The management of people, processes and places in the virtual workplace
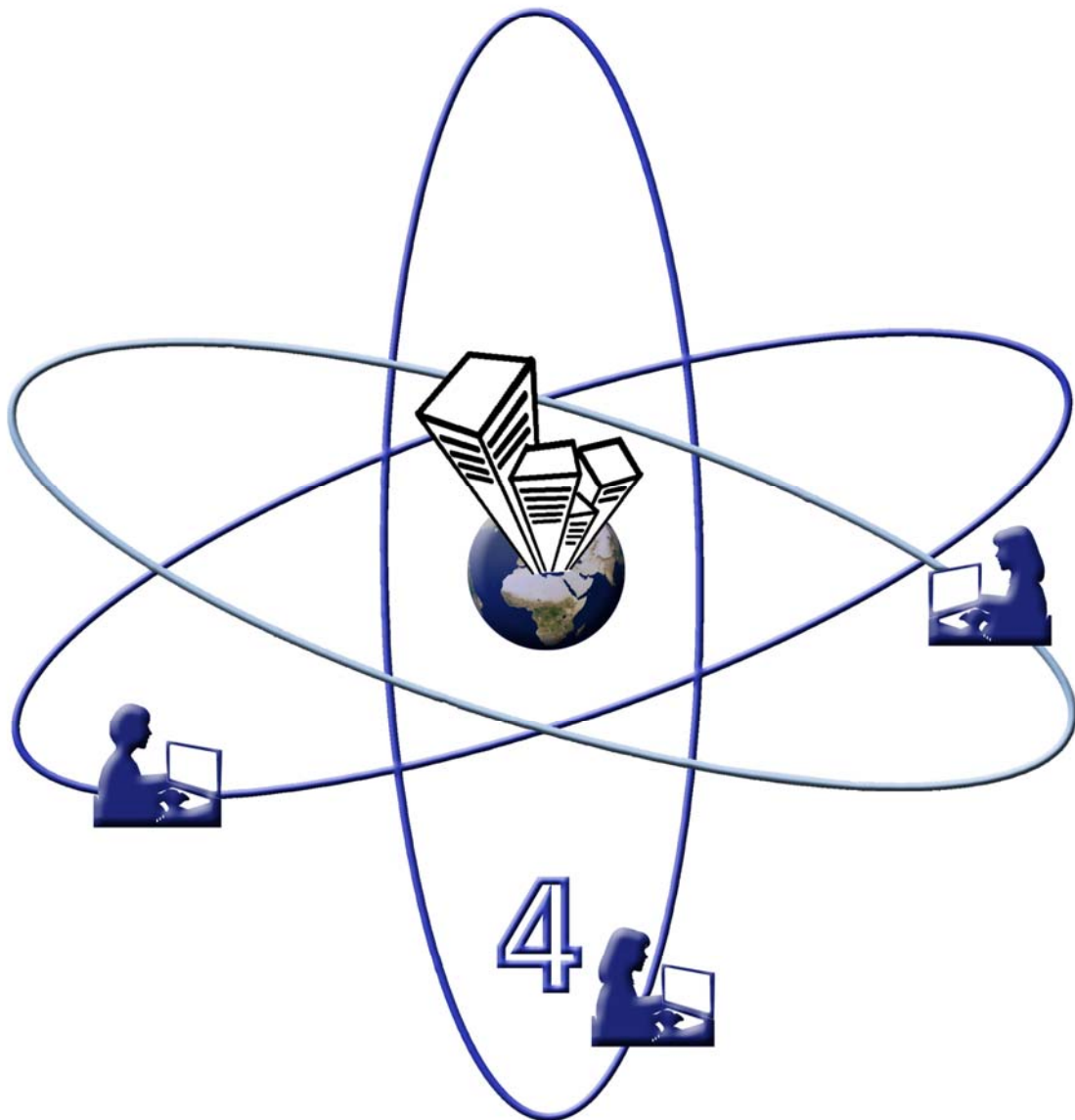
PEOPLE PROCESSES AND PLACES

4

CHAPTER 4: PEOPLE, PROCESSES AND PLACES

> **"Virtual is ongoing, continuous,**
> **has no beginning and has no end."**
>
> **Participant 3**

4.1   INTRODUCTION

The literature overview conducted and discussed in chapter 3 covered the changing nature of work through the different waves of change leading to the evolvement of the virtual workplace, including the types of virtual workplaces, people in the virtual workplace and the advantages and disadvantages of the virtual workplace. This was followed by a discussion of the types, levels and characteristics of business processes and business process modelling. The waves of change relating to business process management are included in the latter part of chapter 3.

This chapter covers the individual discussion of the *people, processes and places* components with its categories, thereby following the structure set for this thesis. The objective of this chapter is to discuss the management of the *people, processes and places* components related to the virtual workplace, supported with graphical presentations of the different categories within each of these components. Steps 2 to 6 of the Extended Hermeneutics Circle of Learning as depicted in figure 4.1 was followed as guideline. The discussion will be structured around the *people, processes and places* components as presented in figure 4.2 below.
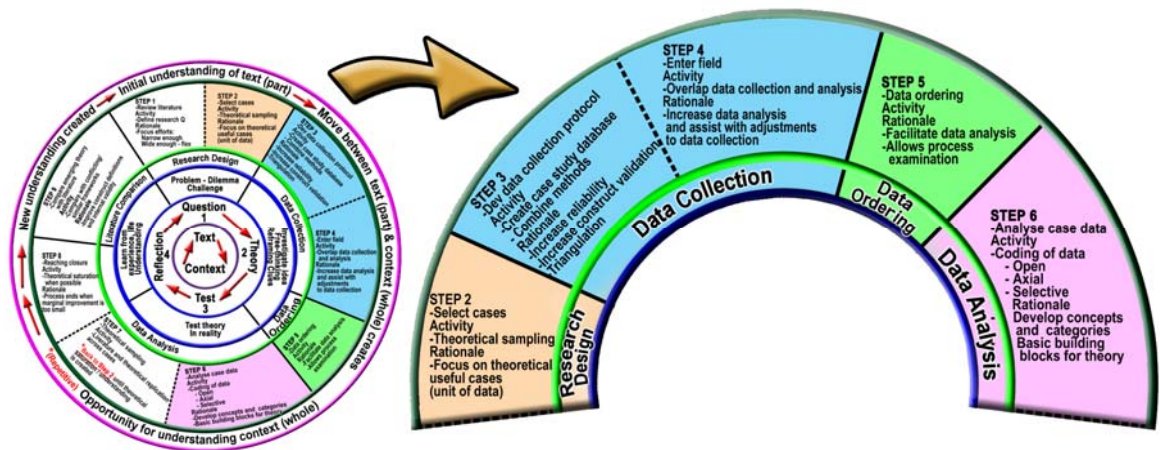
Figure 4.1: Steps 2 to 6: research design, data collection, data ordering and data analysis

Resulting from this discussion is the creation of an understanding of the people, processes and places challenges experienced in the virtual workplace. A framework for the management of people, processes and places in the virtual workplace is consequently derived and the interaction between these components is discussed in chapter 5.

Steps 2 to 6 as indicated in figure 4.2 is discussed in chapter 6 as part of the application of the Extended Hermeneutic Circle of Learning used as guideline for research conducted for this thesis. It should be noted that this thesis refers to people, processes and places components, although the discussion in chapter 6 on data analysis and triangulation refer to these components as categories with its underlying concepts.
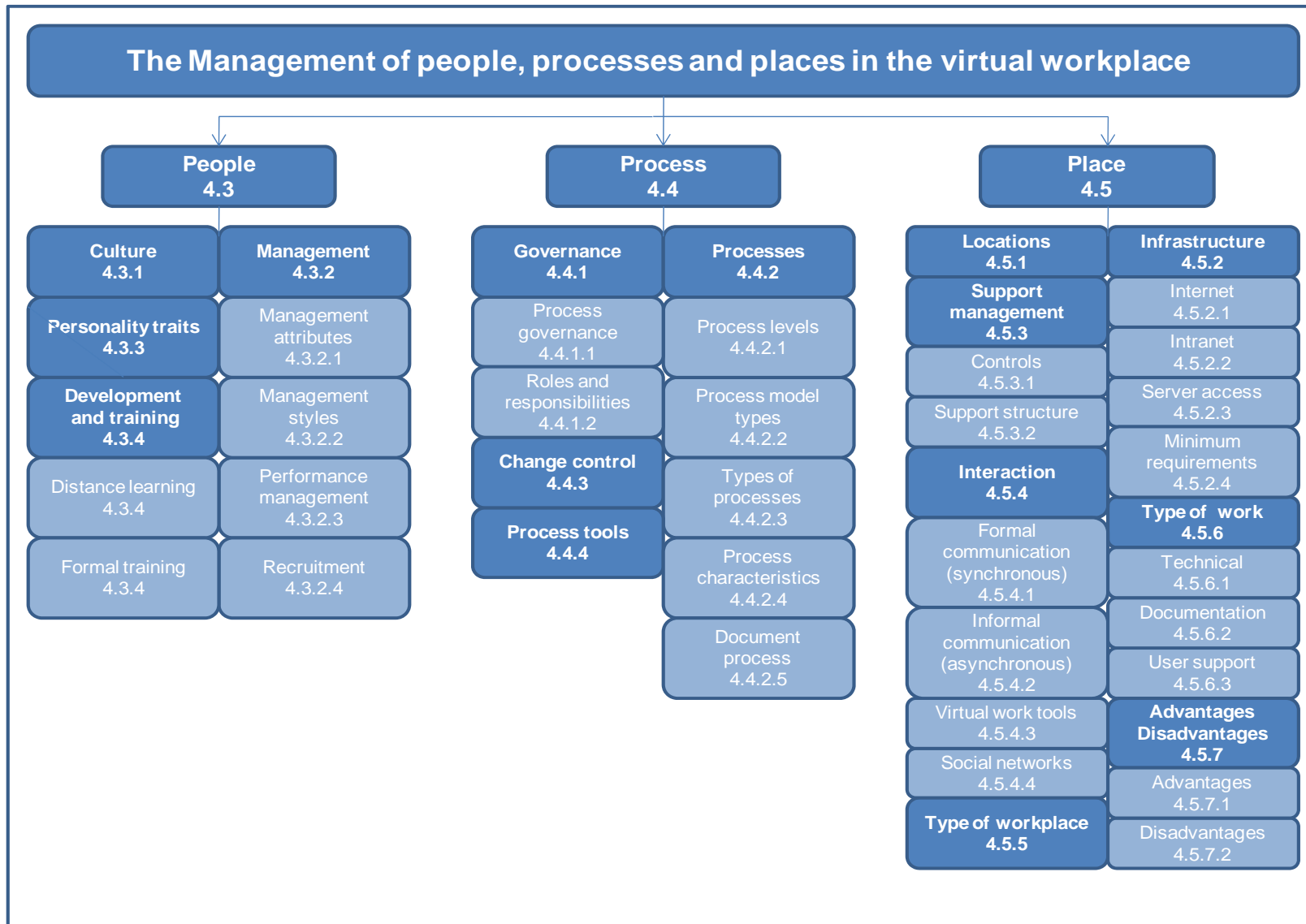
The Management of people, processes and places in the virtual workplace

People
4.3

Process
4.4

Place
4.5

Culture 4.3.1	**Management 4.3.2**
Personality traits 4.3.3	Management attributes 4.3.2.1
Development and training 4.3.4	Management styles 4.3.2.2
Distance learning 4.3.4	Performance management 4.3.2.3
Formal training 4.3.4	Recruitment 4.3.2.4

Governance 4.4.1	**Processes 4.4.2**
Process governance 4.4.1.1	Process levels 4.4.2.1
Roles and responsibilities 4.4.1.2	Process model types 4.4.2.2
Change control 4.4.3	Types of processes 4.4.2.3
Process tools 4.4.4	Process characteristics 4.4.2.4
	Document process 4.4.2.5

Locations 4.5.1	**Infrastructure 4.5.2**
Support management 4.5.3	Internet 4.5.2.1
Controls 4.5.3.1	Intranet 4.5.2.2
Support structure 4.5.3.2	Server access 4.5.2.3
Interaction 4.5.4	Minimum requirements 4.5.2.4
Formal communication (synchronous) 4.5.4.1	**Type of work 4.5.6**
Informal communication (asynchronous) 4.5.4.2	Technical 4.5.6.1
Virtual work tools 4.5.4.3	Documentation 4.5.6.2
Social networks 4.5.4.4	User support 4.5.6.3
Type of workplace 4.5.5	**Advantages Disadvantages 4.5.7**
	Advantages 4.5.7.1
	Disadvantages 4.5.7.2

Figure 4.2: Management of people, processes and places in the virtual workplace

4.2 PEOPLE, PROCESSES AND PLACES

The trio, people, processes and places each consist of a number of concepts as can be seen in figure 4.2: Management of people, processes and places in the virtual workplace. The concepts related to each of the components or categories, when referring to triangulation of data, were derived from analysing the data obtained during the focus group discussions, interviews, weblog and case study. This was followed by grouping of the concepts according to their relationship to people, processes and places. The relatedness of the concepts became evident and this paved the way to the development of the framework for the management of people, processes and places as discussed in chapter 5.

The discussion of people (section 4.3), process (section 4.4) and place (section 4.5) follow below. The profiles of the participating companies and research participants can be seen in chapter 2 and the tables are listed here for explanatory purposes.

