance of the relationship and personal "connectedness". Also emotional support.	Relationship {11-0}	
Visual cues help to "connect" and build relationship.	Visual {9-1}	
Impact / Interference from organisational level.	Corporate impact {1-1}	Organisation
Matrix management of individuals - when not performing, who do you contact.	Matrix management {1-0}	
Work pressure - spending more time on issues and customer delivery than being able to have the regular team and one-on-one meetings.	Work pressure {1-0}	Organisation
Having the tools but they fail due to external factors (Suppliers; SA Bandwidth).	Tools Failing {1-0}	Tools
Not having the right tools - for either seeing or connecting to people.	Tools insufficient {1-1}	
The individual "disappears off the radar" and is not contactable. Also "knowing where the individual is". The manager needs to know where the individual is or at least be able to contact the individual.	Individual not contactable {2-0}	Visibility
Challenge is to manage non-performance or "consequence management" consistently. What do you do when you see something going wrong, or is the issue really you are not aware of something going wrong?	Managing non-performance {1-0}	
Feedback not received timeously. Manager not aware of issues.	Not informed timeously {4-1}	

**Table 5-19: Code list: “Performance: Main challenges” (Continued)**

Description	Code	Category
Differences in client’s impacts mean not able to provide single way of work.	Client Differences {1-1}	Customer

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

#### 5.4.4 Technology and Systems

There are many IT systems used in the day-to-day management of virtual knowledge workers. These include systems that are used for both collaboration and communication, as well as those used specifically to measure and manage performance. In this regard, even systems used for communication may be used to determine how quickly a team member responds when contacted. Table 5-20 gives the list of all the systems that were mentioned during the interviews. Systems providing communication and connectivity were mentioned the most. The last column categorises the systems in terms of those used for the different types of deliverable, namely technical and knowledge, and systems used for administrative or measurement tracking. There are systems that are used for both technical deliverables which automatically provide the administrative measurements as well, for example the call logging, and systems availability type of technologies.

**Table 5-20: Code List: IT Technology: Systems**

Description	Code	Category
Communication systems such as telephone, email, Office Communicator (OCS).	Communication {61-1}	Collaboration
Technology systems used for socialisation (like Facebook). System where personal information can be shared.	Social Media {4-1}	
Video conferencing, for both formal "venue" teleconference or via webcam. Sometimes use customer’s facilities.	Video Conference {10-1}	
Relates to network (internal) and internet (external) connectivity. Network (internal) or internet (external). For own systems include ADSL. Customer provides connectivity in some cases.	Connectivity {37-1}	Collaboration Technical
Knowledge base, often SharePoint. Place to store documents.	Knowledge Base: {5-0}	Knowledge
Central facility where corporate applications can be accessed. Central point of access or portal which makes other applications available.	Portal {8-1}	

**Table 5-20: Code List: IT Technology: Systems (Continued)**

Description	Code	Category
Audit trails - what activities performed, by whom, when.	Audits {4-2}	Measure
Systems that are required for collaboration - where individuals need to work together to achieve an end goal. Includes systems used for email and processes.	Collaboration {25-1}	
Custom application for task tracking, leave tracking, location tracking - to assist in knowing where the individual is and if he/she is staying on task.	Custom Application: Own {2-2}	
Even though the company provides Microsoft Office and Excel, the spreadsheets are developed by the manager and not e.g. HR department.	Excel Spreadsheets: Own {5-2}	
Mainly related to the performance appraisal systems. Managers often provide extension for the data provided by the organisational system.	Performance Mng {18-2}	
Tools or systems that aid reporting of measurements, like the call logging systems. Additional report templates. Additional dashboards.	Reporting {6-2}	
Calendar on which the activities / meetings / location can be seen.	Shared Calendar {1-0}	
Health checks, customer surveys.	Survey: Own {2-2}	
Systems to assist in managing tasks such as SAP, Outlook tasks or customer applications.	Task Tracking {12-2}	
Systems to log and keep track of time that are provided on organisational level. Additional timesheets.	Timesheets {8-2}	
Availability also = Presence.	Availability {4-2}	Measure / Technical
Call logging system. Important for incident management and measurement of service levels for incident resolution. May be combined with timesheet system.	Call Logging {12-2}	
Technologies that can measure how much has been used, e.g. bandwidth, disk space, size of mailbox.	Consumption {3-2}	
Using an Enterprise Project Management (EPM) tool. Additional checklists created out of the EPM tool. The EPM tool is provided by the company.	EPM {1-1}	
Monitoring of the environment for the service. Environment Monitoring, not monitoring of the individuals.	Monitoring {4-0}	Measure / Technical
Applications or Business Systems. These are normally systems that are used for transactional processing. Also coding in general "office" applications.	Applications {9-1}	Technical
Various back-end corporate applications, e.g. mail, and active directory.	Applications: Backend {2-0}	
Configuration Management Database (CMDB). Very important in the ITIL sense.	CMDB {1-1}	
Corporate Anti-virus systems.	Anti-virus {1-0}	Security

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

The diagram in Figure 14-9 in Appendix E creates a visual representation of the IT systems that are either provided from organisational level (top part of the diagram), or

that the managers have created themselves (bottom part of the diagram, also suffixed by “Own”). The centre of the diagram shows those systems that are provided from organisational level, but enhanced by the managers for own use, or where alternative own systems were created. Many systems have been extended to suit the needs of the managers, and allow for more efficient reporting in terms of virtual work accomplishments.

As shown in the combined category of “Measure/Technical” above (Table 5-20), IT systems can assist in making the gathering of data and processing of performance-related metrics quicker and more accurate, especially where systems are more integrated and unobtrusive. On the other hand, using too many tools either becomes cumbersome for the individuals, or creates the perception that the manager does not trust the team member.

“I don’t really know how to answer that. But I think our system, our internal system makes it easy because you can actually track the amount of work we’re doing and you can see if the individuals are doing what they say they’re doing. They have customers which they have to service every day. So I think that, I don’t... that makes my life easier. I don’t think it makes me a better manager. But having that tool to my; access to that tool makes it easier for me.” P19 (301)

“Sjoe, there are fancy tools that you can look at exactly what people are doing. But then it also becomes a trust issue.” My manager wants to deploy all these tools to check that I am doing my work.” And I find that that usually just puts the trust level at a very low. Because I mean “We don’t trust in you, you need to check every minute what I do.” P48 (348)

**When asking the individuals about day-to-day measurement...**

“It should be measured most certainly. We use a Helpdesk tool that assists in tracking and logging time on tasks and calls we are busy on. Although we need to enter the hours worked on a task when completed.” P26 (8)

Some systems that require a lot of effort to populate them in order to obtain the resultant metrics, such as timesheets and tasks lists, are often perceived by individuals as micro-management, since a lot of effort is needed to capture all of this data accurately. Also this links to the perception of individuals being measured on time (hours per day, start and end times and timesheets) (Figure 5-23), whereas they prefer rather to be trusted to deliver the required outputs.

And that is available on this tracking tool. They then either at the end of the day when they’ve finished or, as and when they’ve finished the task they go in and they actually fill it out. We explain to them it’s not micro-management but it is ensuring that we have, the

maturity is there and that we have the understanding that while you have the privilege we also need you to show and prove that you are doing what you're saying.” P7 (82) “

Managers said that they also realised that systems could break or be manipulated, and therefore should not be seen as the only way in which performance is measured. This links to one manager who used multiple “data points” to evaluate individuals (as mentioned under the codes for “Manage: Performance: Monitor”).

“Yes, they are your biggest help, but they can also be your biggest constraint. Because obviously a tool is something that can break. A client or an agent on a machine stops working. That can affect your availability or your SLA figures like “this”. We actually see that a lot.” P48 (160)

“Because trust plays a huge role in this, in my opinion. You can have systems, but systems can be manipulated. For me trust plays a huge role in this thing. And I believe that when people feel they are trusted, then they would perform better and they would produce more. Definitely.” P20 (395)

“So over the years I have put a lot of things in place that make it easier to track things, etc. [...]...but also doing this kind of reporting, I go into the tickets, I can see who is getting the compliments, you know. So it's that kind of you get a perception based on many different data points throughout your working year, of how people are doing” P34 (501)

## 5.5 PARAMETERS AFFECTING PERFORMANCE (RO2A+B+C)

### 5.5.1 Organisational and Contextual Parameters (RO2a)

RO2a: To analyse and describe how the **organisational context** affects the performance and outputs of virtual knowledge workers.

There are parameters that impact on performance which fall outside the control of the manager and the individual. This implies that it does not matter how well the deliverables are planned or measures stipulated, there are aspects that will ultimately affect how performance can be managed. These include organisational factors such as cost cutting, support from executive level for virtual work, and the implementation of matrix management. There are other impacts as well, such as the bigger context of culture in the different provinces, South Africa's status on remote work implementation and other general internal impacts. The paragraphs below will look at these elements in more detail.

From an organisational side, the first element is the *organisational leadership*, its impact on *organisational culture*, and the support that the leadership in general gives for remote or virtual work that will allow it to flourish. In Alpha, Echo and Tango, where specific virtual work policies did not exist, the extent to which virtual work was allowed within the different business units was totally dependent on the senior manager of the business unit.

“Exactly. And that’s one of the key things about Foxtrot, you hit a key note there. There is a great culture here. Coming from the CEO, he is an exceptionally nice person, and there is; he has built a team prior to my coming, a technical function with the company a very, very bright people, very nice people, very personable people, and there is generally a sense of family and caring within the organisation.” P35 (296)

“I don’t think they have an issue. My boss, my boss’ boss, they’re very flexible. They also know that, Tango is not heavy on you have to be here in the office at eight and you have to leave at five type of thing, we, it’s not in our culture. Our culture is you work off-site, you work at home a lot, so you’ll find a lot of people will tell you, “I work a lot until ten-eleven o’clock at night,” you’re going to get that a lot. And they do, because when I’m working, people are answering their emails.” P45 (463)

“And I think the great thing about the way we work is that it is the champion of this whole initiative is our COO. He has been adamant, he said that he has worked differently since he was and audit trainee. I think it’s just that independent nature.” P55 (82)

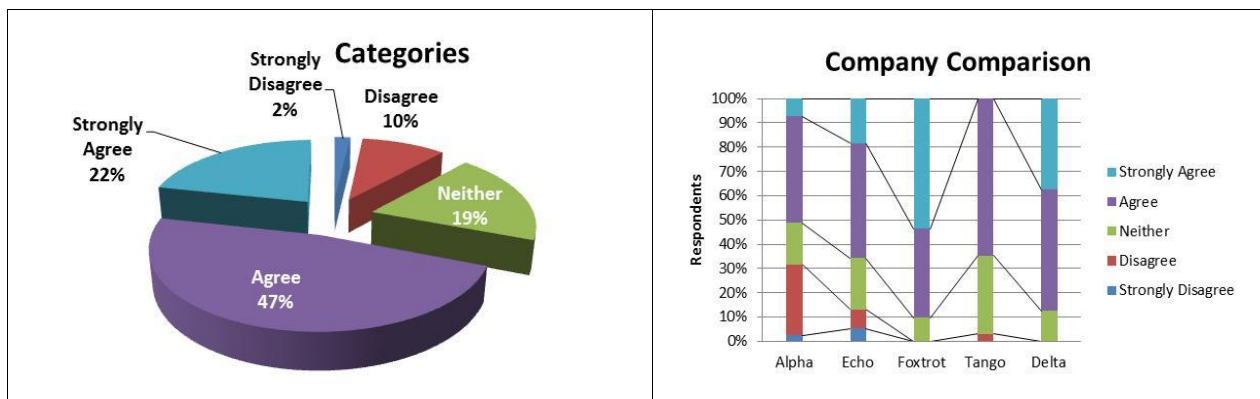
Another impact on leadership level was *the next level up* (from operational level) senior managers. They needed to feel assured that individuals who were working remotely were actually producing. This created the necessity for additional tracking tools and monitoring requirements.

“The bigger question is how I prove to senior management that the guys are busy. So that’s more the challenge to me and we’re hoping that the task tracking and that will fulfil that role.” P9 (329)

Individuals were also asked if they believed that the *organisational culture* supported virtual work. Sixty-nine percent (69%) of individuals agreed, while 12% disagreed and 19% neither agreed nor disagreed. Foxtrot was the company in which most individuals agreed, while close to 50% of the responses in Alpha indicated uncertainty or disagreement. These percentages are shown in Figure 5-28. These responses seem to correspond with the comments relating to the perception of the organisational culture as perceived by the managers.



