

people and technology; it should not only include technology, otherwise it will not work (Ricci and Wiese, 2011, p.45). In building a model of collaboration within an organisation, a culture of collaboration first needs to be established. From the field work, many of the respondents noted that a culture of collaboration did not exist in their organisations.

Drawing from the author's experience of working in corporate environments, new ways of working are difficult to implement and require formal change management. Employees generally do not like change and find it difficult to adjust to new ways of working. In order to drive the necessary change within the organisation, a process of change management is required.

This process, with the help of the human resources department, will facilitate a change in the culture of the organisation into an analytics culture and establish new key performance indicators or KPIs across the organisation, based on the shared goals in implementing big data strategies in the organisation.

6.6.5 Behavioural dynamics within a collaborative framework of inter-organisational collaboration

To develop a guiding model for collaborative efforts for stakeholders in the optimal use of big data in marketing strategies, it requires a set of principles of collaboration to underpin the effectiveness of such collaborative efforts. Below are some of the aspects that will lead to more effective collaboration, and some or all these aspects will underpin collaboration within the specific groups. The principles have emerged from the theory of collaboration and the empirical evidence gathered from the fieldwork.

The principles of collaborations are:

a. Leadership – According to Rosen (2007), it is essential for the leaders of the organisation to instil better collaboration into the culture of the organisation, which will lead to successful and effective interactions. It has emerged from the fieldwork and literature that the CDO is an important leader. From the interviews conducted, some of the informants stated the following about the role of leadership in collaboration:

1. ...if they collaborate amongst themselves as a behaviour they should model the behaviours they wish to see in the teams.
2. It is leadership's role to create the right structure and the right environment that facilitates and enables collaboration.

b. Trust – The concept of trust is difficult to define and even more difficult to achieve, but it is crucial for effective collaboration. Dawes (2003, p.1) believes that “trust (or mistrust) develops out of the joint experience of working together”. The author notes that when trust is high in a professional setting, there is a higher likelihood to “develop informal but well-understood ways of working together”. In a professional setting, people often come from different working environments; they work on projects and need to work together effectively. This is where trust becomes an important ingredient in their working relationship (Dawes, 2003). Many of those interviewed in one of the qualitative studies acknowledged that trust was established by building relationships and by time spent working together. One of the informants noted, “As the CCC members work collaboratively, more trust will develop.” Rosen (2007) refers to an organisation with a collaborative culture where a senior manager mentored others to become collaborative leaders, and that this played an important part in

building trust, even in an informal way. This could be a method that organisations may wish to employ to develop trust among management and staff.

c. Knowledge Sharing – The sharing of knowledge helps others understand the importance of technological concepts. From the results of this study, many respondents, especially middle management, stated that in the organisation, many of the business units worked in silos and that this style did not promote knowledge sharing. The results of the quantitative study showed that there is a relationship between knowledge sharing and effective collaboration. According to Ricci and Wiese (2011, p.54), hoarding is a “barrier that leaders face if they would like to pursue a collaborative approach” and it encourages silos within business units. For business units to overcome this, they need to share knowledge, instead of hoarding it.

d. Culture – From the literature, Rosen (2007, p.32) suggests that as part of a culture of collaboration there needs to be a culture of sharing, and that a certain company in the USA achieved this by assigning staff to different functions within various areas to understand the other people with whom they were collaborating. This sentiment is shared by Ricci and Wiese (2011, p.26), that where effective collaboration exists, the employees will be “empowered by new organisational cultures that celebrate a diversity of talents and promote not only the sharing of knowledge and resources, but also of accountability and rewards”. The results of this study show that most of the respondents listed organisational culture as a crucial aspect that could impact effective collaboration. Leaders can help create a culture of collaboration within an organisation through their

management style (Rosen, 2007). Organisational culture often takes years to change, but with commitment from leadership to move towards a culture of collaboration, such a shift in the culture will eventually benefit the organisation (Rosen, 2007). Kelly (2014, p.3) stresses that organisations must make collaboration “part-and-parcel” of their culture.