Table 2.3: Profile Company A: Consulting

Table 2.4: Profile Company E: Consulting

Table 2.6: Profile Company B: Financial institution

Table 2.7: Profile Company C: Telecommunications

Table 2.8: Profile Company D: Financial institution

Table 2.9: Profile Research G

Appendix A: Case study: Company F

Appendix B: Participant list

4.3 PEOPLE

As mentioned earlier, business is about people, its biggest asset, process and places and the relationship between these components. The virtual workplace requires people with specific personality traits (section 4.3.3) that enable them to function effectively. Cultural, managerial and developmental aspects form building blocks of the people component related to the management of people, processes and places in the virtual workplace.

Companies have the challenge of managing a diverse workforce often located around the globe. Management aspects relate to amongst others recruitment, selection, compensation, training and development. The dispersed nature of the teams complicate team work and collaboration, especially in terms of geography and time as discussed in sections 1.1.1 and 3.3.3. The impact of geography or location and time with the bridging of time zones leading to our boundaries being expanded beyond our control impacting on working hours, are also discussed in sections 1.1 and 4.5.1, including figure 1.1.2 depicting time as an instance in space. The crossing of boundaries, thereby the bridging of time and space, enables a less centralised and more independent, empowered workforce as reflected in sections 3.3.6.1 and 4.5.7.1 (Advantages of the virtual workplace).

This also relates back to the ***people, processes and places*** components of this thesis.

4.3.1 Culture

> *"Align to company culture. It is risk averse"*
>
> **Participant 7**

The adopted and enacted values as part of culture as discussed in section 3.3.3.2 relate to the preferred values and norms explicitly stated by the company, such as the following stated by participating Company C:

- o Inspired to deliver value to customers
  - • Meeting the needs of customers is our core inspiration
- o Dedicated to agile and excellent performance
  - • Diverse, positive, aligned and passionate people
- o Determined to continuously improve
  - • Learning, changing and innovating to own the future

    o Committed to act with integrity

        • Honest, empathetic and approachable in all we do

The enacted values are those explicitly exhibited by employees and can been seen in the case study conducted with participating Company F, and quotes below. The enacted values (explicitly exhibited values) of responsibility and accountability portray the cultural attributes valued and instilled in participants 1 and 3 (Company A) as well as participants 10 and 11 (Research G). It is expressed as the most important values needed to get a job done and survive in the virtual workplace.

> *Treasuring family was encouraged through the culture established in the company .... Company F recognises that family comes first, happiness and job satisfaction come second and Company F third.*
>
> **Case study**
>
> *"Responsibility is most important point, most important value. It helps us to get on really good."*
>
> **Participant 11**
>
> "*The culture – we get our tasks and it is expected of us that it is done."*
>
> **Participant 10**
>
> *"Take responsibility to be online at 22:00 at night to get the job done."*
>
> **Participant 1**
>
> *"Real people who are going to survive in a virtual environment are those who take individual responsibility 100% for everything they do."*
>
> **Participant 3**

These values have an associated link to recruitment and personality traits as discussed in sections 3.3.3.5, 4.3.3 and 4.3.2.4, as it is important for an organisation to identify and employ people who appreciate, encourage and share the same values (participant 7, Research G) as the organisation.

> *"... it is the company culture, because it does not matter if it is trust or integrity, it is kind of a shared value in between the persons which are in there ..."*
>
> **Participant 7**

For the virtual workplace to become successful, companies need to, through a stringent hiring process, identify employees whose culture and values will fit the organisation as expressed by the case study participant as well as participant 1 from Company A. As already stated, this is also coupled to recruitment (section 4.3.2.4) as well as personality traits identified in sections 3.3.3.5 and 4.3.3.

> "*Organisations working virtually have employees of the same personality type, same core values in them that drive them to enable them to work virtually.*"
>
> **Participant 1**

Core values identified, latching onto the desired management attributes (section 4.3.2.1) in the next section, are responsibility, trust and an understanding of a multi-cultural composition. Group structures that determine existence in the organisation are changing from rigid to fluent and the manner in which social networks support virtual workers is part of the new culture, new behaviour and new socialisation process as reflected by participant 3 from Company A.

> "*It becomes a behavioural thing because of the transition between virtual, traditional.*"
>
> **Participant 3**

An organisation supporting the virtual workplace needs to have an "enabling culture" as discussed in culture as part of the virtual workplace (section 3.3.3.2) and as described by the case study participant below. This also has a

relationship with the family life composition ("trailing spouse") aspect of those who work virtual as discussed in the case study (appendix A), as well as the advantages of the virtual workplace (sections 3.3.6.1 and 4.5.7.1) with reference to flexibility allowing for family activities.

> *Organisations need to have an "enabling culture", i.e. a culture that enables as well as supports employees who work virtual, for example, this "enabling culture" can provide day care assistance for mothers; need to recognise the changing structure of households with men becoming more and more the "trailing partner".*
>
> **Case study**

This "enabling culture" has trust, loyalty and comfort as vital components as can be seen from the quote below. Trust and loyalty are discussed in section 3.3.3.1 as part of people in the virtual workplace and section 4.3.2.1 as part of the management attributes with its associated link to management style (section 4.3.2.2) as identified by participants 1, 5, 7, 9, 12, 13, 14, 16 as well as a blog participant. These components, together with the culture component (section 4.3.1) have a close correlation with performance management (section 4.3.2.3).

> *Trust, loyalty and comfort are essential components of an "enabling culture". This means trusting that employees will deliver quality outputs on time, loyalty towards the organisation and its objectives and comfort that the organisation value its employees.*
>
> **Case study**

Hand in hand with the establishing of an enabling culture is establishing "*process-based thinking as a key component of a process culture*" which is crucial for the *"sustained success of comprehensive change management"* with communication and training (sections 3.3.3.6, 3.3.3.8 and 4.3.4) as the foundation for all of those affected. Active change realisation is discussed in sections 3.3.3.3 and 4.3.5 and is recommended to support the organisation.

4.3.2 Management

> *"Management portion is where everything starts and end. This will determine if you are successful or not. "*
>
> **Participant 12**

The shift from traditional and hierarchical to more participative and supportive management styles was recognised by Gilberg (section 3.3.3.4) and can be seen in the expression of their organisational structure by participants 10 and 11 (Research G).

> *"We like to think of us as a network and not a hierarchy. Team leader is responsible for all the tasks that happen in the team."*
>
> **Participants 10, 11**

The barriers identified by Gilberg (section 3.3.3.4) still apply today, irrespective of the workplace as has been found during the research. Participants 7 and 8 (Research G) and participant 1 (Company A) echoed the organisational barriers of rigid control enforced from top management as discussed in section 3.3.3.4.

> *"... start with BPM where everything is process driven and do not have hierarchy anymore."*
>
> **Participant 7**
>
> *"I found management systems being too static – they do not reflect reality. So by the time it reaches the individual, the goals became too abstract. They do not drive, they rather limit it."*
>
> **Participant 8**
>
> *"Management cannot be rigid .... Is the organisation willing to be flexible?*
>
> **Participant 1**

This is followed by participant 17 (Company E) who shared the constraint of time and on quick decision-making. This corresponds with the situational barrier describing constraints experienced due to the lack of time and decision-making and it being influenced by the interaction between tasks and specialised knowledge (section 3.3.3.4).

> *"Decisions related to work and turn around time must happen quickly."*
>
> **Participant 17**

Resistance to change is evident from the experiences shared by participants 7 and 9 (Research G) and participant 12 (Company C). This shows a matching link to the subordinate barrier stating resistance to change is encountered when the subordinate does not see the direct benefit of a proposed change (section 3.3.3.3 and 4.3.5).

> *"... Needs lot of change realisation intervention ... explain the value it can add ..."*
>
> **Participant 12**
>
> *"You change the way things were done. People do not want to change."*
>
> **Participant 9**
>
> *"...involves change and usually people tend to resist change if there is no intermediate benefit. Biggest challenge is to overcome people's resistance to change."*
>
> **Participant 7**

Managerial barriers (section 3.3.3.4) relating to more participative and supportive management translating into less control as management cannot monitor what people are doing when not at work, is echoed by participants 2 and 4 (Company A) as well as participant 10 (Research G).

> *"Management feel they do not have control over you when you are not at the workplace."*
>
> **Participant 2**
>
> *"Management cannot monitor what you are doing."*
>
> **Participant 4**
>
> *"Expectations of the professor or boss as he does not necessarily control you if you work virtually. You cannot be controlled in a way."*
>
> **Participant 10**

The identified barriers as discussed in section 3.3.3.4 show a relationship to what is experienced today as it has been expressed by the different participants.

The nature of work has changed with global, economic and organisational change dictating flexibility to support the contemporary workplace, that is the virtual workplace. This also links to the job fitting the people with an additional link to employing suitable people to work in a virtual workplace. This is evident in the discussion on management (section 3.3.3.4) and recruitment (sections 3.3.3.5 and 4.3.2.4). This link unites people fitting in with the values of the organisation (section 4.3.1) and having the personality traits fitting the virtual workplace with its demands. These personality traits are discussed in sections 3.3.3.5 and 4.3.3 and is emphasised by participant 1 from Company A.

> *"Need to identify exactly the personality type that is going to fit the BPM job (no 1) and process analyst and (no 2) the cultures and values of that person."*
>
> **Participant 1**

Many difficult problems and barriers today require collaborative efforts from individuals (section 3.3.3.4) covering many different areas of expertise. This is

discussed as part of management attributes and management style. Trust and support for decisions taken is expressed by participant 19 (Company E).

> *"A lot of trust relationships between individuals and management and client. Creates support for decisions made – even when it was the wrong decision at that point in time."*
>
> **Participant 19**

The active leadership chain as discussed in section 3.3.3.3 as part of successful change and depicted in figure 3.4: Unbroken leadership chain top to bottom, links to participative and supportive management styles in section 3.3.3.4. It also is reflected in the opinion of participant 12 (Company C) in that management is where everything starts and ends, which will determine if you are successful or not.

4.3.2.1 Management attributes

> *"... management support has to be there; trust must be there - trust that employee will deliver on what they say they will. This fundamental has to be in place. My manager must trust me. Work will be done up to standard."*
>
> **Participant 1**

Trust between parties working together, as depicted in the quote, was identified by the majority of the participants as the most important management attribute needed in order to function effectively in the virtual workplace. Participants from Australia and Germany (participants 7 and 9, Research G) referred to trust as a collaborative partnership and shared value, which is working together, with the acceptance of responsibility and accountability as the key elements, whereas participant 13 from Company C viewed a collaborative partnership as a management style. Acceptance of responsibility and accountability form part of the cultural component (sections 3.3.3.2 and 4.3.1) as well as personality traits (section 4.3.3).

> *"Trust very important. Trust between the parties working together. Part of a collaborative relationship, i.e. working together. Difficult to work together if you cannot trust other parties. Belief in collaborative relationship."*
>
> **Participant 9**
>
> *"I see it (trust) more as shared value – how I select someone based on best for for my requirements."*
>
> **Participant 7**

Trust as discussed in section 3.3.3.1 described trust as a willingness to accept risk and the vulnerability associated with it. In view of the virtual workplace it translates to the willingness to risk giving tasks to people you cannot necessarily control and accepting the vulnerability created through lesser control and dependence on delivery from another party. Trust as described by participant 5 from Company A shows the direct link with management style as discussed in section 4.3.2.2.

> *"Trust has a direct link with management style – trust that the person will deliver on time, with quality and allow person to continue."*
>
> **Participant 5**

Trust and the value instilled as trust is created by leaders who follow and support organisational values and that goes hand in hand with leading by example, thus referring to strong and dynamic leadership fostering cohesion (sections 3.3.3.1 and 3.3.3.4).

> *"Accepting responsibility shows reliability which creates trust."*
>
> **Blog participant**
>
> *"...leading by example, participation, involvement, engagement and support..."*
>
> **Participant 13**

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Negotiation skills are regarded as an important management attribute (participant 13) in order to negotiate trade-offs against extra steps in a process and added advantage for the user.

> *"....can compliment negative side. Provide records of work done as an advantage. Negotiate trade off - an extra step in process. Look at gain, not from process perspective only, but a holistic point of view..."*
>
> **Participant 13**

A passion for processes, a process-oriented approach is an essential management attribute as that is vital for the encouragement of a process culture and appreciation of a process based manner of working.

4.3.2.2   Management style

The management attribute of trust as discussed above links to the management style as described by participants 1 and 5 (Company A).

> *"...Manager that trusts his people. Manager who does not trust, who looks over your shoulder the whole time will not work..."*
>
> **Participant 5**
>
> *"...management support must be there; trust must be there – trust that the employee will deliver on what they say they will. These fundamentals have to be in place. My manager must trust me. Work will be done up to standard."*
>
> **Participant 1**

Below is a description of the management style practised by company E as given by participant 16, which shows close correlation with that described by participant 14 from Company D.

> *"We are a new economy organisation where we have the management style of collaboration and discussions and participation.... It is part of a high performance team."*
>
> **Participant 16**

Company D's management team uses their Triple C management principle as part of their collaborative management style. Triple C refers to the Company, Customer and Consultant. This means that decisions taken should have a positive outcome for the company, client and consultant. This type of collaborative management style is embraced by Company D, as it is vital in supporting the virtual workplace. Company D also places a high premium on trust as part of their collaborative management style (section 4.3.2.1). A collaborative partnership encompasses more than just the virtual workplace. Such a relationship consists of the work component as well as the connectedness to the organisation, that is a "*connectedness to something bigger, the mother-ship*" (participant 14), to which the employee is adding value. This connectedness is relevant irrespective of the traditional or virtual workplace, but this element is underplayed in the virtual workplace (participant 14), leading to alienation from the organisation. This collaborative partnership or relaxing in organisational structure moving towards horizontal thinking is discussed in section 3.3.3.4.