Figure 5-28: “Organisational culture supports virtual work”



The *organisational design* has an impact on virtual work and management of performance. This can relate to the size of the company, which will have an impact on the levels of leadership required. For Foxtrot and Echo, the business unit was effectively “the organisation”, making the CEO of the organisation also the senior manager for the “business unit”. The other companies all had at least one additional layer of senior management, before reaching the CEO level in the company. In the organisations with the flatter reporting structures, the managers and individuals seemed to be more in touch with what policies allowed, and the vision of the CEO was much more pertinent to the different teams. For the larger organisations, matrix management was also used because of the complexity of how services were being delivered to the customers. This left individuals confused as to whom they should try to “please” in terms of their performance. Having a parent company also had its advantages and disadvantages. On the one hand, additional international skills were available, but on the other hand, rigid procedures and processes were being instituted by the parent company, which did not always support the way of work in South Africa.

#### Organisational structure:

“A flat organisation structure seems to suit highly skilled knowledge workers well. Power games and politics don't have any place in any professional organisation---let alone one with extreme knowledge application demands. Working in such a relaxed, informal environment makes it easier to meet the complex demands of knowledge work.” P39 (129)

#### Matrix management:

“I get that from the managers, the project managers. Because they're not going to, the consultants don't, they won't inform you that, you know what, because, it's difficult for them. Let me put it this way; I had a one-on-one last night with somebody and he said to me: “Why do I have five managers?” And I said to him: “Okay, let me explain to you.” Because, he works for me on a project, and he also has, works in the support centre on several customers, now, every customer has a customer service manager, so now he's got five



customer service managers and then his got this project manager and then he's got me, you know. And he said to me: "Why do I have so many?" then I kind of explained to him, "Okay, this is why; how the whole thing works." So, they find it challenging to give you feedback, because sometimes they don't know who do they give feedback to?" P45 (445)

**Parent company: (Positive and negative)**

"I think it does have quite an impact, because being an International company it's quite prescriptive, and often the timelines and requirements are not well aligned to where the local, to where the business locally is from a priority and life cycle perspective." P49 (30)

"No, I can tell you we are in the fortunate position that we have an International parent so we probably have the latest and greatest and the best available to us, while if it is just a local organisation, you are just bound to what is available in South Africa." P46 (405)

The category of *strategy* includes elements that are related to strategy or policy within the organisation, such as general strategy, having an additional panel that would review performance ratings, being a very process-driven organisation and company-wide interventions such as cost-cutting exercises. The table below (Table 5-21) shows the list of codes relating to organisational level impact, and also indicates which ones had a positive or negative impact in the companies under review. Cost cutting, which would normally have a negative impact, actually had a positive impact on the occurrence of virtual work as such, since managers were forced to hold more online meetings, rather than visiting staff in the regions more often.

**Table 5-21: Code list: "Impact: Org level"**

Description	Code	Pos.	Neg.	Category
Organisational culture.	Company Culture {42-2}	X	X	Organisational culture
This is for the Leadership of the company as opposed to the direct senior manager of the team.	Exec Level {6-2}	X		Organisational Leadership
Either CEO of company mentioned, or Leader of that particular business unit is mentioned.	Senior Manager {46-3}	X	X	
The way the company is structured will indicate the autonomy individual business units have. Also the size of the company.	Org structures {10-0}	X		Organisational Design
Multiple managers for one individual.	Matrix Management {3-3}		X	
Impact that the project manager in projectised environment has on the individual.	Other managers {11-0}			

**Table 5-21: Code List: “Impact: Org level” (Continued)**

Description	Code	Pos.	Neg.	Category
Reference to parent company or overseas company that has controlling shares.	Parent Company {17-3}	X	X	Organisational Design
Company Strategy or Business Unit strategy - impact on defining the performance metrics and goals for the team members.	Overall Strategy {3-3}	X		Strategy
Relates to the organisational impact or context the organisation creates in terms of cost cutting and other financial implications.	Cost Cutting {26-3}	X		
Governance process to review the statistical distribution of ratings that managers have given the individuals.	Panel reviewing distribution {1-0}		X	
Following process for the sake of following process. (Tick-box mentality).	Following process only {3-0}		X	

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

In addition to the organisational-level parameters described above, various contextual factors affecting performance were mentioned. These include the absence of the visual, geographical parameters, situational parameters, external parameters and metrics.

The absence of the *visual* was once again mentioned as a factor that affects how performance is managed, and how well the manager is able to understand the needs of the individual. To compensate, listening becomes important because of the absence of visual clues. The manager also needs to be observant and sensitive in terms of differences in quality of work coming from the individual. One manager, who was working from home due to the geography of the organisation and its customers, had never seen some of the members on the team, not even in the interview. In these cases a deeper observation and review of multiple inputs became important.

#### **Listen / Observe**

“Like if I’m in a conference call with somebody I would listen more carefully to what the guys are saying and if I start picking up the guys voice or he isn’t giving the real facts on the table that I’m aware of, things like that, then I after the meeting I will get on the phone and say: “Hey, what’s happening? Something is not right.” So you need to learn, I think you need to pick up a different type of skill as well - is to listen to people and try to figure out is there something wrong or maybe not.” P11 (185)

### Multiple inputs

"Well of course we are trying to see if we can meet up with them. But just from a budget standpoint it's not always possible. So I really rely on three things. Interviewing them over Skype obviously. I send them emails. So I interview every single step of my contact on telephone calls on emails obviously the questions you ask them in the actual interview. I speak to references extensively. I let them do a written evaluation. I get a personality test done by my HR. So it's a multi-step process. And I also, my clues from not the answers to the questions, but how their interactions are. How they communicate; are they on time, things like that; so demeanour and so forth. So I rely a lot on those things, because I do not have the visual or non-verbal communication in a conversation that you have when you sit across from an individual." P34 (58)

*Geographical parameters* refer to the culture in different regions, the culture in different types of customers, and South Africa as a country not being supportive of virtual work in terms of bandwidth constraints. Time zones also have an impact, in that communication between teams who are distributed over the time zones is much slower.

"Durban and Cape Town - they're on the beach and they sometimes are very laid back. But we're getting them to a point where they need to understand what is urgent as well. I must say, we; in the beginning I battled quite a lot to get documentation and things out of the guys because it's like Douglas Green, it's every other buddy's problem but not his." P11 (173)

"And obviously when we made the decision to open the US office, it had a tremendous impact on the throughput within the development team, and that needs to be managed a bit more formally. Having people in the different regions developing, you do have a project plan or something like that, one can continue work themselves." P31 (117)

*Situational parameters* or immediate work situation, imply that the performance will be different depending on the situation, for example the type of call, the nature of the problem that needs to be resolved or other work coming in and reprioritisation having to take place. The manager especially needs to assist with reprioritisation.

### Level of difficulty

"No, the kind of issues that we do get on our side is usually not easy to resolve, first line is pretty thorough by now, and we taught them all the tricks over the years. The stuff that does get escalated through to the development, is a lot of times, ja, sometimes it's easy, but sometimes it might take days to get it resolved, and for a few reasons." P31 (237)

### Prioritisation

"And in that I strongly focus on what is priority, what needs to get done, to focus the team to get the important stuff done. I think we've got a saying in the team. When I say, you know, "die sous en die kool" then we know, we leave... we just do the important parts. We make sure that what we do we do very well, and that takes time. But then you need to know which are the important things to do. So many times there is stuff falling off the table, but it is not the important tasks. So we try to focus our attention. And then I've got meetings with the CEO to make sure I know what is that focus that we need to keep." P30 (210)

Also, *co-located individuals*, in other words those closer to manager, can more readily get access to the manager, by walking into the office of the manager and discussing issues face to face. Another parameter that has been grouped under the situational category is the fact that the individuals need to have fun. This can be facilitated by a more flexible management style, in which the manager makes time for socialising and fun activities and sets less strict measures because the situation will dictate if the measures are relevant. Also if the individuals tend to be self-managed, they work more autonomously. A less proceduralised organisational culture can also support this.

“Yes, yes, it helps on the motivation side, and like I said earlier, we kind of try and hire people who really enjoy programming and technology and stuff. So they are kind of self-motivated to do the stuff because it is fun for them.” P32 (337)

“But my colleagues are awesome, I get on with them very well. We have a really good friendship at work, and we are full of jokes and we have fun. If it’s not fun anymore then; then I won’t do it, it needs to be fun.” P50 (454)

*External impacts* are from various stakeholders, like the customer, external suppliers, the individual’s personal situation and from other teams. From the customers’ side, they can dictate what performance measures to use, which could be either positive or negative. They could also be using the wrong benchmarks to compare performance against, which would imply that they perceive non-performance, rather than performance. External suppliers could also have an impact if their work is incorrect, but it reflects negatively on the team’s performance. Internal suppliers or teams can also have a negative impact on a specific team’s performance, especially where there is a chain of events or workflow that must be followed to reach the final deliverable to the customer. The last item categorised as external is the individual’s personal circumstances, which could also have an impact on how the individual is performing on a day-to-day basis.

#### **Customer impact**

“My role, you must remember in an operations environment, if anything goes wrong at any client, the first place that they look is in the operations environment. And 99% of the time, you find that after investigating an issue, find that it is a client that changed code a while ago it was not tested, or all the conditions was not tested properly. And the problem occurs 2 or 3 weeks after the change was put in. This is really 99% of the problems can be traced back to a change that was made in the last 2 weeks.” P46 (50)

#### **Personal circumstances**

“And I think that is that other side of life of a person that you’re not always aware of. What’s

happening in his life - you want to know if his children are doing well at school or receiving certificates. You know things like that. That is also important and I think that factor is sometimes missing from remote management.” P11 (191)

“But, inherently people don’t just slack, and I’ve really found that they don’t slack, you know, there’s normally something, if somebody doesn’t perform, there’s normally something going on and nine out of ten times there’s something at home that’s bothering.” P45 (246)

Using the right *metrics* is also important, and can have an impact on how well the individual is deemed to be performing. This is especially difficult where the manager had to take into consideration individual differences; in other words, not expecting the same level of detail from all individuals. It is also difficult where measures are inherently subjective, and where the products or services are complex. The impact on performance if one is not measuring is that one would not be able to determine when things started going wrong.

The list of categorised codes as described above, is shown in Table 5-22, as well as whether the parameter was described as having a positive or negative impact on performance or the management thereof.

**Table 5-22: Contextual parameters impacting on performance**

Description	Code	Positive	Negative	Category
Seeing individuals face to face. "Seeing" the emotional state through body language.	Importance of Visual {53-1}	X	X	Absence of visual clues
Region (e.g. Gauteng vs. Cape Town culture); Type of industry (Mining, Retail, and other); SA as country.	General Context {19-4}	X		Geographical
Multiple time zones where customers are. Communication impact.	Time Zones {4-0}		X	
Scarcity of specific skills.	Limited skill availability {2-0}		X	Situational
Co-located vs. remote individuals.	Not in same location as manager {1-0}	X		
The situation dictates.	Situational {5-0}	X	X	
Cyclical requirements of work.	Peak periods {1-0}		X	
Total set of tasks that the individual has.	Other tasks {13-0}		X	
Importance of work enjoyment.	Having fun {5-0}	X		

**Table 5-22: Contextual parameters impacting on performance (Continued)**

Description	Code	Positive	Negative	Category
Customer can dictate. Customer using the wrong measures. Customer causing issues.	Customer {19-4}	X	X	External
Dependent on other team delivering the work in time. (Internal supplier).	Other teams {8-0}			
Personal factors.	Personal Situation {1-2}		X	
Third party could be a vendor or supplier.	Third Party/External {3-3}		X	
Everybody needs to do everything. Complexity of products.	Complex product {1-0}		X	Metrics
The way that the service is measured.	Complex service {2-0}		X	
Individuals deliver differently.	Importance of Individuality {2-0}	X	X	
Performance difficult to measure (and improve).	Measurements subjective {3-0}		X	
Impact on performance management if not measuring.	Not measuring {1-0}		X	
Supporting technology from HR / organisational point of view to support the internal processes.	HR tools not available {1-0}		X	Technology limitations

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

## 5.5.2 Managerial Parameters (RO2b)

RO2b: To analyse and describe how the **approach of managers** affects the performance and outputs of virtual knowledge workers.

### 5.5.2.1 *General managers' approach*

Part of research objective 2 is understanding the impact that the manager could have on the individual's performance through the manager's experience in his or her field, the manager's assumptions about remote work, and who the manager is as a person ("I am" statements made).