- e. **Communication** – This principle was listed in the quantitative results of this research as a critical aspect of effective collaboration. Rosen (2007, p.14) suggests that communication occurs at the interpersonal level, where the individuals are “comfortable engaging” with one another, and at the organisational level, where “channels of communication” need to “remain open for collaboration to occur”. The organisation’s culture should support this. The CEO and top management in an organisation set the culture of the organisation (Manetje and Martins, 2009), and together with the HR department, should enable communication among those collaborating.
- f. **Shared purpose** – The qualitative study showed that cross-functional teams of subject matter experts with common goals or KPIs can collaborate better; if they understand the roles of the team, they can easily be deployed to solve specific business problems in a short space of time. Literature shows that the silo syndrome (when business units work in silos) is infectious in an organisation (Ricci and Wiese, 2011, p.58), and to ensure effective collaboration, common key performance indicators or KPIs should exist among the business units. Organisations that are highly collaborative ensure that the metrics (or KPIs) are aligned across the business units (Kelly, 2014). Having the same KPIs among

different employees means that there is a shared purpose and thus a reason to collaborate successfully.

g. Power – This can be a concern when executives or senior management hold their seniority as power over others at levels below theirs. However, power struggles are also likely to exist among colleagues where the roles are not clear. From the interview held with the big data expert from the USA, the interviewee agreed that a power struggle was likely to exist between the CIO and CDO. The literature confirms that a power struggle between colleagues like the CDO and CIO could exist in the early stages of the introduction of the CDO within the organisational structure (Teerlink, Sigmon, Gow and Banerjee, 2014). Ways of working and responsibilities should be clear, and strong direction is required from the CEO to ensure a change in ways of working.

6.6.6 The collaborative process

Collaboration is more than an activity; it is a process where behaviours are developed over time (Kelly, 2014). Ricci and Wiese (2011) believe that the process of collaboration starts with a collaborative team who commit to working together, but that before the first meeting, trust needs to be encouraged and this step should not be skipped. To ensure this, the purpose and shared goals need to be clarified in the form of a team charter (Ricci and Wiese, 2011). Each team member needs to have a voice to be able to contribute and bring ideas, irrespective of his or her level within the organisation (Kelly, 2014).

Before the collaboration starts, logistical aspects like the frequency of meetings, the capture of minutes and how they are distributed to the members, and how decisions will be made, are vital to establish at the outset to ensure a successful and effective

collaboration (Ricci and Wiese, 2011). In organisations today, rewarding collaborative efforts should be part of the of the individual's remuneration package (Kelly, 2014).

6.6.7 The change management process

The HR department is important in establishing a culture of collaboration, and this can be done through a change management process. Change management is defined as “the process, tools and techniques to manage the people side of change to achieve the required business outcome” and organisational tools are used to assist employees to “make successful personal transitions resulting in the adoption and realization of change” (Prosci®, 2016). This process is important to make employees understand why change is needed and should be facilitated by not only external change management consultants, but also by the HR department.

A change management process will help employees not to revert to old patterns and doing what is comfortable and easy. Pieterse, Caniëls and Homan (2012) note that during change management processes, cooperation among the various business units is required for it to be successful. They contend that people from various professional backgrounds can interpret the same concepts differently and it is important to share knowledge and to gain mutual understanding during such interactions. If there is no cooperation, then the change management process will fail (Pieterse, Caniëls and Homan, 2012).

An important requirement to consider as part of the change management process is the legal obligation for using and storing sensitive customer data as part of the big data generated and acquired by organisations. South African companies need to comply with the Protection of Personal Information (POPI) act. The POPI act was gazetted in the Government Gazette No. 37067 of 26 November 2013 and promulgated by the

president of South Africa on 1 December 2016. Personal information include among others, their race, religious and political beliefs. Companies have to take accountability for how this data is used and stored, as well as obtaining the necessary consent from customers before their data can be used (Kandeh, Botha and Futcher, 2018). The IT departments of organisations have to ensure that the POPI act is not contravened by having sound governance and controls. The change management process will help the management of the organisation, as well as the data scientists understand the importance of treating customers' personal information with care and to ensure that the data managers, the IT specialists, have the necessary controls in place.