Alienation is discussed in section 4.5.4 as part of the interaction needed in the virtual workplace and also forms part of the disadvantages related to the virtual workplace as in sections 3.3.6.2 and 4.5.7.2, including table 3.5 which summarises the advantages and disadvantages of the virtual workplace for employees and employers.

Hence, the impact of management style on ***people, processes and places*** is perceptible.

Hand in hand with a collaborative partnership goes networking, involvement and flexibility (participants 12 and 13, Company C) as the virtual workplace is more fluent due to amongst others, varying working hours, remote locations (as discussed in section 1.1.2) and the type of work being done, such as programming, documentation and help desk support (sections 3.3.4 and 4.5.6).

The *"Post-Fordist"* management style as discussed in section 3.3.3.4 fosters decentralised decision-making and established a higher level of flexibility, thus reflecting on the collaborative partnership as indicated by the participants.

Setting clear goals support the output-driven approach which is important for efficient functioning in the virtual workplace. Although the setting of clear goals is relevant to the traditional workplace as well, it is essential for the virtual workplace, as the virtual workplace is often linked to a project environment which is driven by deadlines and deliverables as was expressed by participant 14 (Company D), participant 7 (Research G) and participant 4 (Company A) thereby providing the link to performance management (section 4.3.2.3).

> *"...clear planning, timelines, milestones, checkpoints..."*
> **Participant 14**
>
> *"I think it is important that you go for the rules, no extension of deadlines. Deadline is (a) deadline."*
> **Participant 7**

4.3.2.3 Performance management

Clear goal setting as part of effectiveness in the organisation is paramount for performance management. Performance needs to be measured based on the objectives, goals and quality achieved (section 3.3.3.7).

> *"Telework requires setting clear performance objectives and measures for employees and managers."*
>
> **Illegems & Verbeke (2004:325)**

In the case study conducted with Company F, the participant indicated that provision for individual circumstances were made in that employees could work at the time best suited to them and their circumstances with the clear understanding that deadlines had to be met.

> *... thereby enabling employees to work at times best suited to their individual circumstances with the understanding and commitment that timelines had to be met.*
>
> **Case study**

Performance management can be viewed from two different perspectives, with the exact opposite outcomes, depending on whether an organisational (client) or contracting view is taken.

When viewed from the client's or organisation's perspective (when working on a project), quality of work, delivered within the agreed-upon timelines and within budget is crucial. This translates into the organisation wanting to pay as little as possible, for the best possible deliverable within a given timeline.

When viewing performance management from a contracting house perspective, the principle of quality applies, however, making money is part of the contracting house's aims. Consequently the contracting house would want to add as many resources to the project as possible with extended timelines, leading to increased cost for the organisation and a bigger profit for the contracting house (participant 7, Research G).

> *"Good quality deserves bonus. Not good quality place negative connotation on you. Makes that you cannot be trusted to do good job."*
>
> **Participant 9**

Clear performance management criteria are needed, especially in a project environment as virtual employees, often contractors, function in a project environment most of the time. Performance must be measured according to the output or deliverables contracted. Linked to the output is the quality of work done as well as deadlines met (participants 4 and 5, Company A). These deliverables need to be specified in clear, unambiguous terms with defined measurements for objective review (participant 12, Company C).

> *"...want to be measured on quality of work, deadlines met and whether you gave more than the client asked for..."*
>
> **Participant 5**
>
> *"Responsibilities and deliverables need to be clear."*
>
> **Participant 4**

Accepting of responsibility as part of culture (sections 3.3.3.2 and 4.3.1) and its associated link with performance management was expressed by participants 10 and 11 (Research G). Their performance management is done informally, although resting heavily on responsibility as that is strongly embedded in their culture, emphasising quality and good work.

> *"Performance management is dual and informal. Main thing is - Did you get your responsibility right; is the quality of the work good enough? Does it fit the requirement?"*
>
> **Participant 10, 11**

Rewards should be based on quality of deliverables, timelines met and additional value added as mentioned above. This is in close correlation with the modus operandi of case study participant (Company F).

> *The organisation needs to have a reward system that supports the virtual workplace, i.e. a reward system that is "results based and not activity based". This means rewarding employees for quality outputs / outcomes achieved.*
>
> **Case study**

The reward system furthermore needs to be fair, acknowledging work well done by individuals as well as teams as indicated by case study participant (Company F).

> *Bonuses were calculated on both individual and team efforts with individual efforts tied to those job aspects that the individual can control. Team bonuses were tied to achieving and exceeding the financial budget*
>
> **Case study**

Limitations, such as a lack of technical knowledge and training required needs to be acknowledged and attended to in order not to hamper executing of activities. This has relevance to development as discussed in sections 3.3.3.6 and 4.3.4.

> *"Chat with manager every half year to decide on your next goals."*
>
> **Participant 7**

Crucial to performance management is the satisfaction of both the client and employee, that is to say, the client is satisfied the work was done on time, to agreed-upon quality within budget. Hence, the employee or contractor needs to be rewarded accordingly.

The following statement made by Bilodeau (2004:4) reflects on the discussion of management attributes and style (sections 4.3.2.1 and 4.3.2.2), ownership as part of personality traits as well as business process modelling (section 4.3.3 and table 3.9), support structure (section 4.5.3.2) and performance management above, namely *"An organisation needs to provide a structure in which process ownership is reinforced, valued and supported, as well as monitor process performance and reward continuous improvements"*.

4.3.2.4   Recruitment

Recruiting employees whose values correlate with that of the organisation links to the discussion on culture (section 4.3.1) and can be seen from the statement below (participant 1, Company A). It has a further connection to the management portion (sections 3.3.3.4 and 4.3.2) and recruitment (section 3.3.3.5) in employing people suited for the job and virtual workplace.

> "*Organisations working virtually have employees of the same personality type, same core values in them that drive them to enable them to work virtually.*"
>
> **Participant 1**

As discussed in the case study conducted with Company F, the virtual environment is suitable for people who want to work virtual and who can benefit from the flexibility it offers, such as students and mothers.

> "*...consisted mostly of women with small children who preferred to work from home having the freedom to attend to their children's needs. The virtual workplace therefore suited women who preferred to work from home allowing them to attend to small children matters.*
>
> **Case study**

It is important that you choose people who want to work in a virtual office environment. Recruiting and employing suitable people for the

virtual workplace is crucial as the virtual workplace requires of people to have specific personality traits.

These personality traits are discussed in sections 3.3.3.5 and 4.3.3 respectively, and it also refers to section 4.3.1 as part of the discussion on explicit cultural values needed, namely responsibility and accountability. There is also an interrelationship between recruitment, management (section 4.3.2) and personality traits in that management have a responsibility to recruit people exhibiting the personality traits for working in the virtual workplace and supporting organisation values.

The retaining of scarce skills was mentioned by participant 15 from participating Company E, which correlates with the discussion in section 3.3.3.5.

> *"Retain scarce skills is crucial"*
>
> **Participant 15**

4.3.3 Personality traits

The personality traits and specific observable traits are in close correspondence with enacted values as part of culture discussed in section 3.3.3.2. The personality traits listed below were identified by the participants and in the case study conducted as those needed for effective functioning in a virtual workplace. Many of these personality traits can apply to different workplaces, thus it is not regarded as limited to the virtual workplace only. This section on personality traits links up with the cultural aspect in section 4.3.1, as well as responsibility and accountability examined in the recruitment portion discussed in sections 3.3.3.5 and 4.3.2.4. The personality traits are:

> *"Person should be driving own career. Not driven by a structure or a profile. It is about individual ownership."*
>
> **Participant 3**
>
> *"Activities therefore need to be planned and organised carefully to ensure quality outputs are met."*
>
> **Case study**

- Trustworthy
- Self-discipline
- Self career driven
- High sense of responsibility
- Personal ownership
- Output driven
- Commitment to performance
- Accountable
- Passion for processes
- Self-motivated
- Focussed
- Organised
- Time management
- Communication
- Flexibility
- Professionalism

> *"That is nice of a virtual workstation, because you manage your own time."*
>
> **Participant 5**
>
> *"Taking ownership of what you have to do and deliver it in quality and on time."*
>
> **Participant 3**

The personality traits identified as part of conscientiousness, as found in the "Big Five" personality traits in table 3.4, show strong correlation with the personality traits identified by the different participants.

When reviewing these personality traits based on business process modelling, which is one of the perspectives related to business process management (section 3.5), it can be viewed based as discussed in the quote below.

"...ability to facilitate a group, handle conflict, work with people, understand different people's views and standpoints, and from that derive actual business process. Take that verbal feedback and translate it into a business process, present it in a tool, and explain it to people in simple language that makes sense.

Participant 12

Appendix D (Geldenhuys 2002:46) contains an extended list of personality traits grouped according to relationships with people, reporting style, feelings and emotions and thinking style.

4.3.4 Development and training

"You rather empower, educate the individual teams."

Participant 8

Training and development as discussed in section 3.3.3.6 indicate the dual role it has in that it assists management in meeting its human resource requirements and it equips the workforce with the necessary skills to perform their activities. Training specific to business process modelling and business process management in the virtual workplace is not covered, thus indicating an identified gap.

Management's role in the provision of proper training as well as the importance of identifying and providing training relevant to the job that needs to be done, were evident from the discussions with participants 1, 7 and 12 from Company A, Research G and Company C respectively. They also mentioned that training should include features, such as clarifying what business process management and business process management governance mean, business process modelling and business process analysis. It is also vital that training material needs to be standardised. Business process methodology and modelling training is part of the function fulfilled by the centralised business process office function as documented by Company C (section 4.4.1.2). Training requirements are also reviewed in the stakeholders' portion of table 3.9.

> *"Management to ensure that they give proper training to their staff. Cannot throw someone in at the deep end and expect them to swim especially if you are on a virtual site."*
>
> **Participant 1**
>
> *"Lots of activities involved in training. What is BPM, what is process modelling, what is BPM governance, how do I analyse a process, what is important when I document a process, not from a modelling perspective only, guideline for a modelling notation."*
>
> **Participant 7**
>
> *"... Also important is, that this function is responsible for identifying relevant training. Everyone involved in BPM, process modelling goes through standard training..."*
>
> **Participant 12**

This thesis covers the identified features as follow:

Business processes, business process management, together with the difference between business process management and business process improvement (sections 3.4, 3.5.1 and 3.6.1) emphasise the difference with regard to the management approach compared to the rectification of broken business processes. Business process governance as reviewed in section 4.4.1 focuses on the need for business process modelling standards,

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modelling notations together with the organisation's policies and procedures. Business process levels, types and characteristics (section 4.4.2.1 up to 4.4.2.4) explain the different components related to business processes.

The flexibility of on-line or informal training as brought about by the internet corresponds with the availability of advanced technology as discussed in section 4.5.2. Personal development through on-line training as assisted by advanced technology is discussed in section 3.3.3.6. Informal learning is conducted through reading, computer controlled exercises, chat rooms and on-line testing as indicated by participant 9 (Research G). Literature, such as text books on software and programming provides digital versatile disks (DVD) and computer disks (CD) to be used during learning and acquiring knowledge.

> *"I believe that for most of e-learning. Very little you cannot teach without direct teacher- student or without face-to-face contact. Learning by reading, watching videos, computer controlled exercises, chat room. Also works well for learning new programmes or software, new methods."*
>
> **Participant 9**

Although participant 9 referred to e-learning or distance learning as being feasible in many instances, such as the virtual workplace, he is also of opinion that formal learning is more appropriate for obtaining specialist knowledge.

> *"Easier to learn specialist things formally."*
>
> **Participant 9**

Formal classroom training is relevant where facilitator intervention is required. Participants 1 and 4 from Company A and participant 9 (Research G) indicated that they prefer distance training and e-learning as it was easier to fit into their schedule and could be done at a time convenient to them.

> *"...Online training. New software – get training online anywhere in the world. Not formal classroom training. Get online material, figure stuff out and continue. Part of internal motivation is to find out for yourself how things work..."*
>
> **Participant 1**
>
> *"Prefer online training instead of classroom."*
>
> **Participant 4**

Participant 8 from Research G highlighted that personal preference with regard to the type of learning preferred, that is educating yourself or using a classroom setting is important when considering training.

> *"...is really what learning type you prefer, educate yourself, or do you want a classroom setting...I do no think there is a company who does not have a performance management programme and links that to a catalogue of educational courses in order to improve skills..."*
>
> **Participant 8**

In section 3.3.3.6 a distinction is made between synchronous and asynchronous learning with synchronous learning technologies assisting to help "*stave off feelings of isolation*". These feelings of isolation correspond to the disadvantages of the virtual workplace (sections 3.3.6.2 and 4.5.7.2) as well as sections 4.5.4.1 and 4.5.4.2 reflecting on synchronous and asynchronous interaction and communication and the need for synchronous interaction to lessen feelings of isolation.

It is important that training and the development of skills should have a bearing on the performance of the employee, meaning training relevant to the job that will assist the employee to perform better needs to be undertaken and his or her performance needs to be monitored accordingly as discussed in sections 3.3.3.6 and 3.3.3.7 on training and performance respectively. This type of training empowers an employee to take ownership of his or her work and performance.