The managers' assumptions on remote work have been grouped in six categories. The first group pertains to reasons why remote work is not necessarily supported, the second group pertains to the fact that remote and virtual work is seen as the new way of work and therefore something to encourage; the third group pertains to the fact that there are parameters that need to be kept in mind that will determine who can work remotely, or what kind of work could be performed remotely; the fourth group pertains to general contextual parameters, for example the state of virtual work in South Africa; the fifth group pertains to the management style and way of measurement, while the sixth group is associated with who the manager is and his or her general technical experience. The related code list and descriptions are given in Table 5-23. (The network diagram is available in Appendix E, Figure 14-10)

**Table 5-23: Code list: “Manager: General remote work”**

Description	Code	Category
Technologies challenging Difficult to change mindset (manager training) Fear of the unknown and not willing to take the risk.	Difficult to learn/Mindset {13-1}	Reasons why not remote
Manager has little experience in virtual work.	Experience-Low {3-1}	
Keeping work at work and home at home.	Home not place of work {1-1}	
Preference for face-to-face interactions	Like face-to-face {5-1}	
Virtuality is de facto for this kind of work (Sales) Nature of the job dictates flexibility.	Accepted way of work {4-1}	New way of work
Advantages of virtual work.	Advantageous {13-1}	
Virtual work as a privilege.	As Privilege {4-1}	
Manager is familiar with virtual work.	Experience-High {29-1}	
Just a way of work that becomes a lifestyle.	New way of work {8-1}	
Technology makes remote work possible (e.g. 3G).	Technology enabling {16-1}	
Different age groups respond differently to remote work.	Age Impact {13-1}	Remote work parameters
Personal differences can affect who wants to (individual's decision) and who would be more suited (manager's decision) to work remotely or from home.	Personal Differences {35-1}	
Hours worked per day. Hours available per day. Time off for time spent.	Timing {5-1}	
Type of work that should <i>not</i> be done remotely.	Type of work {18-1}	
Rules related to who will be allowed (i.e. merit assessment must be above certain number).	Who Allowed {7-1}	



**Table 5-23: Code list: “Manager: General remote work” (Continued)**

Description	Code	Category
Reasons why organisations still exist.	Purpose of Organisation {2-1}	Contextual
South Africa not as mature as European or American countries.	SA Maturity {19-1}	
The situation will dictate if virtual work possible.	Situational {13-1}	
Measure performance based on outputs.	Easy to measure {1-1}	Management Style
Guilt drives individuals to work when they are at home.	Guilt {1-1}	
Specific management style might be more suited for managing remote workers. Maturity of managers.	Management Style {17-1}	
Remote work will only work if there is trust (manager to individual).	Trust needed {20-2}	

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

Looking at the personality of the managers or the fundamental “I am” statements made during the interviews, the following two statements illustrate quite clearly and significantly how two managers differ in their approach to virtual work on the basis of their personalities. The fact that the managers understand their own strengths and weaknesses assists them in handling virtual and face-to-face situations respectively. This was found in all the companies of the multiple-case study.

**Manager wants contact and face to face:**

“I know that sometimes it’s a necessary evil <referring to online tools>, but that is one that I prefer to work around. But not everybody needs to be as connected. 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 though some barrier I struggle to make those connections and reading them.” P53 (357)

**Contrasted with...**

“I am personally an introvert, so I loved working virtually. And not having to engage with people constantly on a day-to-day basis. [...] So in a way you can control the level of interaction that you had.” P54 (52)

“And I personally loved it, again because there was a barrier. 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%. Also I mean I could give you negative feedback, and this is also maybe going to sound quite harsh, but I did not have to worry about the consequences and look at your sulky face for the rest of the day, you know what?” P54 (164)

All of the managers have extensive experience in their field of work, which helped them to understand the requirements of the task at hand, as well as the challenges

that were being faced by the team members. Prior experience in a different type of position was also used to define the way of work for the current team.

“I think being aware of what the job entails; keeping on top of that, I think is a very good one. Now it’s not that I want to blow my own trumpet. I think you need to know what the job entails and what can be done and what cannot be done. That helps a lot. So honesty, understanding what the guys are having to do, understanding the boundaries of what the clients are potentially requesting and what the individuals are capable of.” P47 (257)

### **5.5.2.2 Managing virtual workers: Changes and differences**

The first aspect of managing virtual workers is to determine whether there has been a *change in management approach since starting to allow individuals to work virtually*. One of the managers indicated that he became less formal, and allowed individuals to follow their own methodologies, rather than trying to enforce rules that he would not be able to monitor. Another manager, however, felt that more structure and official check points were needed. In general, managers did agree that they changed from a rather micro-management approach to trusting more. They also had to learn to use and rely on technology for communication. One manager also felt that she had to become more creative to ensure that she could get the best out of her employees, with individuals trading flexibility for longer or different customer working hours.

#### **Less structured...**

“I would say, that probably the biggest change that I have made over the years as I have gotten more and more virtual people, I have become, let me say it "less structured" in terms of how I manage them. And I have placed a much, much bigger emphasis on the hiring than on the management. I am very, very picky and careful about hiring someone, much more so that I would be if they were co-located with me. So that’s probably the biggest thing I have done. I have realised just how critical, just getting the right person to begin with, is.” P35 (214)

#### **More structured...**

“So that means that a lot more time needs to be spent up front to make sure that people can go away for a while and that what you will get back will not be a waste of that time that they have been away. So you also need to set up more official checkpoints” P53 (260)

#### **More trust, less micro-management...**

“I would say it is back to the whole trust thing. I mean trust is sort of an underlying point here. Perhaps when I worked in the office before, I did more micromanagement than I needed to do.” P36 (233)

#### **Using technology...**

“When we became the new Tango with the merged company in, I think I had to rely more on electronic means of communication. The Lyncs of the world and the email overall, and lots of telephone calls. I think that so, I believe I work with telcos a lot of the times. We do a lot of telco discussions, when they guys are far away. Even when the guys are up here we have a telco discussion and talk about whatever we need to talk about. I think I rely a lot on

technology so to speak” P47 (221)

**Being more creative...**

“...I have to be more creative daily, with how I manage people, to get the best out of them. It’s not about just getting the best out of them, it is their happiness as well.” P22 (185)

As a second element, the managers were also asked *what part of their management approach had proven to be most successful in their management of virtual workers*. Managers felt that communication was important, and needed to be transparent. Regular meetings, even if they were relatively short, assisted in keeping the relationship healthy. In addition, setting of goals and delivery dates also helped to focus the individual’s effort. The managers also felt that once the targets and expectations were set, it was important to give the individuals autonomy and trust them to achieve the goals. One manager compared this with the Theory Y management style of McGregor (1957). The managers also felt that their technical experience helped them to better understand the challenges the individuals faced. Some managers also felt that the success was dependent on the individual’s buy-in, skill level and maturity in the situation.

**Regular meetings / contact**

“So I think those regular meetings work well. Even if you don’t really have something to discuss, it’s better to have the meeting, and say well we have nothing to say, so let’s talk nonsense for 5 minutes and then we will carry on with our work. Rather than, oh we will arrange a meeting when we have something to say, because then you end up never speaking.” P32 (323)

**Transparency of communication:**

“It’s really just about communication, communication, communication. So, just because someone is remote it can’t be out of sight, out of mind, for them and for me. And it’s not just me communicating with them; it needs to be the team also communicating. So you need to get them to even if they are working remotely, there has to be touch points, there has to be getting together” P53 (277)

**Tasks and delivery dates**

“So I think having specific tasks to work on just lets people focus and they know what they are supposed to be doing, so that’s why I think that’s good. This is what you have to get done in the two weeks. So generally if there is a bit of a deadline people tend to work a bit faster (work towards that) Yes, yes, otherwise you think oh well I can take as long as I want, and you just sit and spin you wheels basically.” P32 (322)

**Trust and autonomy**

“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)

“I think from my perspective, and as I have evaluated it, I believe the communicated mandate back to the individuals and after the mandate is this communicated, not meddling to the extent where the trust of giving that mandate is questioned.” P13 (199)

**Experience:**

“I have all the knowledge of the people I am managing at the moment so I can relate to them on a technology or on a product level.” P19 (307)

**Individuals contributing**

“It’s not really a management approach. The people supporting me have accepted responsibility, and they know what their job is.” P46 (318)

Thirdly, in terms of their *approach between co-located and remote workers, as well as between different remote workers*, managers all agreed that they measured both co-located and remote individuals in the same way, since the deliverables and processes were still the same. Although the measurement and general approach to performance management remained the same, managers did individualise their style to suit the personality of the individual when working with an individual. Managers did, however, feel that sharing knowledge, involvement in issues and general communication with co-located team members still came more naturally, and an additional effort and formalised communication was always needed for remote individuals.

“So the end result is I treat them exactly the same, the approach is exactly the same, the bit in the middle is different. And it’s the bit in the middle that makes it personal, which makes me probably more of a personal manager, rather than someone that stands on top and looks down.” P22 (117)

“So I think, in my mind it is, have they delivered what was promised? Doesn’t matter where they sat or where they worked. So that’s why I say, I haven’t specified their IPA criteria differently, because I don’t see them. P4 (46)

“No, I certainly don’t consciously split them into two groups, but I certainly respond to the individual personality differently.” P6 (196)

“I think the measurement is the same but maybe just on the motivational side and building culture within the team the more virtual workers and the more widespread they are the more difficult that’s gonna become. But measuring them I think it should be the same, whether they work here or remotely or virtual. Ja. That’s my closing comment.” P19 (500)

Lastly, managers were also asked *how they would change their approach going forward*, in other words how they would manage differently in the future. One of the areas mentioned was to bring in more systems for measurement, tracking and reporting. One of the key advantages that managers see in additional integrated systems is to take away some of the administrative burden in creating objective reports to view the performance of their team members, and to have more measurements at their disposal. Managers would like to see additional or more accurate measurements around time, knowledge contributions made, financial information (utilisation and billable hours) and usage of systems.

“I think there’s some fancy tools out there that could assist us a lot. Those tools, if you use them, they will make your management easier.” P2 (360)

“But with this new system that we are building, we will have reports that will say, so-and-so had 12 issues this month, 6 of them were resolved within the same month, 6 of them are still outstanding, and have charts to come out of that. I just don’t have the time to measure every single aspect I would like to. So my measure is: is the client happy; am I making money; is the consultant happy.” P21 (175)

“I want to implement it online in like a SharePoint portal, where I can actually see visibility of the stuff, I want to be able to survey all the customers, I want to define the metrics, I want a common set of metrics that we use. And I want to see that stuff so that I can look and see where I need to focus my attention.” P8 (97)

**Individual confirmation from open-ended questions:**

“Without micro-managing, expect to understand how days/weeks are spent in terms of productivity. Like an activity report of sorts.” P40 (21)

Another item that ranked high on the managers’ “to do” list for future improvements was more face-time and more regular meetings. Due to time and operational pressures, individual and team meetings were often postponed or cancelled, and managers felt that they were losing contact. Also additional site visits or more video conferencing were required, to see the individuals more regularly.

“It’s something that we want to get to is to have monthly, just monthly sort of one-on-ones not from an IPA point of view, but just interactive - getting to understand what’s been happening.” P7 (9116)

“Ag I think you know, its perhaps to get closer to my managers, because I think in some cases, I do feel that I have been absent, and I did not give them the right or the kind of support that they were entitled to, perhaps that the other managers could have given their guys. So there is more on that level. It’s not you know to specifically change the way I am managing, just to move closer to them, and to be a manager for them” P44 (443)

“As I said, I don’t have that much experience, but I think to use more Skype and to just not Communicator. I think it is important to look the person in the eye. It doesn’t need to be over a table it can be over a network. I would do more of that.” P4 (388)

Obtaining more customer feedback via interviews or online surveys was mentioned by a few managers. This was confirmed by individuals who indicated in the open-ended questions that they would prefer their managers to obtain more feedback from the customer, since they were spending most of their time on the customer’s site. As part of the project management methodology, there are questionnaires that the customers have to fill in to comment on the project manager and the success of the project.

Managers also wanted to make more opportunity for knowledge sharing, or even establishing a community of practice, making use of the online tools to establish better collaboration and sharing between individuals and teams. An important aspect of this is the communication in general. This was mentioned as one of the main challenges, and managers indicated that they would want to address this through creating a communication plan, or by using the online tools more effectively.

The managers and individuals from Foxtrot emphasised the importance of the collaboration that was needed for design and development. In this regard, even with their task-tracking, call-management central knowledge bases, they found that smaller co-located teams were invaluable.

“For future projects we are attempting to break larger teams of people into smaller co-located teams that function independently yet report on a regular basis to a core management team that serves to co-ordinate the full process. Despite advancement in communication technologies a great deal of implicit communication is lost when one attempts to communicate complex concepts such as software designs over electronic media. Often concepts have to be repeatedly communicated and long stretches of development may occur with a misunderstanding of a concept, thus requiring rework.” P43 (5)

Other elements of improvement included in some cases formalising the IPA or ensuring there was more value in the process, making sure that the rules of flexi-time were better known and applied across the board, trusting more, monitoring less, having smaller teams with more managers, focusing on the selection process to appoint the right individuals, and focusing more on the individual and their contribution through more regular one-on-one sessions.