4.3.5 SUMMARY: PEOPLE

Acknowledgement is given to change realisation (also known as change management) and people change aspects as part of the people component. BPM is about change and about people as expressed by a weblog participant:

> *...BPM is about change, change is about people ...*
>
> **Weblog participant**

Active change realisation and the accompanying organisational change affecting the culture of the organisation are fields of expertise on their own and are therefore not covered in detail. However, the following aspects are highlighted, including Company E's reflection on change management.

> *"... projects can only be successful if the organisation is prepared to change. Our implementation methodology incorporates world-class change management processes."*
>
> **Company E**

The business enablers for change realisation as discussed in section 3.3.3.3 need to be taken into account, namely clear and visible support by top management, clear communication, training and promoting process-oriented thinking together with creating trust. These enablers have relevance to the discussions on culture (section 4.3.1), communication (sections 3.3.3.8, 4.5.4.1 and 4.5.4.2), trust (sections 4.3.1 and 4.3.2.2), personal responsibility (sections 4.3.2.3 and 4.3.3) and governance (section 4.4.1). The unbroken leadership chain from top to bottom as discussed in section 3.3.3.3 and these enablers have a close resemblance with management (section 4.3.2) and the reflection on management being the start and the end of everything (participant 12, Company C). The unbroken leadership chain top to bottom is depicted in figure 3.6.

The people component of the virtual workplace consists of various building blocks, namely cultural, managerial and developmental. Although these building blocks are relevant to the traditional workplace, it has been found that the emphasis differs from that in the traditional workplace. A new organisational culture is created as a result of new behaviour and new socialisation processes being established. Hand in hand with this new culture goes a fluent, collaborative management style with trust, responsibility and accountability as crucial elements. Recruiting employees who instil the enacted values of the organisation and who are suitable candidates for the virtual workplace is important, as the virtual workplace is not suitable for everybody. Performance management needs to be output driven and this has a relationship to the personality traits of those working in the virtual workplace. Training as and when required by the virtual worker is preferably done informally and from a distance. This also links to accountability and responsibility as part of the personality traits, in that the virtual worker does it at his or her own convenience.

A process oriented management approach with a passion for processes, both from management and from people working in the virtual and traditional workplaces form part of the people component for the management of people, processes and places in the virtual workplace.

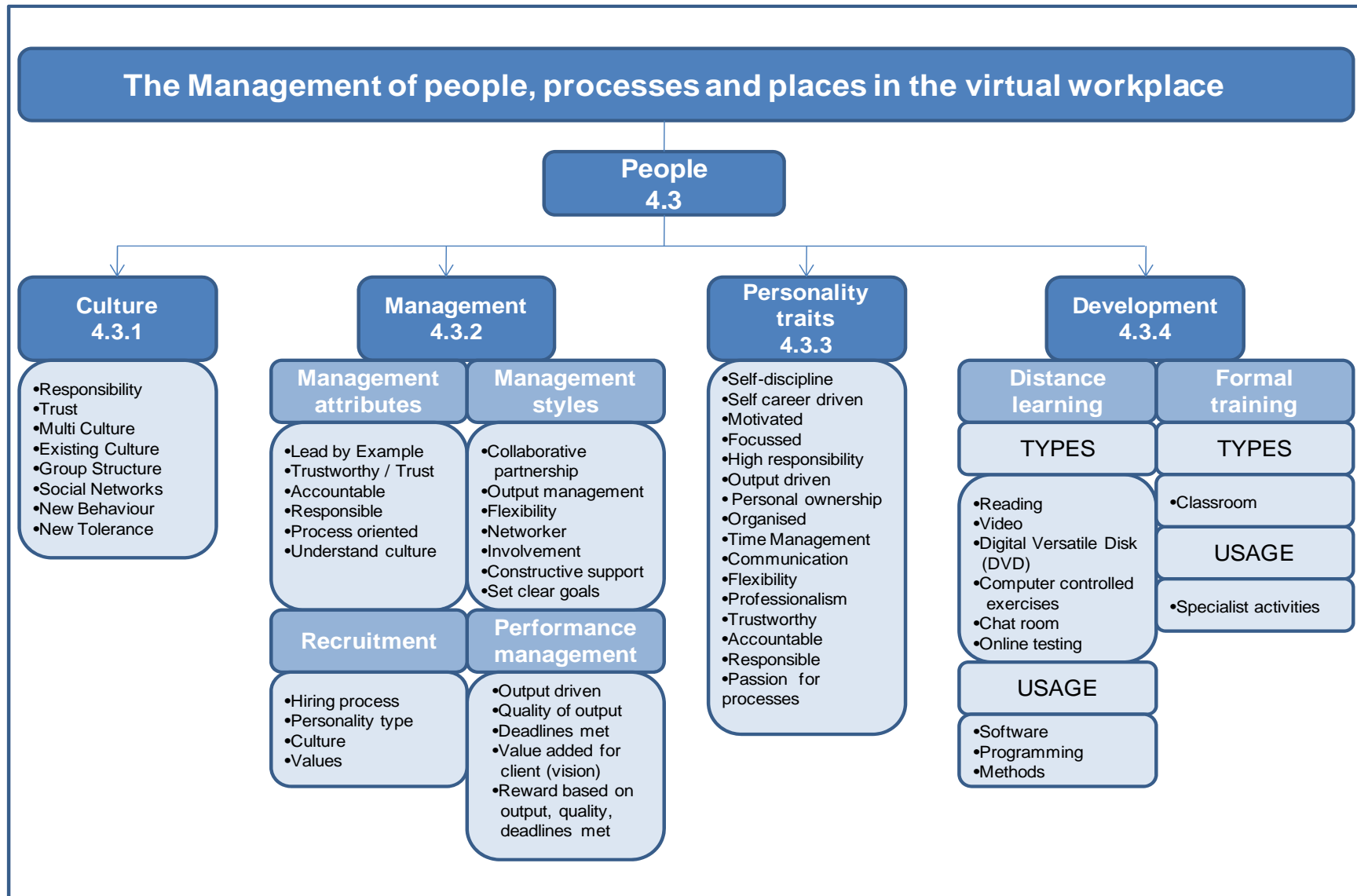Figure 4.3 summarises the people component as discussed above.

The Management of people, processes and places in the virtual workplace

People 4.3

Culture 4.3.1
- Responsibility
- Trust
- Multi Culture
- Existing Culture
- Group Structure
- Social Networks
- New Behaviour
- New Tolerance

Management 4.3.2

Management attributes
- Lead by Example
- Trustworthy / Trust
- Accountable
- Responsible
- Process oriented
- Understand culture

Management styles
- Collaborative partnership
- Output management
- Flexibility
- Networker
- Involvement
- Constructive support
- Set clear goals

Recruitment
- Hiring process
- Personality type
- Culture
- Values

Performance management
- Output driven
- Quality of output
- Deadlines met
- Value added for client (vision)
- Reward based on output, quality, deadlines met

Personality traits 4.3.3
- Self-discipline
- Self career driven
- Motivated
- Focussed
- High responsibility
- Output driven
- Personal ownership
- Organised
- Time Management
- Communication
- Flexibility
- Professionalism
- Trustworthy
- Accountable
- Responsible
- Passion for processes

Development 4.3.4

Distance learning

TYPES
- Reading
- Video
- Digital Versatile Disk (DVD)
- Computer controlled exercises
- Chat room
- Online testing

USAGE
- Software
- Programming
- Methods

Formal training

TYPES
- Classroom

USAGE
- Specialist activities

Figure 4.3: Management of people, processes and places in the virtual workplace – people

4.4 PROCESS

Business processes are vital in its support to the virtual worker irrespective of the manner in which it is presented (weblog participant) thereby providing the only structure to the virtual workplace (participant 6 from Company B).

Process as discussed in this section relates to the processes supporting the virtual worker and not specifically to core business processes.

> *Business processes play a huge role in the life a mobile worker. Whether these processes are formally documented and managed as per BPM or not, the truth is that you are part of an organisation, but are working remotely; processes for communication, timesheets, reporting, etc. are crucial...*
>
> **Weblog participant**
>
> *"Process is the only permanent work structure ... Process is the only structure to the virtual workplace."*
>
> **Participant 6**

As discussed as part of the literature overview and more specifically defining business processes in section 3.4.1, it is important to understand that value is created through the execution of the whole process and that all the different, defined tasks have been grouped together to obtain synergy and assist in the systematic and orderly execution of the activities, paving the way towards one clear, common agreed-upon goal. The goal is to get more out of the entire organisation (and not the individual) and this is obtained by improving the performance of the end-to-end business process to which individual workers contribute (Hammer et al, 2004:14). This translates into a change in work style as described by participant 8, Research G, below and has a bearing on the comments by Watson-Manheim et al (2002:191) that changes related to the work environment become apparent as boundaries of time, space and organisations are expanded with the virtual workplace becoming part of the changing environment (section 3.3).

> *"Work style environments will change. Organisational boundaries become porous, from business alliances and networks, move towards a work style that is less transactional oriented and more collaborative, problem-solving oriented."*
>
> **Participant 8**

Governance, the process itself, process tools and process change control form the building blocks within the process component as part of the management of people, processes and places in the virtual workplace. A discussion on these building blocks follows below and is summarised in figure 4.4.

4.4.1 Governance

Governance can be discussed from different perspectives, such as corporate governance and financial governance, but for the purpose of this thesis governance is discussed from a business process perspective, including the roles and responsibilities associated with the business process environment, namely that of business process owners, business process modellers and centralised business process custodian (sections 4.4.1.1 and 4.4.1.2). Governance is also discussed in the strategy and governance as well as modelling success, practice of modelling and maintenance portions of table 3.9, covering business process modelling pitfalls.

Business process governance is responsible for setting business process standards, including adherence to the standards as stated by participant 12 (Company C).

> *"Management is important in terms of governance, establishing standards but also making sure that standards are adhered to."*
>
> **Participant 12**

Business process governance also links to the unbroken chain of leadership as discussed as part of people (section 3.3.3.3), business process management (section 3.5.1) and table 3.11.

4.4.1.1   Business process governance

Business process governance relates to the establishing of appropriate structures, measures, roles and responsibilities needed to measure, improve and manage the performance of the end-to-end business as reflected on in the strategy and governance as well as maintenance portions of table 3.9 which covers business process modelling pitfalls. Participant 12 form Company C reflects on adherence to standards as part of business process governance.

Ensuring data integrity is a crucial part of business process governance as expressed by participant 6 from Company B, who used the example of many business process modellers using abbreviations related to the short message system (SMS language) which is inappropriate for formal business process modelling. This destroys the integrity of data when using a single source for business process models. The use of stenographic or shorthand language as part of short message system (SMS) usage is discussed in section 3.3.3.8.

In order to perform and support these activities specific business process governance is needed, namely business process modelling standards, modelling notations, the organisation's policies and procedures documenting the business rules applicable to the business process as well as simple, unambiguous process language (participant 6, Company B and participant 12, Company C) thereby providing the better management option (participant 13, Company C). The notion of standardisation in support of business process governance is also echoed by Zemliansky and St Amant (2008:518) as can be seen in section 3.4.5.1.

> *"Standardisation not always a criteria – but I believe it is the criteria you manage better with."*
>
> **Participant 13**
>
> *"We have standards for everything...the only things you are allowed to use. On what level you will map it. Standards of process modelling, naming conventions. We have a customised template."*
>
> **Participant 6**
>
> *"...inputs and outputs from each process and decisions involved clearly indicated in a standard methodology that is clearly communicated."*
>
> **Participant 12**

The importance of having business process governance covering these aspects is emphasised (participant 12, Company C) as a lack of business process governance results in dissimilar processes modelled according to different standards, in different tools, thereby obstructing the endeavour to have a repository with an end-to-end view of the organisation's business processes.

> *"... but if not applied throughout the company then BPM as a value add to your organisation fails, because you have disparate processes modelled and implemented throughout the company using different standards, different criteria, different priorities – ending with a disparate set of processes, modelled in different tools according to different standards. Cannot have a repository with end-to-end view of business processes."*
>
> **Participant 12**

Business process governance has a further management component latching onto training and development (section 4.3.4) as training should cover business process governance and more specifically business process modelling standards and business process analysis (participants 1, 7 and 12 from Company A, Research G and Company C).

Documenting of the business processes including business process levels and business process decomposition, business process tools and business process change control have governance features of their own and are therefore discussed separately in sections 3.4.7 4.4.2, 4.4.2.2, 4.4.2.5 and 4.4.3. Business process levels are also reflected upon in table 3.9 as part of the practice of modelling and sections 3.4.3 and 4.4.2.1.

These governance aspects relate to the traditional and virtual workplaces and are vital in order to obtain a standardised, end-to-end business process view. However, technology, that is business process modelling tools and its accessibility over the internet and other networks, have been identified as a challenge for those working in a virtual workplace (section 4.5.2). These aspects are discussed as part of the place component related to the management of people, processes and places in the virtual workplace.

4.4.1.2   Business process roles and responsibilities

Defining the roles and responsibilities within the business process environment, as in any other environment, is crucial, as it provides guidance and clarity on expectations. Table 3.9 reflects on roles and responsibilities as part of the modelling success and maintenance portion. Business process roles and responsibilities as part of the literature review can be seen in section 3.4.6, with table 3.10 covering business process roles and responsibilities.

The roles of the business process owner, business process modeller and centralised business process custodian have different responsibilities and were documented by participating Company C.

Roles and responsibilities	
Role	**Responsibility**
Business process owner	- Business process management to ensure validly and accuracy of business processes. - Liaise with business process modellers on the design and mapping of business processes for the relevant area. - Ensure validity and accuracy of supporting business process documentation (work instructions, business control points, methods and procedures). - Performance auditing on processes to verify accuracy of business practice being displayed, i.e. what is being done should be the same as what is being displayed in the business process. - Deployment and implementation of the business processes. - Establish training requirements for business process modellers and communicate such training needs to the modelling support office. - Establish Service Level Agreements (SLA) and measurements. - Benchmark business processes against best practices. - Monitor and review business process and process performance to facilitate continuous improvement. - Liaise with all relevant stakeholders to facilitate acceptance of new and revised business processes.
Business process modeller	- Update repository with new and changed models. - Define and document processes through the BPM life cycle. - Facilitate and design as-is business processes. - Compile to-be business processes. - Provide an integrated end-to-end business process design. - Adhere to modelling standards set. - Conduct business process impact analysis on proposed changes before actual business process changes are executed. - Provide approved business processes for development of training material. - Facilitate and align business process changes with other impacted domains to ensure integration of business processes. - Adherence to quality standards.

	- Adherence to documentation standards, that is obtaining of business process identification number and version number. - Facilitate and arrange workshops to review models. - Provide business process owner with graphic reports and other reports, such as work instructions by generating the reports from the central repository.
Business process custodian and support office	- Develop and document business process modelling methodology, that is business process model types, business process levels, objects and their associated relationship to be used by business process modellers. - Conduct business process modelling methodology training. - Arrange and conduct business process tool training as identified by the business process owner. - Facilitate business process change control. - Quality assurance conducted on all documented business processes, including semantic check and spell check. - Version step the business process as part of change control - Merge new and updated business process models in the business process repository. - Consolidation of objects in the business process repository. - Coordinate publishing of the documented business processes to the intranet. - Create users on the server. - Act as single point for business process changes. - Investigate new business process tool enhancements. - Resolve business process tool error log files. - Manage business process modelling tool licences. - Investigate requests for changes to business process methodology and modelling standards. - Updating of weekly project progress report and other relevant reporting.

Table 4.1: Roles and responsibilities – Company C

The responsibilities related to centralisation of business process support (Company C) correlate with those defined by Bilodeau (2004:15), except for the assessment of business process maturity. The training feature included in the centralised business process support office portion above closely correlates with the training and development of the business process resources (section 4.3.4) through

standardised business process modelling and process analysis training (participant 1, 7 and 12 from Company A, Research G and Company C).

4.4.2 Processes

As indicated above the documenting of business processes has process governance features of its own which are essential when aiming to establish a general, widespread understanding of business processes. This can be seen as the starting point when moving towards the establishing of a business process centric culture.

Hand in hand with the documenting of the business processes goes adherence to the business process standards to assist in ensuring uniformity and training to understand the business process methodology, standards and levels (participant 12, Company C).

> *"Obvious understanding of process modelling, levels, standards and how it relates to each other."*
>
> **Participant 12**

4.4.2.1 Process levels

As discussed earlier (section 3.4.3), defining different levels of business processes assist in creating an understanding of the way in which the organisation is structured. These process levels usually start off with the enterprise value chain, followed by the end-to-end value streams depicting activities across organisational borders. Next, the end-to-end value streams are broken down into sub-processes which include the different role-players. A further decomposition of the sub-process leads to individual activities performed per single role-player. At the lowest level, these activities can be broken down into tasks that are performed without interruption (Hayden & Draft, 2004:19). The latter, usually the lowest level, is often executed through workflow and is therefore semi- or fully automated. Decomposition of business

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processes and the levels can be seen in tables 3.8 and 3.9 reflecting on defining business process levels and business process decomposition respectively. Business process levels are also covered in table 3.10 as part of the tools and related requirements as well as practice of modelling.

The viewpoints shared by participants 7 and 12 (Research G and Company C respectively) correlate with the levels of business processes above, in that board members are interest in knowing that the business is running thus focussing on and understanding of the high level process without necessarily knowing what is happening in the detail process. The opposite of this, meaning knowing the detail process would be applicable to a clerk executing invoice payment as this person needs to know the detail steps to be followed. Hence, understanding the audience's needs is important for providing an understandable process, such as the use of level 3 processes for training (participant 6, Company B).

> *"Then you are talking on level of business analyst who is doing execution level. Manager looks at execution level once in a while. He needs to understand on high level what we are doing. Senior Manager or Board Member perspective does not care about all twenty different views. Want to know business is running."*
>
> **Participant 7**
>
> "*If Executive wants to invoice processes show it at the relevant level that will make sense. If it is the clerk who executes transactions give level 4 or 5 – detail level. Depending on who is targeted will you give a business view or IT view.....Understand different audiences' needs and translate that in an understandable process."*
>
> **Participant 12**
>
> *"Use level 3 processes for training."*
>
> **Participant 6**

Applying these levels consistently across organisational divisions assists in creating a uniformed view and understanding of the organisation's business processes (participant 12, Company C).

Hand in hand with process levels go the consistent use of process model types pertinent to the specific process level, audience and usage of the process. This is relevant to business process models as well as system models.

4.4.2.2 Process model types

Acknowledgement is given to different process modelling tools having different process model types. The emphasis is placed on the consistent usage of process model types to display a required level of detail for a specific audience as described by participants 6, 7 and 12 above and participant 13 (Company C) below. This matter is also reflected upon in the strategy and governance portion of table 3.9.

> *"For a process to add value it should be able to be read and understood by the target audience."*
>
> **Participant 13**

Different business process model types as discussed as part of sections 3.4.2 and 3.4.4 provide different views to different audiences. This was documented by Company C as:

- o organisational charts for documenting organisational structures representing organisational units or positions
- o value chain diagrams for representing high level business processes

- o event-driven process chains to display the actual sequence of functions that forms the business processes (This was for use by the business people, including a training requirement.)

- o various dataflow diagrams and case diagrams for us by system administrators

This correspond with the use of specific process model types as expressed by participant 6 from Company B.

".... also have workflow diagrams, activity diagrams, dataflows ..."

Participant 6

Evaluating and deciding on the appropriate model types to be used, is a fundamental part of the development of the process modelling standards which is part of process governance within the organisation.

4.4.2.3   Types of processes

The collection of processes within an organisation consists of different types of processes of which the following main types of processes were identified during discussions (participants 2, 3 and 4 from Company A, participant 7 from Research G and participant 14 from Company D):

- o manual processes which require human action to be executed
- o semi-automated processes which require human interaction or handover before the automated portion can continue
- o automated processes which require no human interaction

Activities within the virtual workplace were for the most part supported through semi-automated processes, supported through workflow (participants 2, 3, 4 Company A; participant 7, Research G and

participant 14, Company D), with only manual forms being done at the office (participant10, Research G.)

The submission of timesheets provided the following details with regard to the types of processes mentioned above:

o A manual process is followed where office time is derived from a clock-card system, meaning that the clock-card system is "clocked" personally each time a person leaves the office and returns. Timesheets are not electronically compiled and routed via workflow for approval. The data collected through the clock-card system is manually extracted and provided for approval to the individuals involved.

In the exceptional event that a person would work from home, approval needs to be obtained from the supervisor ahead of time. Upon return to the office, exact detail of time worked and activities performed need to be handed in writing to the supervisor. Once approved these details are added to the person's records for inclusion in remuneration (participant 2, Company A).

> *"If not working at office but remotely, had to get special permission to be paid for those hours as time was not recorded on server."*
>
> **Participant 2**

o A semi-automated process is followed where timesheets are completed in Excel, saved and emailed to the relevant supervisor for approval. The approved timesheet is provided electronically to the finance division for arrangement of payment (participants 1 and 3, Company A).

o An automated process with workflow components is followed where the timesheets are captured on an ERP system, whereafter it is routed to the supervisor for approval. Upon approval, it is routed to the financial division where remuneration is arranged (participant 18, Company E) with participant 17 from the same company adding that support personnel book their time on a daily basis, whereas consultants working on projects book their time on a weekly basis.

Automation of business processes and thus the standardisation thereof is part of business process support in the virtual workplace as can be seen from the quotes below (participant 7, Research G).

> *"Execution level – workflow plays a big role in virtual environment. Workflow is the technical part of it. Real detail is on execution level.*
> *Workflow is automatically executed. We have a standard process for certain countries, certain divisions; depending on their characteristics you have a different workflow – a variation of the standard with more or less detail."*
>
> **Participant 7**

The type of processes and the characteristics portrayed by these processes, as discussed below, form a combined unit to support the virtual workplace.

4.4.2.4 Process characteristics

> *"Characteristics of processes for traditional and virtual should be the same for example timesheet system."*
>
> **Participant 9**

Various business process characteristics have been listed as part of the literature review in section 3.4.4 of which routine or mundane tasks

are performed by computers wherever possible, for the sake of speed and reliability (Smith & Fingar, 2003b:47).

The dominant characteristics of business processes supporting the virtual workplace relate to process that are computer supported, thus workflow and semi-automated processes as reflected in the discussion in section 4.4.2.3 (participants 1 and 3, Company A and participant 17, Company E).

> *"Workflow and computer controlled processes."*
>
> **Participant 17**
>
> *"...try to do is to maintain a 95-96% similarity. If you touch any generic process and it has something to do with compliance there will be a problem."*
>
> **Participant 6**

Uniform processes, independent of infrastructure or location, are the answer to supporting the virtual workplace as can be seen from the quote below (participants from Germany).

> *"Business process is the same. We do at home what we do at the office .... completely independent of infrastructure of location."*
>
> **Participant 10**

This corresponds with the case study conducted (Company F) as a standard process for both the traditional and virtual workplaces applied and meetings were not scheduled for 14:00.

In order to accommodate employees in both the traditional and virtual workplaces the same business processes and rules applied with reference to flexible working schedules, i.e. that no meetings were held at 14:00.

Case study

The notion of generic processes was also expressed by Company E who indicated that they have generic processes. Differences in processes were encountered with the different clients, such as differences in payments and invoice dates.

"Process the same. Generic. Standardised. Same system, same approval. Differences will be client based. Different cut-off dates.

Participant 18

4.4.2.5   Documenting processes

Documenting of business processes is more than just the drawing of pictures. It is about a central repository with business process information, linked to the supporting documentation (participant 6, Company B). This statement corresponds with Smith and Fingar (2003b:21–23) in section 3.5.1 with business process management providing a shared, integrated platform of business processes and business process information. Documenting of business processes is also reflected upon in the strategy and governance portion of table 3.9 as a driver for business process modelling and it is part of the responsibility of the business process modeller (tables 3.10 and 4.1).

> *"Every map on the system is linked to the policy, system, any other documentation, training material. If you go into the repository and go into one specific process you can see the link and if you click on the link it will take you to the policy...Behind the process map is a lot of information."*
>
> **Participant 6**

Apart from knowing and understanding the business process methodology that needs to be followed when documenting business processes, which is part of the business process modeller's responsibilities (section 4.4.1.2), the business process modeller and business analyst also need to understand the following (participants 6, 7 and 12, 13 from Company B, Research G and Company C respectively):

- o the purpose and focus of the business process (*why*)

- o the usage of the business process (*what*)

- o the process audience that will be using the business process (*who*)

- o the as-is business process (*what is currently done*)

- o the to-be business process (*future mode of operation*)

When an existing business process (as-is business process) is being reviewed, it needs to be done in consultation with the business process owner and business experts. Cognisance needs to be given to the role and responsibilities of the business process owner who is ultimately responsible for the business process and its execution as discussed in section 4.4.1.2, table 4.1, as well as table 3.10. Part of business process review is also ensuring adherence to the business process methodology that sets the standards for business process compilation and documentation. This is also stated as part of governance and the practice of process modelling in table 3.9.

Only once an existing business process has been taken through the formal change control process, that is the written request for a business process to be changed which allows for version control, can the business process be changed.

These are crucial check-points as part of delivering quality and usable business processes (participant 6, Company B) and these check-points apply to the traditional and virtual workplaces. The impact from a change control perspective on the virtual workplace is discussed below.

4.4.3 Process change control

> *"...changes due to improvement of customer service and changes due to compliance changes and from senior stakeholders.."*
>
> **Participant 6**

It is important to understand what business process change is about as stated in table 3.9 as part of the modelling success and maintenance portion. Business process changes can arise due to a number of factors, such as mergers, legal regulations and outsourcing (section 3.4.7). This leads to changes in the genetics of the organisation as stated by participant 9 from Research G.

> *"If you change business processes you change the genetics of an organisation. You change the way things were done."*
>
> **Participant 9**

Although any combination of the changes mentioned in section 3.4.7 will have an impact on various organisational aspects, such as culture, work

procedures and training, it is not addressed in this specific discussion of change control. The reason for this is that it is part of organisational change realisation (participant 12 and 13, Company C) or organisational change management, which has as focus communication, information and training (section 3.3.3.3).