### **5.5.2.3 Manager responsibilities**

The “Manager Responsibilities” code was used as a code group in addition to “Manage: Performance”, to show activities and responsibilities of the manager that might not be related directly to the initiating, planning, executing, monitoring and controlling codes as used in the general management of performance, but would still contribute to the well-being of the individual and thereby facilitate good performance. The codes have been grouped into five higher-level categories. (Refer Figure 14-11 in Appendix E for the network diagram)

### 5.5.2.3.1 Communication and organisational change management

In the first group there are two activities that relate to *communication and organisational change management*. The manager needs to make sure that the messages from organisational level are relayed in an open and transparent way to the teams. The stakeholders participating in communication were the organisation, the manager, the team, the individual, other internal units, managers or teams, and the customer. By reviewing the communication instances between these stakeholders, a communication matrix was created for each company in the study. This was used to evaluate whether communication was happening sufficiently on all levels. An example of such a matrix is provided below in Table 5-24.

**Table 5-24: Communication matrix (Example of one company)**

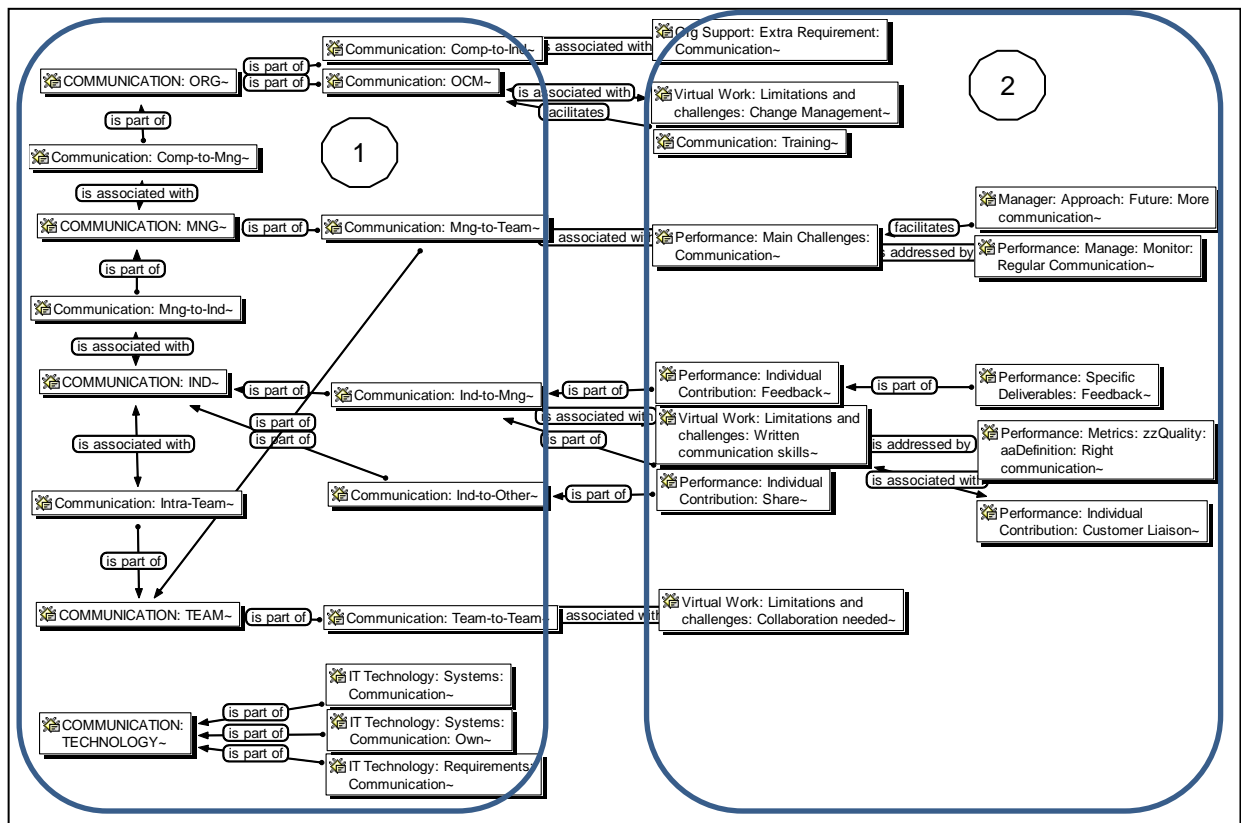
FROM TO	Organisation	Manager	Team	Individual	Other - Internal	Customer
Organisation		L	X	X		
Manager	L		M (Team meetings)	H	X	L (Only exception)
Team	X	H	L (Other Teams)	H	X	M (Where on site)
Individual	L (Session with Exec)	H	M (Intra Team)	H (Intra Team)	X	H (Where on site)
Other – Internal		L (Teams isolated?)	L	L (Matrix mng)		
Customer	X	M	L (Projects)	H	M (AE's)	

**Key** X=None mentioned; L = Low; M = Medium; H = High

A code network representing the communication theme is now presented in Figure 5-29. Most of the elements of communication as found in the literature reviews were also present in the current study. The diagram shows the interrelationship between the organisation, manager, individual, team and other communication codes (Block “1”), as well as how the elements of communication address certain of the limitations and challenges of virtual work and management of virtual performance (Block “2”).



Figure 5-29: Theme – Communication



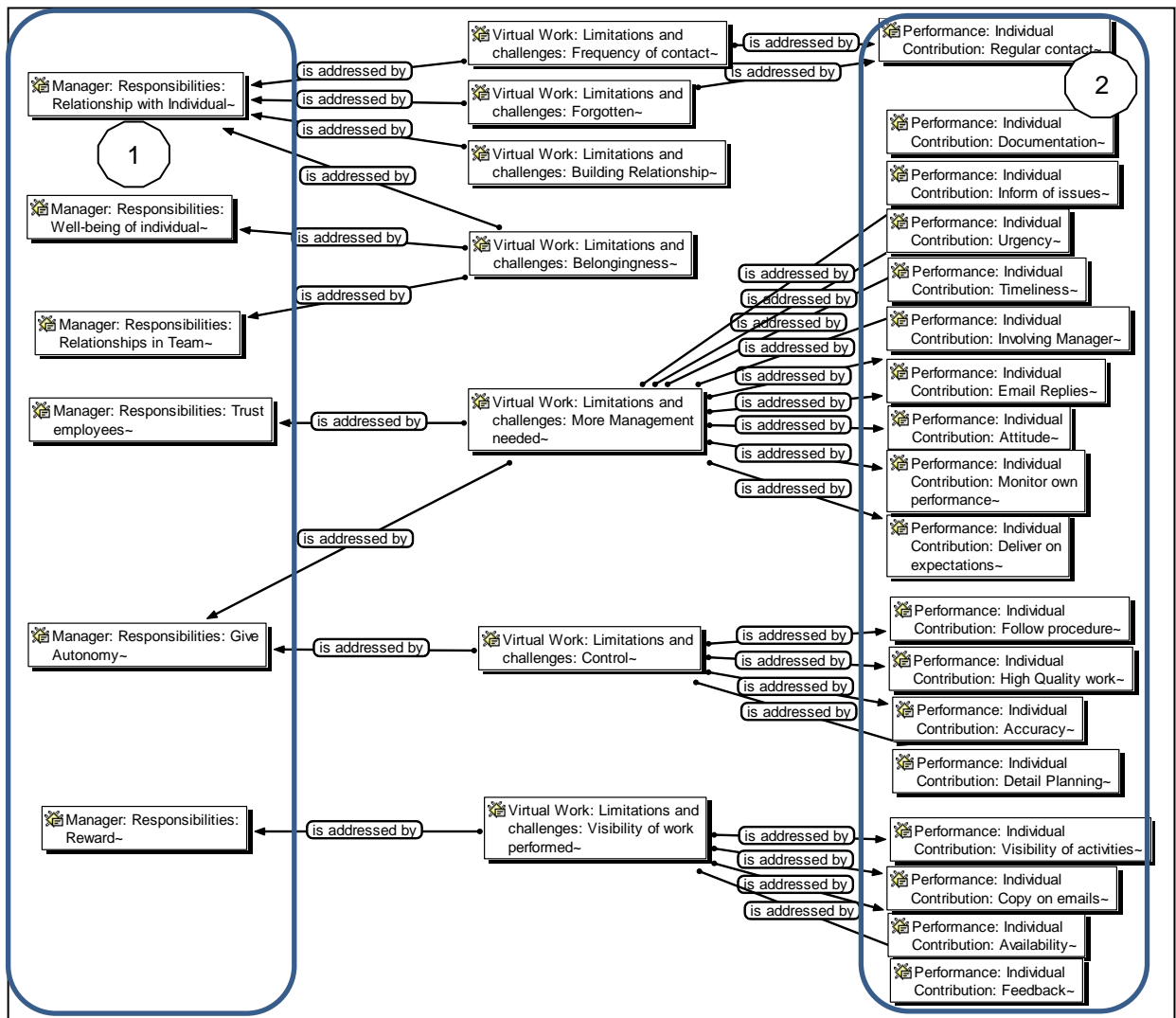
### 5.5.2.3.2 Focus on the individual

The second group places *focus on the individual*. The manager needs to trust the individuals, and build relationships both between the manager and the individual and within the team. The importance of this activity is shown by the fact that the groundedness of the relationship responsibility was 92 in total for the combination of individual and team relationships. This is in contrast to the next-highest figure for groundedness of 38 for both “Support and accessibility” and “Set specific measures”. In addition to the relationship, the manager needs to look out for the well-being of the individual. While relationships might lean more towards “sympathy”, well-being links to the concept of empathy. An example is where the individual might have wanted to work some more, and the manager, in order to make sure that the health of the individual is looked after, rather advises the individual to get some sleep. Well-being may also be expanded to giving the individual the right salary increase or the right level of job or allocating the right customer fit. The elements of “Reward” and

“Exposure” were also classified under the “EXECUTE” category of “Manage: Performance”.

The codes for “Manager: Responsibilities” that form part of the category of “Focus on the individual” are now also mapped to limitations and challenges of virtual work in Figure 5-30. The manager responsibilities address some of those issues (refer Block “1”). In keeping with the importance of the individual, the individual’s contribution to addressing some of the challenges is mapped as well (refer Block “2”). Relationships create a sense of belonging and ensure that the individual is not forgotten. Trusting and giving autonomy reduces the need for additional management. Rewarding individuals publicly gives visibility of their contributions to the senior levels of management in the business unit.