Process change control requires a formal process which requires well documented change requests as business process changes may lead to system changes. The change control process followed by participating Company C is system based and the documentation covers the following fields:

- o change request number as generated by the change control system
- o sequence number/s related to the change
- o priority of the change, that is high, medium or low
- o transport numbers and sequence in which change is taken to the production system
- o change request title
- o business reason necessitating the change, for example legislation
- o business risk associated with the change, for example non compliance to legislation
- o back-out plan if change is unsuccessful, for example revert back to previous version
- o type of change, for example master data, reporting, new development
- o Identification of cross module impact if more than one module is impacted
- o SAP module impact
- o business process impact
- o name of person responsible for updating of the business process

- o date specifications, namely date change was requested on; date change was created; date change is required by; date change was received by IT; date work on the change commenced and date the change was completed

- o name and details of change requestor or initiator

- o name and details of person responsible to investigate the change

- o names and details of all role-players involved in approving the change, namely team leads; support manager; senior manager; change control forum chairperson.

- o business processes impacted by the change

- o name of person responsible (developer) for executing the change

- o name of testers

All signatories and the sign-off page are generated by the same system when logging of the change request and included the following sign-offs:

- o tested successfully in Development

- o tested successfully in QA

- o tested successfully in Production

- o master data verified and data integrity check completed on production

- o master data changes communicated to all affected partied

- o business process change request registered with business process team

- o business process changes done and verified by business process owner

- o training material change request registered with process owner and training team

- o training material change done and verified with process owner and training team

- change communication to all involved parties completed

- close change after post evaluation

> *Changes in business processes are key as input into the whole change realisation and training perspective.*
>
> **Participant 12**

The change control documentation as generated by the system serves as trigger for the updating of the impacted business processes, thus aligning the business process change with the system change. This emphasises that business process changes are also dependent on a formal process, which include:

- a formal request to change the business process

- a motivation and explanation of the required business process changes

- version control on the business process

Once approval has been obtained and the business process has been provided, meaning the business process has been moved from the business process production group to the development group, the specified changes can be done. These business process changes are work-shopped with the business process owner to his (or her) satisfaction, which is in line with the responsibilities of both the business process owner and -modeller. Once the business process changes have been completed, quality assurance is done to ensure adherence to the company's business process methodology and standards. Sign-off is obtained from all the relevant stakeholders whereafter the updated business process is booked into the applicable business process repository. Only approved processes are used for system development (Companies B and C, participants 6 and 12).

Business process change control is more complex and cumbersome in the virtual workplace, as all communications related to business process changes are done via email. The following high level process is followed by the virtual workers of Company B:

- o Request business process via email.

- o Receive business process via email.

- o Execute business process changes, including version control of the business process, the name of the person responsible for executing the business process changes and the date changes were done.

- o Conduct workshops with business process owner until process is to his or her satisfaction.

- o Do quality assurance to ensure adherence to company's business process standards.

- o Obtain business process owner's physical sign-off on changed business process.

- o Scan the business process in order to obtain a soft copy for email purposes.

- o Email scanned copy of updated business process to be sent to business process repository in South Africa.

- o Retain paper copy of approved business process on site (Angola).

- o Person in charge of the business process repository updates the business process in the system with the relevant changes.

- o Quality assurance is done to ensure compliance to the organisation's business process methodology and standards.

- o Business process status is updated in the system.

From the above-mentioned procedure it is evident that duplicated work is being done due to the business process changes being done on the project site and again when the centralised business process repository is updated.

Quality assurance is also done twice, that is at the project site before the business process is signed off by the business process owner as well as when the business process repository is updated.

The reason for this way of working is the limitations with regard to online accessibility, given that it is crucial for the financial institution to protect its business and customers. The sending and receiving of business processes via email can be problematic, especially when a large number of business processes (sometimes up to seventy processes) are requested due to the limitations on email attachment capacity (participant 6, Company B).The infrastructure limitations and difficulties experienced are discussed in more detail in section 4.5.2.

Although it is an extensive process that is being followed, it has the advantage of a formal audit trail which is crucial to Company B. It furthermore ensures that the business process repository, which is the single source where all business processes are kept, stays valid, providing users with the latest approved business processes.

> *...Single source, single repository, audit trail...*
>
> **Participants 3, 6, 17, 18**
>
> *"All the training material, everything is already done, signed-off and then implementation will take over."*
>
> **Participant 6**

4.4.4 Process tools

Various process tools with a mixture of process models and added functionality exist in the market today, such as the Architecture of Integrated Information Systems (ARIS) and Enterprise Architect (EA). Business process modelling tools are also covered in practice of modelling in table 3.9. Key to

supporting the business process domain, whether it is in the traditional or virtual workplace, are integrated business process tools. This means tools encompassing a single repository or source for business processes, which allows for re-use of business processes and objects according to an approved methodology. The matter of a single repository and using of an appropriate business process modelling tool are also stated in the strategy and governance as well as tool and related requirement portions of table 3.9.

> *"... You need to do a proper selection of the tools you want to implement. Make sure process implementation requirements match the tool you want to use. Make sure you select the right tool for the job you want to implement. "*
>
> **Participant 12**

Business process modelling tools supporting the collaborative management style as considered in sections 4.3.2, 4.3.2.1 and 4.3.2.2, as well as the specific skills required in section 4.3.3, are summarised by the participant 8 in his expression of people, skills and tools moving towards collaboration and networking. This also links to Smith and Fingar (2003b:21–23) in section 3.5.1 where it is stated that BPM enables the collaborative design of business processes among partners as well as providing the tools needed for management of business processes supporting virtual organisations.

> *"It is about moving away from assembly line but rather creating networks of people with certain skill sets in order to solve a specific problem. Toolsets supporting BPM are also moving in this direction. You will see more collaborative type environments than transactional type oriented environments."*
>
> **Participants 8**

From a more technical perspective, hand in hand with the selection of the appropriate business process modelling tool is the availability of adequate and appropriate licences for the business process consultants as expressed by participant 9 (Research G).

"No toolset available to help them manage business processes.... This organisation had three Visio licences for 600 computers. No."

Participant 9

This is also fundamental in the establishment of a business process centric culture in the organisation, as the unavailability of business process modelling tools or licences are a sure way of hampering the initiative of moving towards business process buy-in.

4.4.5 SUMMARY: PROCESS

Business processes are vital to obtain synergy and assist in the systematic and orderly execution of the activities, paving the way towards one clear, common agreed-upon goal and this holds for the traditional as well as virtual workplaces.

Understanding and embracing the building blocks of business process governance, business process change control and process tools are crucial to move towards a business process centric organisation in supporting the virtual workplace.
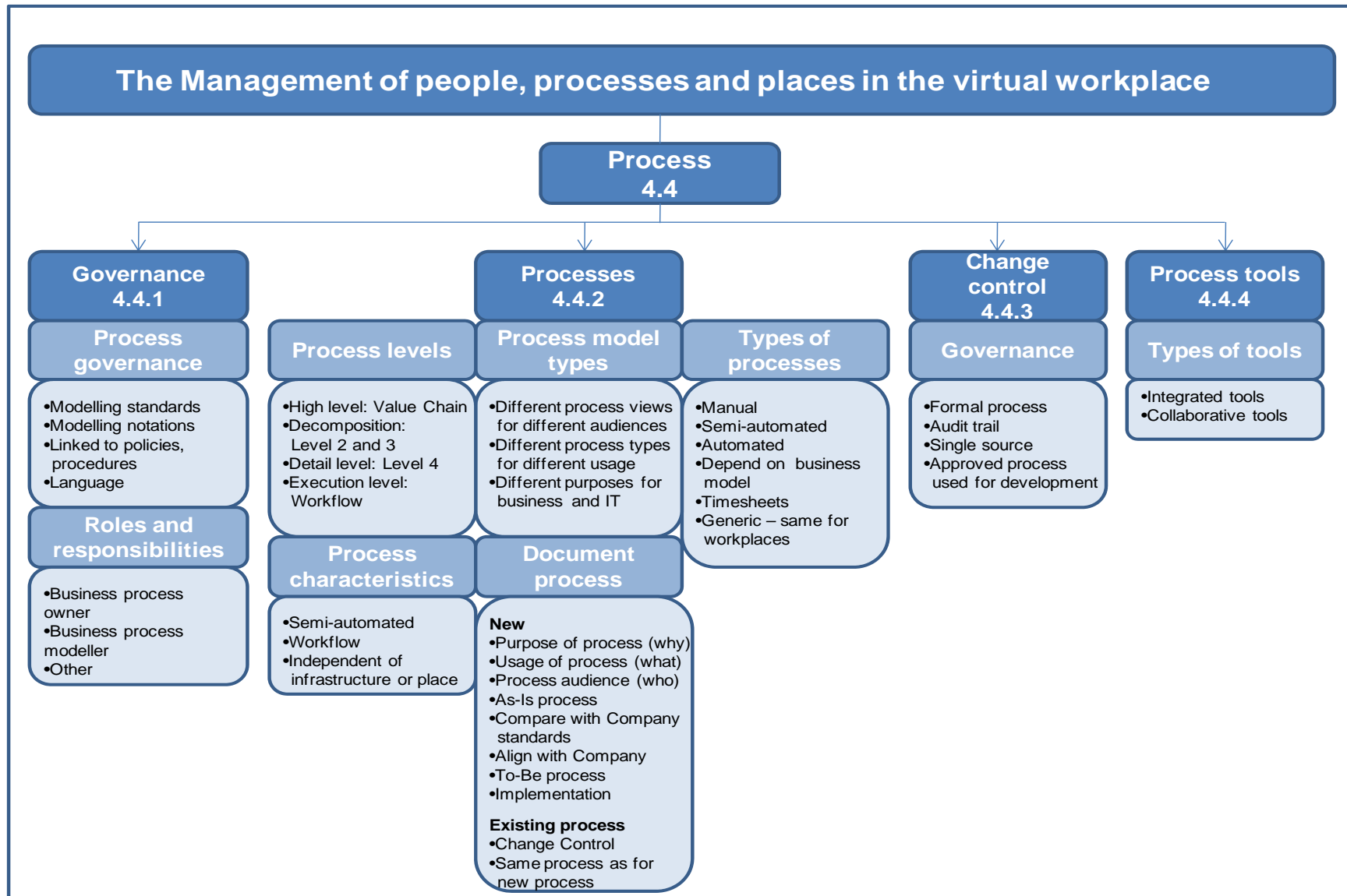
The Management of people, processes and places in the virtual workplace

Process 4.4

Governance 4.4.1

Process governance

- Modelling standards
- Modelling notations
- Linked to policies, procedures
- Language

Roles and responsibilities

- Business process owner
- Business process modeller
- Other

Processes 4.4.2

Process levels

- High level: Value Chain
- Decomposition: Level 2 and 3
- Detail level: Level 4
- Execution level: Workflow

Process characteristics

- Semi-automated
- Workflow
- Independent of infrastructure or place

Process model types

- Different process views for different audiences
- Different process types for different usage
- Different purposes for business and IT

Document process

New
- Purpose of process (why)
- Usage of process (what)
- Process audience (who)
- As-Is process
- Compare with Company standards
- Align with Company
- To-Be process
- Implementation

Existing process
- Change Control
- Same process as for new process

Types of processes

- Manual
- Semi-automated
- Automated
- Depend on business model
- Timesheets
- Generic – same for workplaces

Change control 4.4.3

Governance

- Formal process
- Audit trail
- Single source
- Approved process used for development

Process tools 4.4.4

Types of tools

- Integrated tools
- Collaborative tools

Figure 4.4: Management of people, processes and places in the virtual workplace – process

4.5 PLACE

The virtual workplace covers a variety of mobile and remote work environments, such as telecommuting, hotelling, telework centres and home workers translating into working from a distance (Davenport & Pearlson, 1998:51). The virtual workplace is viewed as a knowledge society with **people** working closely and successfully together using technology **(process)** to work from a distance **(place)** to transfer knowledge (implicit and explicit) in order to achieve specific goals (Zemliansky & St Amant, 2008:2, 3). Defining the virtual workplace, including the stated references is covered in section 3.3.1.

This definition clearly indicates the trio of people, processes and places as the central theme of this thesis. Place, the third component of the trio is discussed in the following section.

The place component consists of building blocks covering locations and infrastructure as well as managerial support aspects. In addition to this, the type of work, workplace and interaction are discussed.

4.5.1 Locations

In the virtual workplace location is the distributed place from where work or research can be done. Location has a definite impact on working hours as time zones influence the hours worked, for example Sydney in Australia is roughly eight hours ahead of time for a worker located in Johannesburg. Thus, the worker in Johannesburg will be able to contact a colleague or client in Sydney at 08:00 South African time. At that point it will be 16:00 in Sydney. This means that the South African employee will either have to start working earlier or alternatively, the Australian employee will have to work later. The same principle will apply if workers or clients are based in South Africa and South America. Irrespective how it is viewed, someone will be inconvenienced due to the time zone.

This links back to the discussion on time zones with time as an instance in space in section 1.1.2 as well as figure 1.3 depicting time as an instance in space.

Participants 8 and 9 (Research G) and participant 15 (Company E) shared their views on time zones which correlate with time zones and the bridging of time and space resulting in their boundaries being expanded beyond their control (section 1.1.2) impacting on working hours, family life and the manner in which business is being conducted.

> *"Classic problem of distribution of time and place. Different time zones with people not working at the same point in time."*
> **Participant 9**
>
> *"Only trouble is time zones. Tends to be difficult when you work from Australia with the USA and Europe. General meetings take place at 1am in the morning or get up at 5am to return a call."*
> **Participant 8**
>
> *"Australian time zone is challenge. Established support structure with ex-colleagues. Meet each other half way."*
> **Participant 15**

In figure 4.6, which presents the place component of the management of people, processes and places in the virtual workplace, the locations relevant to the research conducted have been listed. This includes physical locations as well as virtual locations or weblog locations.

Technology and the infrastructure associated with it enabled distributed work and the establishment of the virtual workplace with participant 10 (Research G). He stated that he could execute all the processes supported by the computer. Such infrastructure also enabled the use of a weblog as part of the research conducted.

> *"We access our machine at the office and work on it remotely. Can do all the processes that are supported by the computer itself."*
>
> **Participant 10**

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4.5.2 Infrastructure

Technology enablers, such as wireless technology, broadband and virtual private networks (VPNs) assisted individuals in managing their emails, and diaries.

Case study

Section 3.3.5 discusses infrastructure, reflecting on local area networks (LAN), virtual private networks (VPN), internet and intranet. The advantage of VPN access was also highlighted by participant 4 (Company A) as it provided the participant with acceptable access when working remotely.

Obtaining on-line training at a time and place convenient to the worker (section 4.3.4) is a further advantage offered by technology.

4.5.2.1 Internet

Having sustained internet connectivity and high internet capacity or speed is crucial to the virtual workplace as identified by all the participants.

....Limitations on the speed of the internet, sustained internet connectivity...

All participants

In the South African context the high cost involved in internet connectivity and downloads was raised as a challenge (participant 14, Company D). Technology such as 3G makes wireless connectivity possible, but the cost of such connectivity and the benefit obtained from using it needs to be balanced. Video-conferencing as communication media is also deemed as expensive as discussed by participant 14 (Company D), but needs to be evaluated against time and cost involved in travelling.

4.5.2.2   **Intranet**

The intranet is used by Companies B, C and E for the publishing of supporting documentation and business processes internally, thus correlating with the responsibilities of the centralised business process support office (section 4.4.1.2). The business processes are published to the intranet and not the internet, therefore it is accessible for identified users within the organisation, therefore corresponding with the views of Zemliansky and St Amant (2008:441) in section 3.3.5.

> *"...everyone that can access the intranet can see the published maps, that is the signed-off process maps."*
>
> **Participant 6**

Business processes are not published to the internet as an organisation's business processes is its only differentiator providing the organisation with its competitive advantage as reflected upon by participant 6 (Company B).

> *"Processes are not published on the internet, because the only differentiator is not product, but process. Your product can be cloned within 3 weeks, but they cannot clone your process."*
>
> **Participant 6**

The internet and the intranet each has its own place in the infrastructure supporting the virtual workplace and it is clear from the

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usage of these technologies that the virtual workplace will not exist without these technologies.

4.5.2.3   Server access

Server access related challenges are a given when working virtual or remotely as was conveyed by the participants.

> *.... Technical challenge that you do not have access to the server ...*
>
> **Participants 5, 6, 7**

The number of user identifications, also referred to as user ids, and passwords needed to access the various servers translate into an administrative challenge. However, it is essential given the security measures needed to protect organisations, especially financial institutions. The use of single sign-on for users has been identified by the participants as a possibility to streamline server access, but needs to be evaluated by each organisation individually for usability, such as feasibility in terms of protecting a financial institution's customers (participants 6 and 14, Companies A and D).

> *"Single sign-on. One password, one user id ... difficult if you use different internet platforms. High complexity, e.g. remembering all the passwords, user ids..."*
>
> **Participants 10, 11**
>
> *"...a different profile you get when you work off-site. Go in via different route into system, because of the firewall, have a password or two more to go in. Will not be able to access remotely if you do not have that ..Firewalls and profiles needed to protect institution..."*
>
> **Participants 6, 14**

Network accessibility is also impacted by the different user profiles assigned to permanent employees and contractors. User profiles

assigned to permanent employees offer more accessibility than those assigned to contractors, resulting in constraints for contractors when servicing a client as expressed by participants 1 and 5 (Company A) and participant 16 (Company E) below. This equates to the different sets of authorisations as referred to by participants 4 and 5 from Company A. This also relates to the discussion on network accessibility as part of the types of work done in the virtual workplace in section 3.3.4.

> *...It is difficult to help people without access to the client's server ...*
> **Participant 1, 5, 16**
>
> *Two different sets of authorisations. First one set for contracting house and then one set for client. Authorisations according to company requirements.*
>
> **Participants 4, 5**

In view of business process management, access to an integrated business process modelling tool is important as that constitutes using a single source as previously discussed (section 4.4.4). Accessibility to such a system will however be determined by the security measures put in place by the organisation.

4.5.2.4   Minimum requirements

The bare minimum requirements for a person to be able to work virtual are internet connectivity via fixed telecommunications line or 3G connectivity, compatible laptop, mobile phone and electricity as discussed by participant 18 (Company E). These requirements do not provide for photocopiers and other office equipment which may available at a telework centre or head office.

> *.... Basics for a virtual workplace is 3G, ADSL, computer, electricity, cell phone, telephone ...*
>
> **Participant 18**

4.5.3 Support management

Support management in the virtual workplace consist firstly of the controls needed to ensure active completion of quality assignments or outputs, as commonly referred to by participants and secondly, the support structure.

4.5.3.1 Controls

Controls in this context refer to control measures and prescribed actions put in place to guide and regulate the activities and deliverables of the virtual worker. These measures and prescribed actions relate to the business process environment and are relevant for the traditional workplace as well. These controls, in addition to the change control process discussed earlier, are:

- o Obtain physical sign-off on completed business process models from the relevant business process owner.
- o Retain physical signed-off business process models and supporting documentation within a properly structured document management system.
- o Compile weekly core team meeting and bi-weekly meeting minutes stating all action items, names of those accountable for the action items and due dates for actions assigned.
- o Compile monthly status reports for submission to the project sponsor and Executive Committee (EXCO).
- o Compile project work breakdown structure, clearly stating business process deliverables, role-players (business process owner, business process modeller, business process analyst, business analyst), due dates and other relevant details.
- o Obtain approval for business process changes through a change control forum before actual execution of those changes.

- o Manage critical business process changes as and when they occur, supported with detail documentation for future reference and lessons learned.
- o Clear audit trail of actions taken and stakeholders involved (participants 6, 13, 18, Companies B, C and E).

Acknowledgement is given to detail documentation that can be done in support of the project environment, such as scope changes, time management, financial reporting, quality control and risk management. However, it is not included in that level of detail in this discussion.

4.5.3.2   Support structure

The support structure has to have clearly defined roles and responsibilities as discussed as part of governance in the business process component (section s 4.4.1, 4.4.1.1 and 4.4.1.2). Hand in hand with these roles and responsibilities is the virtual worker's reporting structure.

Many contractors working virtual support more than one client as indicated by participants 5, 6 and 18 from Companies A, B and E respectively, resulting in multiple reporting and support structures and the challenge of "*having two bosses*". Having had "*two bosses*" translates into having a boss at the organisation's headquarters as well as a project boss on the remote site. Close alignment of project deliverables and expectations with both parties through the application of the controls mentioned in the previous section are crucial for success (participant 6, Company B).

> *"Big problem if it is in a virtual office is that you have two bosses. You have your boss here and new your boss there....It is not that easy... Both of them approved the project plan and I could do my work."*
>
> **Participant 6**

Organisational support relates to general management matters whereas project support focuses on project deliverables. Organisational support need to include help desk support for the virtual workers to assist them with matters such as assistance with business process modelling tools, since user manuals do not have all the answers (participant 1, Company A).

A fundamental element in the support structure of the virtual workplace constitutes mutual trust, which is created through the acceptance of responsibility which shows reliability (weblog participant) and is expressed by participants 5 and 6 (Companies A and B) in that "*they come to a point where they just trust you*". This matches up with trust as discussed earlier as part of the people component reflecting on trust as a management attribute in section 4.3.2.1.

4.5.4 Interaction

Interaction in the broader sense is made up of face-to-face and interpersonal communication as well as verbal and written communications. Different types of communication exist as discussed in sections 3.3.3.8, 4.5.4.1 and 4.5.4.2. Formal communication can have a paper based output such as reports, minutes and project documentation. Formal documentation may therefore have a notion of being asynchronous as it is not happening in "real-time". Synchronous interaction, that is "real-time" interaction relates to face-to-face meetings, teleconferences, telephone calls and so forth. Altough the interaction may not be face-to-face the empahise is on "real-time".Meetings can be formal such as Steering Committe meetings or informal when team building is being done.

The importance of having interaction is clear from the statements below, emphasising support for the human aspect in the virtual workplace (case study, Company F) and the need for clear, verbal communication (participants 7 and 10, Research G) as well as participants 8 and 10 (Research G) as part of formal, synchronous communication (section 4.5.4.1).

> *Face-to-face meetings were mixed with social interaction to assist in embracing the human aspect within the virtual workplace.*
>
> **Case study**
>
> *"What I realised is very, very, very clear communication."*
>
> **Participant 7**
>
> *"...Important to talk to people – on phone, not necessarily face-to-face. Big difference between calling someone and writing an email. Email goes back-and-forth and still not clear what is in it. Verbal communication is important – can ask questions and have the same understanding..."*
>
> **Participant 10**

Participants 5, 6, 14 and 19 from Companies A, B, D and E respectively indicated that alienation from the organisation is experienced due to less interaction with office located co-workers. Frequent telephone calls, even on a daily basis help to combat loneliness and alienation (participant 19, Company E). Participants 6 (Company B) also experienced that *"they tend to forget about you",* especially when you are working outside the borders of South Arica.

> *"They tend to forget about you. Trust you to do your work. Become alienated. From a virtual perspective you are alienated."*
>
> **Participant 6**

This participant also linked alienation back to trust (section 4.3.2.1), explaining that the quality of work done by the participant is known and respected and therefore the organisation knows and trusts that project deliverables will be done on time, within budget to agreed-upon quality. Less interaction is required due to the trust relationship that was established. This translates into a positive element in that a trust relationship exists, but a negative element also transpires in that less interaction takes place.

Participant 6 (Company B) took photographs of the off-site project manager and team leads which were emailed to "*the boss*" at head office in order to put a face to a name and improve interaction between remote and local *"bosses"*.

Interaction and communication in the virtual workplace can take on different forms as discussed below.

4.5.4.1 Synchronous and formal communication

> *"Synchronous communication is done face-to-face."*
>
> **Participant 10**

Synchronous communication as highlighted by participants 8 and 10 (Research G) matches "*real-time*" communication as stated by Zemliansky and St Amant (2008:471) in sections 3.3.3.8 and 3.3.3.9. Synchronous communication is conducted face-to-face, such as project core team meetings, management meetings, group sessions and individual sessions (participants from Companies A, B and Research G). These meetings are held at the organisation's premises and are scheduled using the Outlook calendar. Minutes are compiled of the meetings and action items listed, including the responsible person's details and due dates. These minutes are booked into the official document management system for record purposes and retrieval when needed (participant 18, Company E). The project documentation as mentioned correlates to formal communication as discussed in section 3.3.3.8. Section 4.5.4 also reflects on synchronous interaction being formal or informal based on the audience.

> *"I do like working virtual as long as you have face-to-face contact before you start. From this viewpoint works very well for me."*
>
> **Participant 8**

4.5.4.2 Asynchronus and informal communication

Informal and asynchronous communication as discussed in sections 3.3.3.8, 3.3.3.9 and 4.5.4.

The participants indicated that electronic mail (email) and text messages received via their mobile phones are used for non-verbal communication. Verbal communication is done via telephone and teleconferencing. In the event of having an online meeting, technology such as Net Meeting is used. Email and text messages can be more informal and since it may not require immediate action can it be seen as asynchronous. However, telephone calls will relate to synchronous interaction as already discussed.

> *"Asynchronous communication based on email. We use basic infrastructure – net meeting, email, shared folder, working on same document at different times"*
>
> **Participant 11**
>
> *Communication methods frequently used were SMS (short message system) via mobile phones, emails and web portals.*
>
> **Case study**

Participants from Germany indicated that they use a shared folder on a server for access to shared documentation. Although the documentation is shared by the different users, version control is kept on the documents and a document can be changed by only one person at a time. This links back to infrastructure enabling distributed work as discussed in section 4.5.2.

> *"... Colleagues working together we have a shared folder. Same with clients. No other way of collaboration..."*
>
> **Participant 11**

Structuring communication and interaction around sound communication pointers (section 3.3.3.8) is recommended as it helps to covey clear messages. The communication pointers aim at creating clear and unambiguous messages through the structuring of the message according to who, says what, to whom, how, when and with what effect.

These communication pointers have relevance to change realisation with its associated communication as discussed as part of the people component (sections 3.3.3.3, 3.3.3.8 and 4.3.5) and are also useful when communicating using the virtual work tools as discussed below.

4.5.4.3   Virtual work tools

This relates to the different virtual work tools covering communication, conferencing and collaboration as discussed in section 3.3.3.9, Virtual work tools. Each of the tools has its own usage, fulfilling different needs of workers, such as:

- o Communication tools
  All participants indicated that they use combinations of telephones, mobile phones, email, email attachments, internet, intranets and instant messaging services as communication tools.

- o Conferencing tools
  Conferencing tools require strong infrastructure, thus making the set-up of such facilities more expensive. This also links back to section 4.5.2.1 where participant 14 (Company D) indicated that video-conferencing is expensive.

o Collaborative tools

These tools are the most sophisticated virtual work tools, providing project and document management functions, such as centralised documentation systems and project management systems. Examples of such systems are Document Management System (DMS) used by Companies C and E as well as Project Management Tool (PMT) used by Company C.