**Figure 5-30: Focus on individual – addressing limitations and challenges**



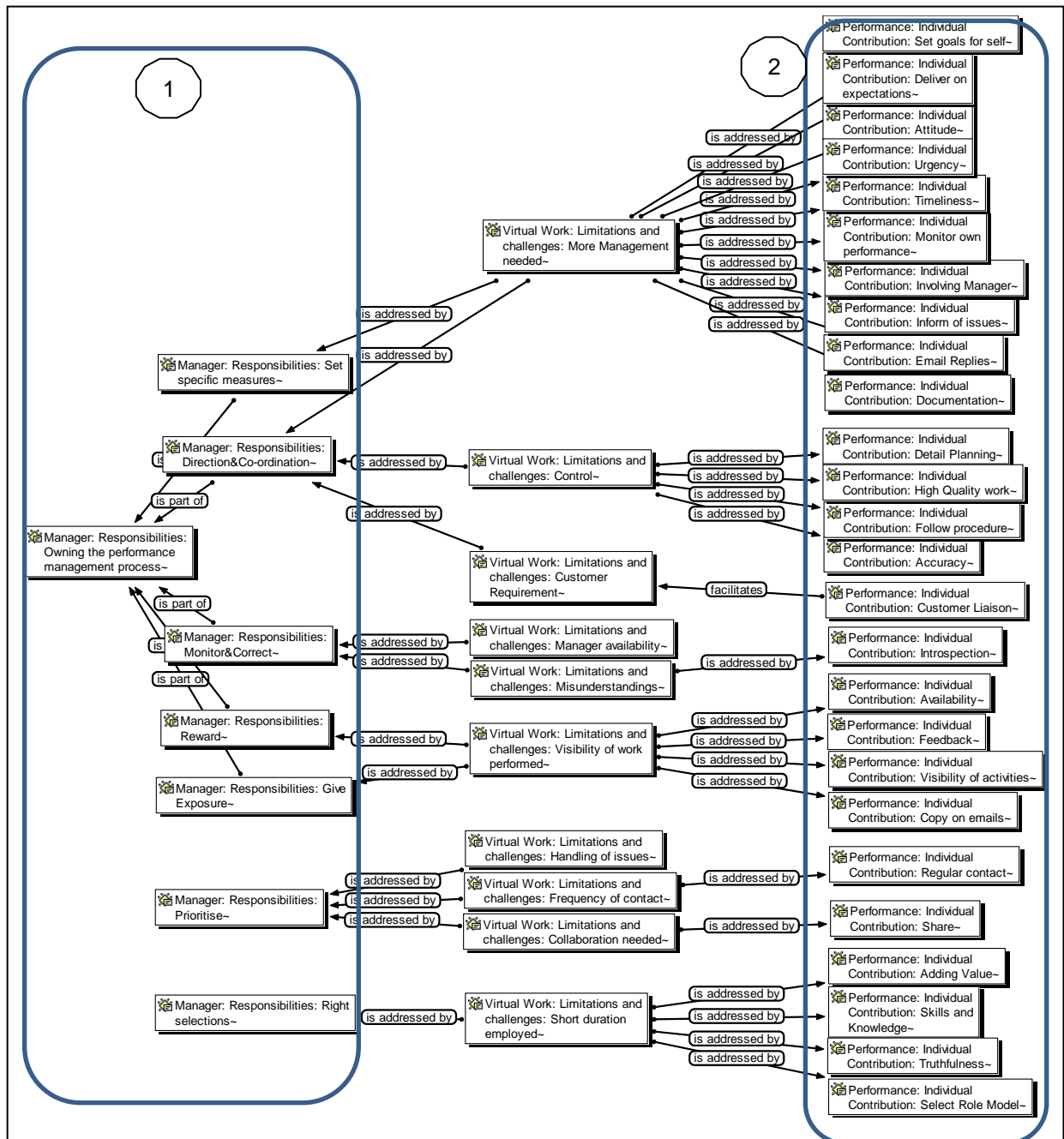
### 5.5.2.3.3 Management of performance

The third group relates more to *performance management*, and has therefore been linked to the different codes of “INITIATE”, “PLAN”, “MONITOR” and “CONTROL”. Setting of specific measures or making sure the goals are clear is quite important in this group. The manager also needs to make sure that everybody in the team is working in the same way.

How these elements address some of the limitations and challenges of virtual work is also shown in Figure 5-31, with the manager responsibilities shown in the left-hand (refer Block “1”) and the limitations and challenges shown in the centre of the diagram. The individual plays an important role in reducing the management that is required by setting own goals, delivering on expectations, being timely, monitoring own performance, involving the manager and notifying him or her in good time of issues, replying to emails and making sure documentation is up to date. If the individual does the detail planning for tasks, delivers high-quality work and follows procedures accurately, the need for control from the manager’s side will also be reduced. This is shown on the right-hand side of the diagram (Block “2”).

See overleaf for the network diagram.

Figure 5-31: Performance direction – addressing limitations and challenges



#### 5.5.2.3.4 Manager involvement and support

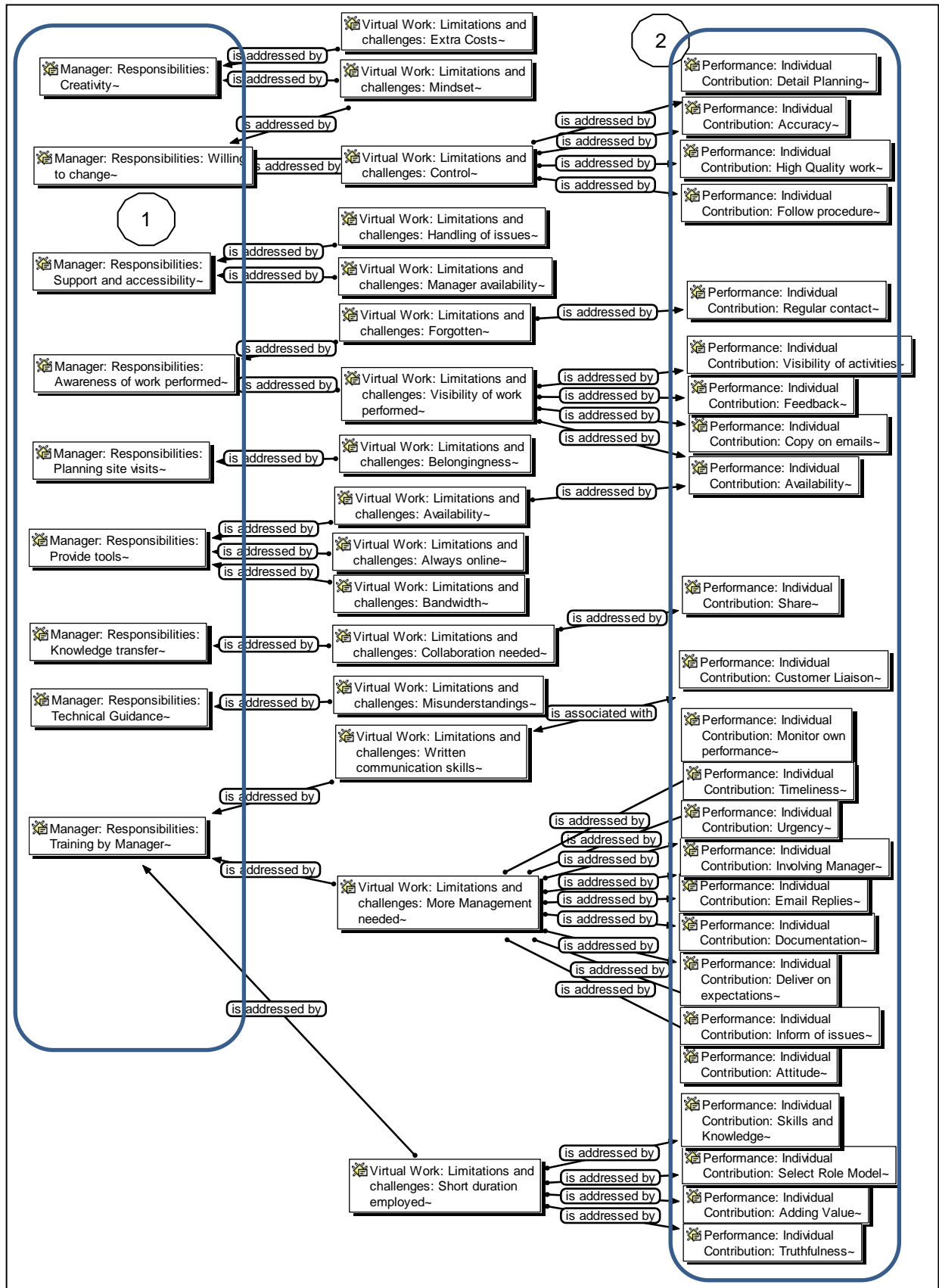
In the fourth group, the *focus moves to the manager in general being involved with the individuals and giving them support where required.* This may be through training, technical guidance, making sure that site visits take place, keeping up to date with what individuals are doing, providing the right tools and being willing to change the

processes if they are not conducive to performance. In this, the manager needs to be creative and explore new ways of supporting and motivating the individuals.

Figure 5-32 now shows how the sub-elements of involvement and support, as part of the manager's responsibilities (refer Block "1"), can be used to address the limitations and challenges of virtual work shown in the centre of the diagram. Once again, the individual's contribution is mapped on the right-hand side of the diagram (refer Block "2"). Creativity and willingness to change can overcome limitations created by old mindsets, and find opportunities to save costs; by being accessible, managers can resolve issues much more quickly; tools, knowledge transfer, technical guidance and training are all necessary to reduce management time required, and ensure that the individual is competent to deliver. Awareness of work performed and regular site visits foster a feeling of belonging.

See overleaf for the network diagram.

Figure 5-32: Involvement and support – Addressing limitations and challenges



### 5.5.2.3.5 Interface management

The last group pertains to “*interface management*” that is required: making sure that the individual is not distracted by work that is not important or politics, making sure the customer understands what the expectations are, and also facilitating contact with other teams and individuals who could assist the team in achieving their objectives. The codes and their descriptions are now listed in Table 5-25.

**Table 5-25: Code list: “Manager: Responsibilities”**

Description	Code	Category
Communication of organisational changes.	Change Management {9-4}	Communication
Sharing of information; being transparent about management-related items; Sharing team information.	Transparency and sharing {7-0}	
Giving accountability and responsibility.	Give Autonomy {22-3}	Individual Focus
Making remote individual’s contribution visible.	Give Exposure {12-2}	
Connecting with the individual; Personal relationship (Sympathy) - becoming personally involved; Socialising together; Individuals open to discuss "all" problems; visit at home.	Relationship with Individual {70-11}	
Importance of building teamness. Team relationships and team culture.	Relationships in Team {22-0}	
Rewarding individuals where applicable. Praise and constructive criticism.	Reward {6-2}	
Trusting employees to be working.	Trust employees {13-0}	
Well-being (empathy) – Keeping a line between work-related and personal involvement. Looking after health of individual. Looking out for opportunities for the individual. Best fit with customer and project.	Well-being of individual {15-0}	



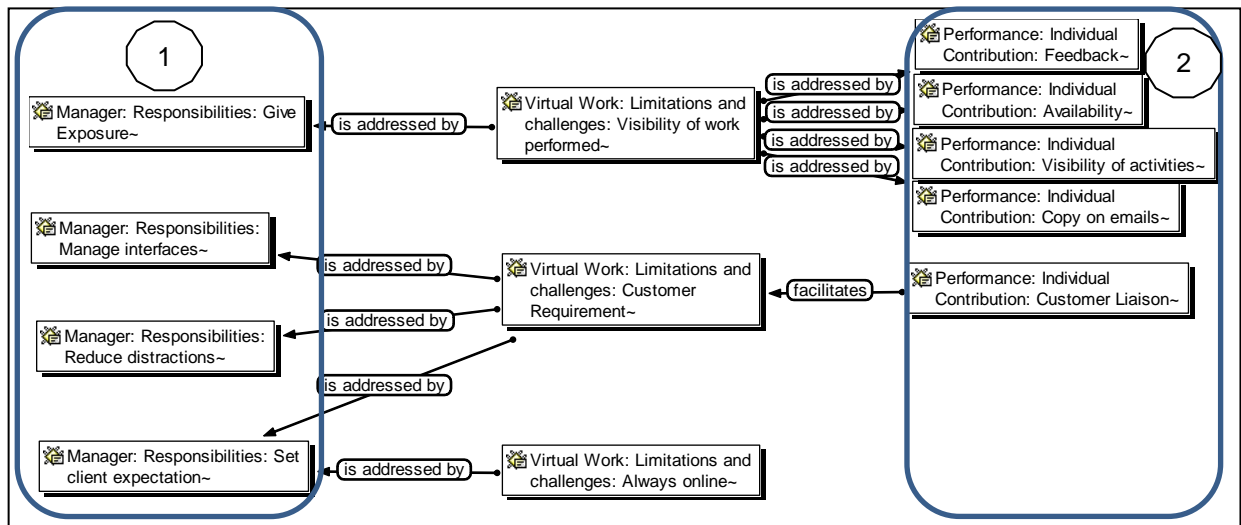
**Table 5-24: Code list: “Manager: Responsibilities” (Continued)**

Description	Code	Category
Giving direction. Making sure everybody works in the same way.	Direction & Co-ordination {18-3}	Manage performance
Being aware of and correcting issues when they occur; Mentorship role.	Monitor & Correct {13-1}	
Owning the performance management process. Accountable for the performance of staff.	Owning the performance management process {4-0}	
Assisting individuals in prioritising work.	Prioritise {7-0}	
Selecting the right individual - skill, job fit, manager fit.	Right selections {5-1}	
Defining deliverables and specific measures. Setting of clear expectations.	Set specific measures {38-3}	
Keeping track of good/bad so that this can be taken into consideration with KPI. Individualising, not punishing the group.	Awareness of work performed {4-0}	Involvement and support
Creativity in creating new management rules; Getting the employee to work more flexibly.	Creativity {3-0}	
Ensuring that knowledge is transferred between individuals in the team.	Knowledge transfer {13-0}	
Pre-planning site visit and making this a priority.	Planning site visits {2-0}	
Providing the tools for the individual to work remotely.	Provide tools {1-0}	
Available for direct reports; Encouraging, Praising; Listening and acting faster.	Support and accessibility {38-2}	
Having the technical experience to provide guidance.	Technical Guidance {3-1}	
Training in tools, working remote, requirements and on technical level.; Coaching of individual. ; Identifying training gaps of individual.	Training by Manager {33-3}	
Changing procedures if they are not working. Listen to needs of team members.	Willing to change {4-1}	Interface management
Managing interfaces external to the team.	Manage interfaces {15-5}	
Creating productive environment.	Reduce distractions {7-3}	
Managing client expectations of performance.	Set client expectation {10-3}	

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

By fulfilling the role of managing interfaces, the manager will ensure that there is visibility of work performed by remote team members and that the customer expectations are set, especially in terms of service scope and availability of individuals. Refer to the Block “1” in Figure 5-33. The contributions of the individual are also mapped (refer Block “2” on the right-hand side of the diagram) and they address making work more visible for the manager, as well as being the customer liaison to ensure that the customer’s requirements are addressed.

**Figure 5-33: Interface management – addressing limitations and challenges**



### 5.5.3 Individual Parameters (RO2c)

RO2c. To determine what **individual factors** play a major role in the performance of virtual knowledge workers.

Managers were asked what they expected of individuals in order for them to remain on task, both from a practical perspective (what individuals should do) and secondly from a characteristic that supports the kind of activities needed. The two lists are shown in the tables below.

From a *characteristics perspective*, many of these centre on *professionalism*, including the category of “dependability”. Individuals are also expected to be *self-managed and achievement* driven, since then the manager does not have to do so much monitoring. *Experience and skill* are important, since the manager (or colleagues) may not always be available for assistance. Managers also agreed that resilience is needed, since the remote world leads to social isolation, and the individuals may not always be aware of changes happening in the organisation, or other organisational politics. Maturity was also mentioned by many managers (Word count for “mature”/“maturity” = 117), in relation to professionalism, experience, emotional intelligence, seniority and resilience. Lastly, the managers also mentioned the personality of the individuals, but more in relation to the individuals’ preferences

in terms of location. There was not a general consensus that being an introvert was more suited to remote work than being an extrovert.

### **Responsibility and Achievement**

A sense of responsibility, taking ownership, wanting to do well, wanting to have that sense of achievement, as well. So with the responsibility, goes hopefully and producing goods, goes a sense of achievement. P6 (190)

### **Self-driven**

“I think first and foremost is that they actually have a drive to do what they are doing, they must enjoy their job. So anyone who is not 100% into what they are doing is going to find ways and means of not doing it. And I think that is the most important thing. They must actually enjoy what they do. And then they will be driven to do that, without having to be checked up on. I think you will have already gathered that we don’t spend any time on checking up on people and seeing that they are at work when they are supposed to be at work. Everyone is sort of self-managed. So I think that in itself, even for someone who is not that responsible, just actually enjoying what they are doing is enough to keep them going. So I think that is the single most important thing for me, is having people who really have the passion for development and for software development.” P32 (343)

### **Enthusiasm**

So you need someone that just has a lot of energy and a lot of drive. And to me it’s all of the other requisite skills can be taught, such as product knowledge, knowledge of the industry and sales techniques. But the drive and the energy and the motivation and competitiveness are the things that you cannot necessarily teach someone. P35 (52).

### **Maturity**

“And the funny thing is that we have some people who are on site at the one client, but whenever there is an issue with another client, they just log in quickly and sort out that, and then they carry on with the work with the client. So it’s virtual anyway. It makes no difference where you sit. So for me, it’s the maturity to handle this freedom. Because it is, its freedom, and you have got to be accountable and responsible.” P24 (253)

### **Flexibility**

“So for me it’s more somebody needs to be able to adapt to change, you know and then the basics, conflict management, the way how you deal with complexity how you deal with people and your experience as well. Because I believe that if you have experience, that you can deal with a lot of these things, because you have either been and seen the end of it, or you have dealt with situations like that.” P44 (128)

### **Resilience**

“So take whatever politics happen at the member firm level and times it by 25. So you need someone who is exceptionally resilient. Because decisions are made, and people’s agendas are, my experience is that it is exceptionally political, but again, because you are not working directly with people, so whatever decision, so if you are my boss, you will make a decision based on politics, or whatever the case is, and there is no kind of out-of sight out of mind, so there is no consequences in terms of what you communicate and what you don’t communicate. So resilience becomes very very important.” P54 (195)

Table 5-26 now lists the codes and their descriptions, as well as the categories into which the codes were divided.

**Table 5-26: Code list: “Performance: Individual characteristics”**

Description	Code	Category
Professional (Using the word specifically) Reliable; Effective communication; Returning calls; Acknowledging queries; Way of addressing the customer; Being on time; Having integrity; Communicating; Positive attitude; Sophistication; Higher level of employee.	Professional {7-1}	Professional
Co-ordinating and facilitating ; Taking accountability for actions and making sure that performance can be sustained / delivered ; Seeing the bigger picture; Also accountable for own development.	Accountability {8-1}	
Responsible; Conscientious; Taking ownership; Sense of priority.	Responsible {28-1}	
Leadership and initiative.	Leadership {1-1}	
Honest and trustworthy; True to your word. Say what you do and do what you say - people with integrity are trusted.	Integrity {8-0}	Dependable
Commitment; Dedication; Loyalty; Stability (not jumping around in jobs).	Loyal {3-1}	
Client or customer focus of the individual.	Customer focussed {3-0}	
Wanting to achieve; Protecting reputation; Competitive.	Achievement {8-1}	Achievement driven and self-managed
Individuals who work in this way normally needing recognition.	Recognition (want) {3-1}	
Passionate about work; Enthusiastic; Reads up more. Showing interest in work; Energy / Drive	Enthusiasm {9-1}	
Self-managed and self-driven.	Self-management {14-1}	
Doing things for themselves; "Entrepreneurial".	Autonomous {2-0}	
Should not be a junior.	Not: Junior {1-1}	
Certification; Knowledge; Skill; Specialist.	Skilled {14-1}	Experience and Skill
Senior in terms of years and knowledge; Years of experience.	Experienced {12-1}	
Resilient; Adaptable; Flexible in terms of working hours; Willing to work outside of the defined "role".	Flexibility {7-1}	Resilient
Assertiveness specifically.	Assertiveness {1-1}	
Self-worth and Inner strength; Sense of self; Sales person handling rejection.	High Self-esteem {5-1}	
Working alone; Having inner strength; Being able to work independently.	Independent {6-1}	

**Table 5-25: Code list: “Performance: Individual characteristics” (Continued)**

Description	Code	Category
Maturity = Understanding what you have to do.	Maturity: General {9-1}	Maturity
Commitment to reach what they should deliver.	Maturity: Commitment {2-0}	
Understanding on a deeper level why things are the way they are; Can rationalise. Distinguishing different levels of decision making and impact a decision would have in different circumstances.	Maturity: Emotional Intelligence {10-1}	
Maybe this could be professionalism as well. Working wherever you are. Making sure all customers get their fair share.	Maturity: Handling freedom {1-0}	
Working without supervision - no micromanagement required; Work on their own, away from the manager. Self-starter.	Maturity: Independence {7-1}	
Planning and prioritising. Say what you do and do what you say. Understanding what they have to do. Self-management.	Maturity: Planning {8-1}	
Maturity referring to internal processes specifically and not the individual.	Maturity: Processes {1-1}	
Referring to the conduct or professionalism of the individual. (Contacting people; giving feedback; being available.)	Maturity: Professionalism {12-1}	
Maturity in that you can handle "no communication".	Maturity: Resilience {2-0}	
Reference to senior in terms of experience and age	Maturity: Seniority {13-1}	
Personal and personality differences. Different individuals bringing different ways of working to the table.	Personal differences {6-1}	Personality
Rather introvert - somebody that is not dependent on other inputs and social exchange the whole time.	Not: Extrovert {1-0}	
Not wanting somebody who is a total introvert.	Not: Total introvert {2-1}	
Stability as referring to the "S" in DISC profile.	Stability {1-1}	
Team Player.	Teamness {11-1}	

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

The *contribution* most asked of individuals by managers was related to transparency and communication. This included giving feedback, informing the manager of issues, keeping documentation up to date, and keeping managers copied on emails.

#### **Feedback (Transparency and Communication)**

“Feedback. Feedback. I like to just get a phone call or an email or an SMS to say, ‘You know, I had a really great meeting’. I want to know what’s happening. I don’t want to know ‘I’m here today and not there tomorrow’. That doesn’t favour. There’s an important meeting

or there's a deadline that they're going to sign off. Things like that. Just feedback. Things like, you know, 'Customer's not happy with this. Maybe you should phone her' or 'That went really well'. Often if I can attend those kinds of meetings I would attend them anyway, just to - it's important just to show your face with the customer as well. But feedback, you know, that is for me is a big expectation." P20 (281)

**Detail planning**

"I say: This is the result and you need to get to. And they need to be able to construct out of that result, they need to almost backwards construct. "Well how do I need to get there?" So it speaks to a level of maturity and that is certainly critical in terms of having the structure where, you know, they don't have a lot of guidance and direction and face-to-face interactions with their direct manager on a daily basis. So they need to be mature, they need to be someone that can self-manage, someone that can almost discover work for themselves. Not sit and wait until they are told what to do." P8 (79)

**Accuracy and Integrity**

"So, and timesheets are an issue for them as well, but we have them, they're just not good with admin, so that's another area that I measure them on, because if they don't do their time-sheets, I can't bill; my finances are a mess, you know, that type of thing." P45 (185)

**Individual confirmation on integrity:**

"There is not that much that can be done to manage me more effectively. A lot rests on my own ethical approach which makes me responsible and accountable for my work".P41 (48)

**Skills and Experience and sharing**

"Ok, so what we have added in there is for example knowledge share. So we expect the senior members within the team to knowledge share on a regular basis. And its client information as well as technical information. So if he can give me a portfolio of evidence of session that he has helped with the team, where he has shared his knowledge of a client environment, or of a specific technology, then he gets rated accordingly." P13 (223)

The items related to transparency and communication have been marked with "T" and "C" respectively in Table 5-27. The other major categorisations were for planning and prioritisation (P), skills and experience (S), and integrity (I). Many individuals in the open-ended questions agreed that accuracy and timeliness of information could be a contribution that they could make to assist managers. The sort order in the table below has been used to keep these categories together, where possible. The five codes with the highest groundedness have been highlighted. Most of these are related to the category of transparency.

**Table 5-27: Code list: “Performance: Individual contribution”**

Code	Description	Transparency	Communication	Integrity	Planning	Skills
Attitude {15-2}	Reference to positive attitude that is needed.			I		
Introspection {1-0}	Constantly reflecting and introspecting to see how things can be improved, and if comments are relevant.			I		
Select Role Model {1-1}	Role model; mentor or coach type of discussion - this must come from the individual's side; not necessarily the manager talking about being a coach or mentor.			I		
Adding Value {7-1}	Extra mile ; Thought Leadership; Innovation			I		S
Accuracy {14-2}	Accurate in filling out timesheets or reports.			I		S
Skills and Knowledge {14-1}	Link to both technical skills and other knowledge that they need to build up in terms of their job. (Building of skills and knowledge vs "HAVE" skills and knowledge as characteristic) Also to take accountability for acquiring skills or asking for training.					S
Experiment {3-1}	Try something new (Leadership and innovation characteristic?) Initiative.					S
Documentation {20-2}	Use for updating knowledge bases; updating call information; updating technical documents and regular formal reports. ; Including the whole issue of "portfolio of evidence"; Making sure there is a "mail trail" ; Keeping an audit trail of what has been completed in a place that is accessible to the manager.	T				S
Deliver on expectations {15-2}	Linked to "specific deliverables", but this is in the context of what is expected to show on task - to the extent of the manager saying - "just give me what I asked you to do."	T		I		
Follow procedure {15-2}	Following process in terms of work to be done, or administrative procedures expected of the individual.	T		I		
Copy on emails {5-2}	Keep manager informed	T				
Visibility of activities {9-0}	Making activities visible on shared calendar	T				
Truthfulness {5-1}	Honesty	T	C	I		
Availability {19-2}	Individual must be contactable; available; answering emails; answering phone; C2: Show presence on Office Communicator or other tool.	T	C			



**Table 5-26: Code list: “Performance: Individual contribution” (Continued)**

Code	Description	Transparency	Communication	Integrity	Planning	Skills
Company Representative {2-1}	Individuals working remotely from their manager on a customer site, often become the representative of the company.	T	C			
Email Replies {4-2}	Answer when receive email.	T	C			
Feedback {47-2}	Feedback when something has been done or asked (Importance of the manager still keeping track of what's happening). Keeping manager up to date.	T	C			
Inform of issues {33-2}	Where the manager wants to know about issues; Also asking for help when getting stuck.	T	C			
Involving Manager {7-2}	Any specific agreement with the manager of what the manager should review or get involved in. (More specific than "regular contact"-code)	T	C			
Regular contact {28-2}	Need to keep in contact and inform not only of "issues" but also of good things; General communication requirements.	T	C			
Customer Liaison {13-2}	Company representative on site		C			
General Liaison {4-1}	Not necessarily with the customer, but internal or doing whatever is necessary to get an issue resolved.		C			
Share {14-1}	Ideas; Knowledge; (Specifically around "knowledge" ); Links to "Feedback" and all items marked as "transparency".		C			S
Increase productive hours {2-0}	Increase time spent at home (which is seen as productive hours) - Training users to be more self-sufficient - Getting management to trust you.				P	S
Planning: Future view {1-0}	Being aware of future so that planning can be improved.				P	
Set goals for self {5-0}	Setting own goals.				P	
Urgency {7-2}	This code is about getting things done; not waiting till the last moment.				P	
Monitor own performance {8-0}	The individual becomes self-monitoring – identifies what is needed to achieve goals.			I	P	
Timeliness {7-2}	Delivering in a timely fashion. Notifying timeously when deadline will be missed.			I	P	
Detail Planning {12-2}	Giving objectives and expecting tasks to be "thought up"; Do their own planning; Converse of micromanagement. Do own prioritisation of activities.	T			P	

Note: {x-y} indicates the approximate groundedness (x) and density (y) of the code.