4.5.4.4   Social networks

Social networks (section 1.1.1) are part of the internet and mobile phone space and a myriad of these networks exist today as can be seen from figure 4.5: Social networks. Social networks such as Face Book, Twitter, YouTube and LinkedIn are frequently used by the participants for communication in a less structured manner (case study) and having conversations (participant 8, Research G) and is part of the new generation entering the workplace (participant 14, Company D). Social networks are available thanks to technology such as the internet as discussed in sections 1.1.1, 3.3.5 and 4.5.2.1.

As stated, social networks revolve around social interaction and the extent to which is could be used for official work purposes need to be determined.

> *...technology, such as Twitter, Face Book and iPods, enabling them to communicate in different, less structured manner...*
>
> **Case study**
>
> *"People across organisation boundaries start working together using Twitter as a tools to stay in touch and exchange ideas, have conversations."*
>
> **Participant 8**
>
> *"...new generation entering workplace grew up with social networks, such as Twitter, Face Book..."*
>
> **Participant 14**

Figure 4.5: Social networks
(http://www.adrants.com/images/social_networks.jpg)

4.5.5 Type of workplace

Participants indicated that they worked from home when working remotely. Participants from Germany included working from hotels, especially when they were working on projects outside their home town.

4.5.6 Type of work

Not all types of work are suitable for the virtual workplace as was expressed by the case study participant and discussed section 3.3.4.

> *It is important to recognise the type of work suitable for a virtual workplace. HR, documentation, finances and marketing can be done from a virtual workplace...*
>
> **Case study**

The type of work performed from a virtual workplace often relates to asynchronous work, meaning work that does not require face-to-face interaction, such as research and statistical analysis done by the case study participant (Company F). The marketing element mentioned in the case study relates to telemarketing which also does not require face-to-face interaction. However, it does have relevance to "real-time" or synchrononous communication via telephone.

> *All research and statistical analysis were done using virtual teams...*
>
> **Case study**

The types of work as pointed out by the case study participant and the other participants have been grouped into three main groups, namely technical, documentation and user support.

4.5.6.1 Technical

Work of a technical nature comprises of business process modelling using an integrated business process modelling tool or other tool as prescribed by the client. System programming and script writing are often done from a remote location as it does not require any other human interaction (participants 3, 5 and 6, Companies A and B).

4.5.6.2 Documentation

Documentation per definition does not require interaction from other workers and can therefore be done remotely. This shows a correlation with asynchronous communication (section 4.5.4.2) and more specifically the German participants' explanation of them using shared

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folders for documentation. Examples of documentation given relate to compiling and consolidation of lecture material, writing of functional design specifications and convention manuals, meeting minutes and various other documentation of general nature (participants 5,10,11,14 and 18 from Company A, Research G and Company E respectively.

4.5.6.3   User support

User support relates to resolving user problems or errors as logged by the users. Users can be assisted from anywhere, meaning the calls are either routed via a help desk or are received per email. Examples of such support are the help desk numbers provided by the financial institutions for internet banking, housing loans, credit card support, theft of bank cards and fault reporting related to interrupted telephone services to a telecommunications company (participants 1, 5 and 15 from Companies A and E). User support goes hand in hand with the management style as discussed in section 4.3.2.2, in that user and client expectations need to be managed through the setting of clear goals and directives in order to ensure that all parties are in agreement with time frames needed to attend to errors logged.

> *From a helpdesk perspective the virtual environment sometimes is a pain because if people are logging calls at all hours of the day. With certain agreements you can stipulate South African time, 8 to 5.*
> **Participant 1 and 5**

4.5.7   Advantages and disadvantages of the virtual workplace

The advantages and disadvantages of the virtual workplace were discussed in sections 3.3.6.1 and 3.3.6.2 and are depicted in table 3.5: Advantages and disadvantages of the virtual workplace for employees and employers. Below is a collection of quotes from the participants reflecting on the advantages and disadvantages of the virtual workplace based on their experiences.

4.5.7.1   Advantages of the virtual workplace

The virtual workplace offers advantages to both the employee and employer. From a monetary perspective the employee saves on fuel, parking and corporate clothing expenses, whereas the employer saves on a lower salary bill and a reduction in the cost of "*fitting out the office*" (case study, Company F).   These are referred to as the economic drivers. In addition to these economic drivers is the quality of live drivers. The quality of live drivers encompasses work and family components and the following were highlighted by the participants, namely flexible working hours allowing for attending to family matters, less commuting and time wasted due to traffic, less disturbances providing a more focussed work environment which supports higher productivity. Advantages relating to flexibility of working hours can also lead to longer working hours as reflected upon in advantages and disadvantages in sections 3.3.6.1 and 3.3.6.2 as well as the quotes below.

Quality of live drivers go hand in hand with economic drivers in that flexibility of working hours enabled mothers to take care of children and their school related activities. Less commuting time also meant less time away from home....working from home fuel, parking, vehicle maintenance, suitable clothing can be reduced hugely... Working virtual had a direct impact on corporate expenses as it meant a lower salary bill and a reduction in the cost of "fitting out an office."

Case study

...address biggest problem of travelling. Wasting time – 4 hours a day...

Participants 1, 4, 5

...more productive working form home...

Participants 1, 5, 6

...less disturbances, can work more focussed...

Participants 3, 5, 15

..like flexibility, prefer flexibility...

Case study, participants 1, 2, 4, 5, 6, 18

4.5.7.2 Disadvantages of the virtual workplace

As mentioned above, case study participant (Company F) indicated extended working hours as the biggest drawback of the virtual workplace and this has a link to time management capabilities as discussed as part of section 4.3.3. Internet capacity and sustainable connectivity were highlighted by the participants in addition to alienation due to less personal interaction.

> *The biggest drawback experienced by employees working in the virtual workplace was "no start or end to a work day". Employees tend to work 24/7 reading emails even before going to bed.*
>
> **Case study**
>
> *...Body language cannot be read over a teleconference...*
>
> **Case study, participant 7**
>
> *...do have capacity issues with internet in SA not being the fastest...*
>
> **Participants 1, 3, 5, 6, 14, 18**
>
> *...personal interaction is missing...*
>
> **Participants 4, 5, 8, 9, 19**

4.5.8 SUMMARY: PLACE

The place component as discussed covers a number of mobile and remote work environments, although participants indicated that they work mostly from home or hotels when working remotely. They make extensive use of the internet and various work tools when working from a distance (Davenport & Pearlson, 1998:51). The virtual workplace is viewed as a knowledge society with *people* working closely and successfully together using technology *(process)* to work from a distance *(place)* to transfer knowledge (implicit and explicit) in order to achieve specific goals (Zemliansky & St Amant, 2008:2, 3) as discussed in chapter 1.
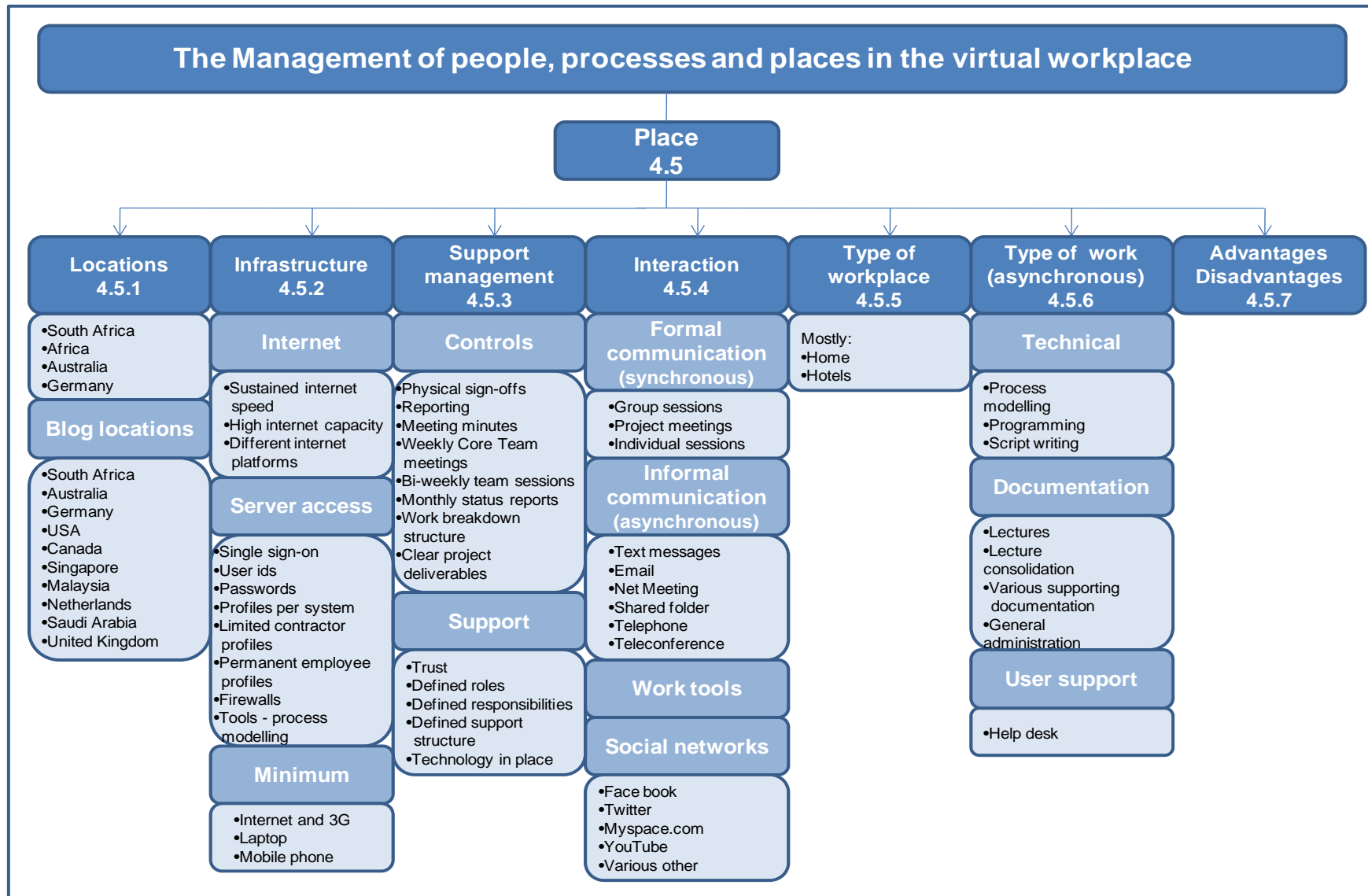
The Management of people, processes and places in the virtual workplace

Place 4.5

Locations 4.5.1
- South Africa
- Africa
- Australia
- Germany

Blog locations
- South Africa
- Australia
- Germany
- USA
- Canada
- Singapore
- Malaysia
- Netherlands
- Saudi Arabia
- United Kingdom

Infrastructure 4.5.2

Internet
- Sustained internet speed
- High internet capacity
- Different internet platforms

Server access
- Single sign-on
- User ids
- Passwords
- Profiles per system
- Limited contractor profiles
- Permanent employee profiles
- Firewalls
- Tools - process modelling

Minimum
- Internet and 3G
- Laptop
- Mobile phone

Support management 4.5.3

Controls
- Physical sign-offs
- Reporting
- Meeting minutes
- Weekly Core Team meetings
- Bi-weekly team sessions
- Monthly status reports
- Work breakdown structure
- Clear project deliverables

Support
- Trust
- Defined roles
- Defined responsibilities
- Defined support structure
- Technology in place

Interaction 4.5.4

Formal communication (synchronous)
- Group sessions
- Project meetings
- Individual sessions

Informal communication (asynchronous)
- Text messages
- Email
- Net Meeting
- Shared folder
- Telephone
- Teleconference

Work tools

Social networks
- Face book
- Twitter
- Myspace.com
- YouTube
- Various other

Type of workplace 4.5.5
Mostly:
- Home
- Hotels

Type of work (asynchronous) 4.5.6

Technical
- Process modelling
- Programming
- Script writing

Documentation
- Lectures
- Lecture consolidation
- Various supporting documentation
- General administration

User support
- Help desk

Advantages Disadvantages 4.5.7

Figure 4.6: Management of people, processes and places in the virtual workplace – place

4.7   CONCLUSION

The management of people, processes and places in the virtual workplace have various related touch points emphasising that the components cannot be viewed in isolation. The organisation's maturity is a definite contributor which needs to be considered when the organisation's strategy towards business process management is developed. This maturity level is linked to an enabling culture with trust, loyalty and support which is associated with a collaborative and flexible management style. Employing the right person for the job is crucial when employing people to work in the virtual workplace, as it is not suited for all personality types. Managing remote or virtual workers' outputs as well as those in a traditional workplace require clearly defined deliverables, timelines and quality measures which have been agreed upon by all role-players. Business process modellers *(people)* and analysts need to have a passion for processes, be trained in the client's methodology and standards *(process)* and have accessibility to networks and tools *(place)* enabling them to deliver on a job well done.

The trio of people, processes and places as part of the management of people, processes and places in the virtual workplace were discussed based on the experiences shared by the various participants and organisations while writing the case study and conducting the focus group discussions and interviews.

A framework assisting with the management of people, processes and places in the virtual workplace as derived from the shared experiences is discussed in the following chapter.