Although individuals were not always asked about their preferences and experience in virtual work during interviews, managers indicated the importance of the characteristics of individuals for the selection process. The characteristics of the job often coincided with characteristics needed to be an effective virtual worker, and in addition, the managers found it important to appoint individuals who would fit with their own management style, where possible.

“But I do start to deploy those type systems if I am concerned about someone. I have a very fervent belief that if you hire very good people and you hire correctly, and they are personally motivated and you are comfortable that the activity is there, I do not believe in micro managing or micro measuring someone, because I believe that everybody has their own way of doing things, and believe in a trusting relationship where results will either start coming or they won’t. P35 (82)

“The one is somebody that would sort of fit into my managerial style if you will. I’m a very sort of hands-off non-technical type of manager. I intensely dislike details. I suppose it’s a nice way to put it. And I also don’t like to manage; micro-manage people. So I look for a sort of profile of an individual that can work independently, that is self-motivated that can work by them-selves.” P20 (53)

The three codes used for the selection questions were “Selection: Manager Criteria”, “Selection: Individual Characteristics” and “Selection: Input criteria”. The code analysis related to these codes was done by generating the co-occurrence table for these codes with the “Performance Manage: Individual Characteristics” and “Performance Manage: Individual Contribution”. The results are given in Table 5-28: Co-occurrence: “Selection: Manager Criteria” with “Characteristics”/“Contribution” and Table 5-29: Co-occurrence: “Selection: Manager Criteria” with “Characteristics”/“Contribution”.

**Table 5-28: Co-occurrence: “Selection: Manager Criteria” with “Characteristics”/“Contribution”**

Category	Code	Selection: Manager Criteria
Characteristics	Assertiveness	0.02
	Customer focussed	0.02
	<b>Experienced</b>	<b>0.03</b>
	Maturity	0.02
	<b>Maturity: Seniority</b>	<b>0.07</b>
	Professional	0.02
	Responsible	0.01
	<b>Self-management</b>	<b>0.03</b>
	<b>Skilled</b>	<b>0.05</b>

**Table 5-27: Co-occurrence: “Selection: Manager Criteria” with “Characteristics”/“Contribution” (Continued)**

Category	Code	Selection: Manager Criteria
Contribution	Attitude	0.02
	Deliver on expectations	0.02
	Inform of issues	0.02
	Skills and Knowledge	0.02

**Table 5-29: Co-occurrence: “Selection: Manager Criteria” with “Characteristics”/“Contribution”**

Category	Codes which are co-occurring	Selection: Individual Characteristics
Characteristics	Accountability	0.02
	Achievement	0.02
	Enthusiasm	0.02
	Experienced	0.02
	<b>Independent</b>	<b>0.05</b>
	<b>Maturity</b>	<b>0.04</b>
	Maturity: Emotional Intelligence	0.02
	Maturity: Planning	0.02
	<b>Maturity: Seniority</b>	<b>0.09</b>
	Responsible	0.02
	<b>Self-management</b>	<b>0.04</b>
Teamness	0.02	
Contribution	Detail Planning	0.02

## 5.6 SUMMARY

This chapter has analysed and categorised the codes used for analysing the interview data across cases, and consolidated the analysis of the online questionnaires to obtain a view of how performance of virtual knowledge workers was being managed across the five companies, with the aim of answering the first two research objectives. This will now be summarised below for each sub-objective individually. The understanding of what constitutes virtual work provides the context in which the two research objectives are answered and will therefore will be addressed first.

### 5.6.1 Virtual Work (Context)

The types of the virtual work arrangements are summarised in Table 5-30 in a location and frequency matrix.

**Table 5-30: Summary: Code “Virtual work: Arrangements”**

Frequency Location	Occasional		Fixed (Part-time)		Fixed (Full time)
	Days	Hours	Days	Hours	Permanent
<b>Home</b>	Work project <sup>(a)</sup> Child / Self Sick <sup>(a)</sup>	Deliveries <sup>(a)</sup>	Work-from- home privilege	Operational Flexitime	Contractual arrangement
<b>Client</b>	Resolving problems	Meetings	Projects Outsource	Projects Outsource	Projects Outsource
<b>Satellite Office</b>	Meetings	Meetings	Alternative place of work	Alternative place of work	Regional employees
<b>Various</b>	Combination of all above				

Note (a): Implies that the individual needs to obtain permission per “instance”

All of the companies had examples of most of the states shown in the table above. The work from home on a permanent basis as part of a contractual arrangement had the lowest prevalence and was seen as an exception, while working from client site, and thereafter flexitime arrangements, had the highest prevalence. This is supported by Figure 5-12: Locations per company and Figure 5-13: Remote locations for individuals (detail).

Foxtrot and Delta also had examples of the manager working away from the individual on a more permanent basis. Because it has a virtual work guideline, Delta was the only company that allowed all the different permutations of virtual work as described above as a generally accepted practice. The only time that a contractual agreement needed to be made was when the salary was affected. All other agreements were done informally with the manager, via email, and only copied to HR.

In general, the manager decided whether an individual could work remotely or not, based on the individual, the job requirements and the customer. In some cases the

preference of the manager was still to see the individuals often through face-to-face meetings.

### **5.6.2 Managing the Performance of Virtual Knowledge Workers (RO1)**

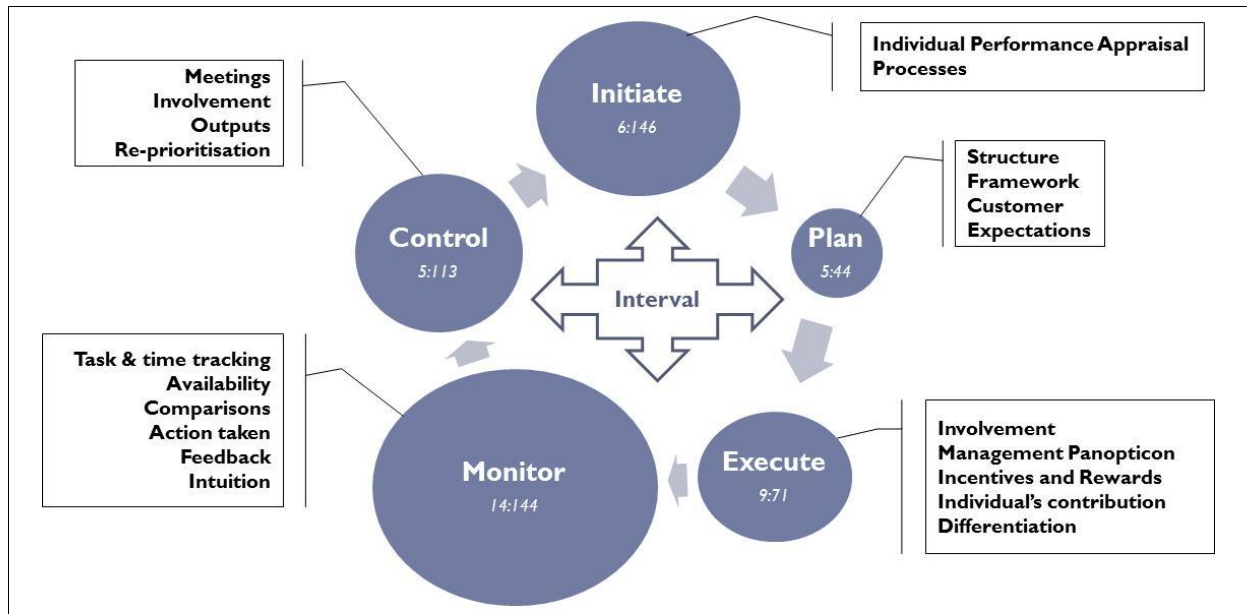
**RO1: To critically review the current state of knowledge and understanding of **how the performance of virtual knowledge workers is managed.****

Three aspects were used to describe the management of performance, namely the way the manager managed in general, then specific deliverables and lastly associated metrics. An important finding, however, was that managers indicated that they did not distinguish between their management of the performance of co-located and remote individuals, nor that of two different individuals both working remotely. The same deliverables were expected, and the same measures were used. Even though managers indicated that there was not a difference when managing remote individuals, there did seem to be a greater focus on defining deliverables, having task lists and ensuring that there was regular communication and follow-up or transparency from the individual's side. For the fixed-days arrangement, certain tasks had to be completed, while for occasional arrangements, the individuals needed to show that they were available online, and the agreed outputs needed to be completed. In general, the work of the individuals was driven by the customer requirements, so the manager would know the status of delivery through a "customer happiness factor". Managers did, however, agree that a lot more trust was needed (as opposed to micromanagement) when individuals worked away from them, especially where regular site visits were not possible due to time zone differences and geographic remoteness. Most of the managers also indicated that it was still important to differentiate their management style between individuals, based on the individual's preference and personality, which linked to the fact that managers also preferred to select individuals that fitted more closely with their own management style.

All the elements relating to the way in which managers managed virtual knowledge workers were linked to the process groups of PMBOK (PMI, 2004:42), of initiate, plan, execute, monitor and control. The sizes of the circles in Figure 5-34 are used to

represent the relative magnitude of each process step related to number of codes and total number of quotations linked to that process step for the code grouping. The lists linked to each circle indicate the selective codes that were linked to the process step as per section 5.4.1.1 Code category: “Performance: Manage”.

**Figure 5-34: Summary for managing performance**



**Key:** (a:b) where **a** indicates the number of codes in the grouping and **b** the number of quotes linked to the codes.

The main finding from the initiation process was that there must be a starting point that can be used as the golden thread through the process of managing performance. Setting of objectives and how they can be achieved, as well as getting the buy-in of the individuals at this stage, is important. The best way of obtaining buy-in is by allowing individuals to participate in the process by selecting and committing to tasks. This is part of the planning stage. In addition, in the planning stage the manager uses his or her technical experience and skill to create frameworks and measurements for the individuals to follow, or to assess the plans that the individuals have created in terms of accuracy and quality.

Giving incentives and rewards forms part of the execution phase. In some companies, allowing individuals to work remotely was seen as an incentive or reward in its own right, especially when the managers were financially constrained. In other organisations virtual work was seen as allowing flexibility and thereby allowing the

individual to save costs. In some cases when managers allowed individuals to work flexibly, the individuals were in return expected to be flexible in terms of accommodating requirements for after-hours work, without necessarily receiving extra compensation.

As can be seen from the code analysis and represented visually in Figure 5-34, the combination of monitoring and controlling forms a large part of the manager's focus. This corresponds with the fact that 38% of the deliverables could be classified as *administrative type deliverables* (as per Figure 5-18), which are in essence used to monitor whether individuals have completed the work according to expectations, and adjust if outputs are not up to standard, especially in the virtual context. An example of this was that in the case of Alpha, for the "two-days-from home" arrangement there was a greater focus on predefined tasks that had to be completed for the period the individual was away, with these tasks being registered on a task management system. As can be seen from the code categories in Figure 5-34, the controlling process step also includes interaction in the form of meetings that can be used to keep contact with the individuals working remotely. Active monitoring becomes important in the remote situation in comparison with a face-to-face situation. In the latter situation, follow-up would happen more naturally by simply engaging with the individual when one sees them.

While the administrative deliverables mentioned in the previous paragraph contributed to the *perceived performance* in the remote situation, there were also *technical deliverables* (49% of deliverables mentioned) and *knowledge deliverables* (13% of deliverables mentioned), which contributed to *actual performance*. These deliverables were also mapped to specific metrics (Table 5-13: Co-occurrence of "Specific deliverable" and "Metric" and Table 5-14: Co-occurrence: "Knowledge Work" and "Performance: Metrics"). The metrics in turn were classified as *objective* and *subjective* metrics. Subjective metrics included quality measures, while objective metrics were based on specific counts or target dates achieved and were in some cases substantiated by *IT systems* which automatically captured statistics and then displayed in dashboards or reports produced. Some systems were also used to manually capture job metrics such as timesheet systems, which led to the perception by individuals that they were being micro-managed. What also did assist in the



measurement (setting metrics and measuring deliverables) was the *experience of the manager* in understanding what the deliverable should be, and how much time the individual should be spending on the task or deliverable. This could assist in determining if productivity was acceptable. The experience of the managers also assisted in having only a few key deliverables on which individuals were measured, rather than trying to measure all aspects of the work.

In terms of managing non-performance, managers always tried to do this as soon as possible after the issue had occurred, and preferably face to face. The main challenges that managers faced in managing remote team members were communication, relationships and gauging the individual's frame of mind when their facial expression and body language was not visible. To compensate for the fact that the manager could not always see the individual, the *management panopticon* (in other words the customer, other managers, the project managers or the account team) was often used to obtain feedback relating to the individual on either a formal or informal basis.

### **5.6.3 Parameters Affecting Performance and Outputs (RO2)**

The achievement of research objects RO2a, RO2b and RO2c will now be described in turn.

RO2a: To analyse and describe how the <b>organisational context</b> affects the performance and outputs of virtual knowledge workers.
---

The categories relating to organisational impact were leadership, organisational culture, design and strategy. All of these create an environment within the organisation within which managers and the individual team members need to work. From the findings of this study, it seemed to be easier for the smaller companies to maintain the corporate culture in relation to the vision of the CEO and to maintain coherence in terms of the policies and procedures relating to virtual work and performance management in the organisation. From a design point of view, the smaller organisations seemed to have fewer levels of management, which reduced the possibility of message distortion, but did not reduce the need for organisational

change management and communication. They also had a smaller HR function, implying that the line managers needed to fulfil more of the HR functions.

However, managers in the larger organisations also perceived that they fulfilled many HR-related functions. Because managers often also have operational responsibilities and had to focus on delivery, it was not always possible to fulfil all the work related to HR governance and managing human resources. The expectation was that HR would assist with this. However, the HR representatives confirmed that the managers always remained accountable for the execution of the HR policies. In this study, HR normally assisted with talent management strategies, recruitment, termination and performance deviations. Managers defined their own performance criteria, performance appraisals and related documentation.

In addition, the analysis found that all the companies, except Foxtrot, had flexible work-hours policies, and only Foxtrot had a draft telecommuting policy for its offices in the US. In Alpha and Tango, working from home was seen as a privilege and accommodated occasionally or for fixed days per week. In Echo and Delta, it was a new way of work that had been established. For Foxtrot, the virtuality depended on the amount of collaboration needed in the teams but was very much driven by its geographic distribution of office and customers. Virtual work arrangements in all companies were dependent on the type of job, the customer requirements and the preference of the individual and his or her manager. The combination of all these factors could explain why only 66% of individuals believed that they were virtual workers. This is in contrast with the fact that for the total dataset, 86% of the respondents could be classified as virtual workers, in other words spending more than one day per week away from their manager.

There are various parameters on organisational level that affect the performance of virtual knowledge workers. In addition, the combination of certain parameters will affect it in different ways. The type of work of the five companies differs but is still in all cases related to client deliverables, facilitated by IT. Therefore, knowledge work does play a prominent role, although it cannot always be precisely measured. Although work is delivered as part of a team (i.e. project work), in most of the cases the individual delivers a separately measurable component. The reasons for remote

work, the performance measures, and the remoteness and frequency are driven by operational needs. The client always plays a prominent role in the measurement of performance.

The differences and similarities between the companies in terms of type of work, collaboration type, performance measures, reasons for remote work, client impact and remoteness frequency, are now summarised in Table 5-31.

**Table 5-31: Similarities and differences between companies**

<b>Parameter</b>	<b>Alpha</b>	<b>Echo</b>	<b>Foxtrot</b>	<b>Tango</b>	<b>Delta</b>
<b><i>Type of work</i></b>	Outsourcing & Projects	Projects & Support	Development & support	Outsourcing & Projects	Consulting
<b><i>Type of knowledge work</i></b>	Known error database Lessons learnt for Projects	Known error database Lessons learnt for Projects	Product manuals Software	Known error database Lessons learnt for Projects	Various knowledge artefacts
<b><i>Collaboration type</i></b>	Individual	Team	Team	Individual	Individual
<b><i>Performance measures</i></b>	Service levels Project measures	Service levels Project measures	Sales Development Procedures	Service levels Project measures	Project measures
<b><i>Main reason for remote work</i></b>	Privilege	Way of work	Organisational structure	Privilege	Way of work
<b><i>Client requirement / impact</i></b>	SLA Project sign-off	SLA Project sign-off	Customer value SLA	SLA Project sign-off	Customer value
<b><i>Remoteness and frequency</i></b>	Fixed days Occasional	Flexible work schedule	Occasional	Fixed days Occasional	Flexible work schedule

The contextual parameters include elements of geography such as time-zone and general context, absence of visual clues, situational factors, external elements such as customers, other teams, the individual's personal situation and impact of third-party interventions, metrics that were difficult to define, and lastly some technological limitations in terms of HR tools not being available.

RO2b: To analyse and describe how the **approach of managers** affects the performance and outputs of virtual knowledge workers.

In addition to the codes and categories created for managing performance, an additional set of codes also evolved which has been termed “*Manager Responsibilities*”. In general, the manager remains instrumental in translating the organisational context for the individual and keeping the team together and focused on their deliverables. The codes relating to this aspect 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 principles of management of performance (refer Table 5-25). This forms the basis for the theme of “Manager as Enabler” and will be mapped to the relevant literature in Chapter 6.

Three additional aspects influence the manager’s approach to how virtual work is managed. Firstly, how the manager describes himself or herself in terms of “*I am*” *statements used*, influences the manager’s initial selection of individuals, the level of involvement of the manager in work being performed and the way that deliverables are defined. If the management style is not compatible with the needs of the individuals, the management style may hinder the performance of individuals in the team. Secondly, the *manager’s experience with remote work*, and resulting *assumptions about remote work* will also influence how the performance of virtual knowledge workers is managed. If the manager has extensive remote work experience, and the assumptions are related to positive aspects of virtual work, the manager will be more trusting and allow greater flexibility for individuals. Thirdly, the level and years of *technical experience* of the manager allow the manager to be more accurate in goal setting as well as evaluation of deliverables. The manager can also use this experience to adjust the performance expectations of the customer if these are not realistic.

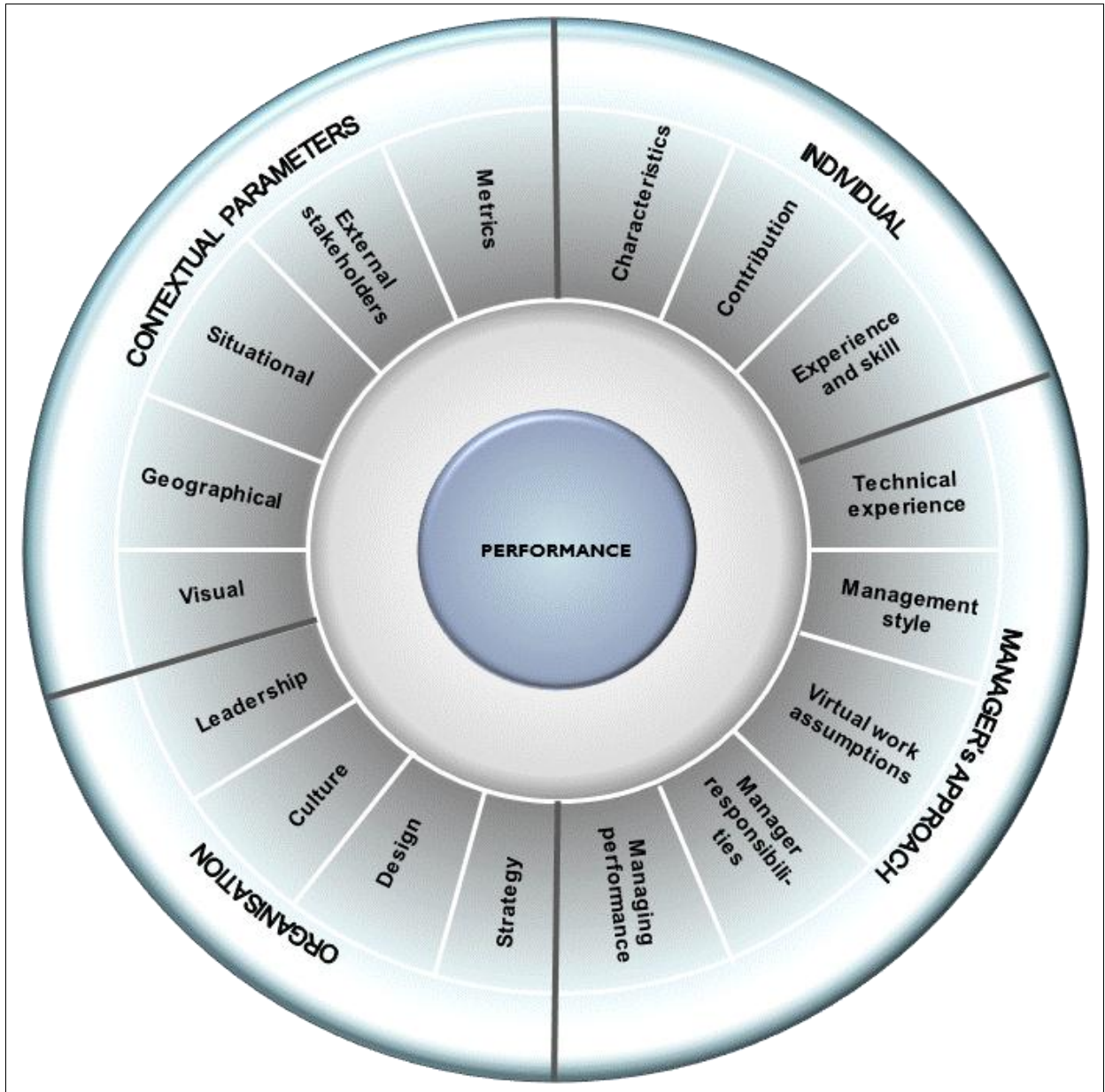
RO2c. To determine what **individual factors** play a major role in the performance of virtual knowledge workers.

The analysis reviewed both individual characteristics and individuals’ contributions that could be beneficial in a virtual work situation. Desirable *characteristics* included

professionalism, dependability, being achievement-driven and self-managed, having resilience and maturity, and the nature of the individuals relating to their personal preferences (Table 5-26). Desirable *contributions* were summarised as being transparent, communicating regularly, showing integrity, performing detail planning and building on existing skills (Table 5-27). The concept of *transparency* from an individual's contribution point of view includes aspects such as regular feedback, keeping the manager informed, copying on emails, following process, delivering on expectations and being contactable. It also includes online availability while working remotely, for which internet *connectivity* and connectivity to the remote systems is critical. Communication includes regular feedback and email replies; integrity includes truthfulness, timeliness and monitoring of own performance; planning includes being able to break down an objective into the tasks that will have to be performed to achieve the objective, and the individuals should constantly strive to increase their skill level, but also be prepared to share their knowledge with others.

The four levels of parameters that affect performance are consolidated in Figure 5-35. They include the organisational level parameters; contextual parameters such as the geographical context, situational, external and metrics parameters; the manager's approach and characteristics; and the contribution that the individual is making.

Figure 5-35: Summary of impact parameters (Impact Parameter Model)



#### 5.6.4 Themes Identified

The themes contributing to the management and enablement of virtual knowledge workers which were identified as part of the individual case studies, have now been adjusted into four themes. They are listed in Table 5-32.

**Table 5-32: Adjusted themes**

Original Theme	Adjusted / Recombined	Comment
Understanding the “virtual” in virtual work	<b>Theme 1:</b> Understanding “virtual” in virtual work (As per Table 5-30)	No changes.
<None>	<b>Theme 2:</b> Perceived, actual and true performance (As per Figure 5-34)	Identifying “control” aspects vs trust Difference between management of performance and performance management.
Importance of communication	<b>Theme 3:</b> Parameters affecting performance (As per Figure 5-35)	One of the elements that the manager as enabler needs to look at.
Impact of the customer		Customer becomes one of the impact parameters.
Manager as enabler		Manager as enabler and mediator for the impact parameters.
<None>		Adding the parameters of organisation, individual and contextual into one model.
Importance of the visual	<b>Theme 4:</b> Importance of the visual, or face-to-face interaction (As per various code tables)	This theme has consistently surfaced as a category in various code tables.

The adjusted four themes will be used as the framework for interpretation of the data in Chapter 6.