The model of collaboration is created for a brand new way of working together successfully. Such a model will be introduced at organisations where big data initiatives are considered. Employees identified will need to attend change management workshops to discuss the benefits for the organisational and possible cultural changes.

The collaborative groups will be identified during the change management process and they will be trained with the necessary skills. In addition to a high-level change management process prior to the collaboration, as part of the collaboration process, while meeting regularly and applying the principles of collaboration, there needs to be business process management, where the details of how the business process changes are documented and where the collaborators are trained for implementation of the new processes to optimally use big data in marketing strategies. Business process management (BPM) is defined as the use of “methods, policies, metrics, management practices, and software tools to coordinate all aspects of the specification, design, implementation, operation, measurement, analysis, and optimization of business processes” (Rahimi, Møller and Hvam, 2016). BPM will be used in the organisation as a way to both document the process and to gain consensus of the participants or

collaborators, of how the new processes will be implemented with regard to the optimal use of big data in marketing strategies.

6.6.8 Types of collaborative groups

Each of the collaboration groups considered will have a purpose and principles that will govern the collaborative group. The types of collaborative groups will be at different levels of the organisation, in the following ways:

1. Collaborations at the executive level – horizontal
2. Collaborations between levels – vertical
3. Cross-functional (and level) collaborations

Some collaborations are horizontal in their interaction, with people at the same level, whereas other collaborative groups are vertical, along the reporting lines from executive to middle management levels and cross-functional collaborative groups that can also include stakeholders at different levels. The structure of how collaboration will exist is dependent on the people and the reasons for collaboration. The hierarchical level, various stakeholders, purpose and principles that will govern their interaction will be made clear, through the change management process, in a consultative way to ensure buy-in from the employees.

6.6.8.1 Collaborations at the executive level

Group 1 – Data strategy team

The first group that needs to collaborate to use big data optimally in marketing is the executive level. According to Steele (2017, p.16), “the ideal data strategy is written in collaboration with both the business stakeholders and the technical stakeholders, so that it is well understood and agreed upon by everyone involved”. These stakeholders are,

firstly, the CEO, the person ultimately responsible for the running of the organisation, reporting to the board and therefore to the shareholders of the business; secondly, the chief operating officer (COO), overseeing the day-to-day operations of the organisation; and thirdly, the CIO, the technical stakeholder, responsible for the technological infrastructure of the organisation. Finally there is the CDO, a key business stakeholder, whose primary role is to drive value through the execution of data and analytics strategies (Teerlink, Sigmon, Gow and Banerjee, 2014). According to Teerlink, Sigmon, Gow and Banerjee (2014), the CDO has to collaborate with the leadership of the organisation to provide them with timeous and quality data to drive the goals of the organisation. Figure 6-4 highlights the collaborative group at the executive level.



The Purpose

Setting a data strategy is not a once-off activity, because a strategy is “a set of long-term goals” (Levy, 2017, p.9). Thus, the team identified above will have to collaborate over time to ensure that a data strategy is developed for the organisation.

Principles of Collaboration

1. Trust – This forms the foundation of effective collaboration, according to Kelly (2014), but requires the members to be vulnerable. Trust is developed over time through building relationships (Ricci and Wiese, 2011), and since these executives interact on a regular basis, trust should be an aspect more easily formed compared with groups that interact less frequently.

2. Power – A power struggle could exist between the CDO and CIO in the early stages of the introduction of the CDO within the organisational structure (Teerlink, Sigmon, Gow and Banerjee, 2014). Ways of working and responsibilities should be clear, and strong direction needs to come from the CEO.
3. Communication – This is crucial for effective collaboration.
4. Shared vision and purpose – These executives have a shared vision through the direction of the CEO and the purpose of setting a data strategy is to make the organisation more profitable through the use of their data for decision making (Teerlink, Sigmon, Gow and Banerjee, 2014).



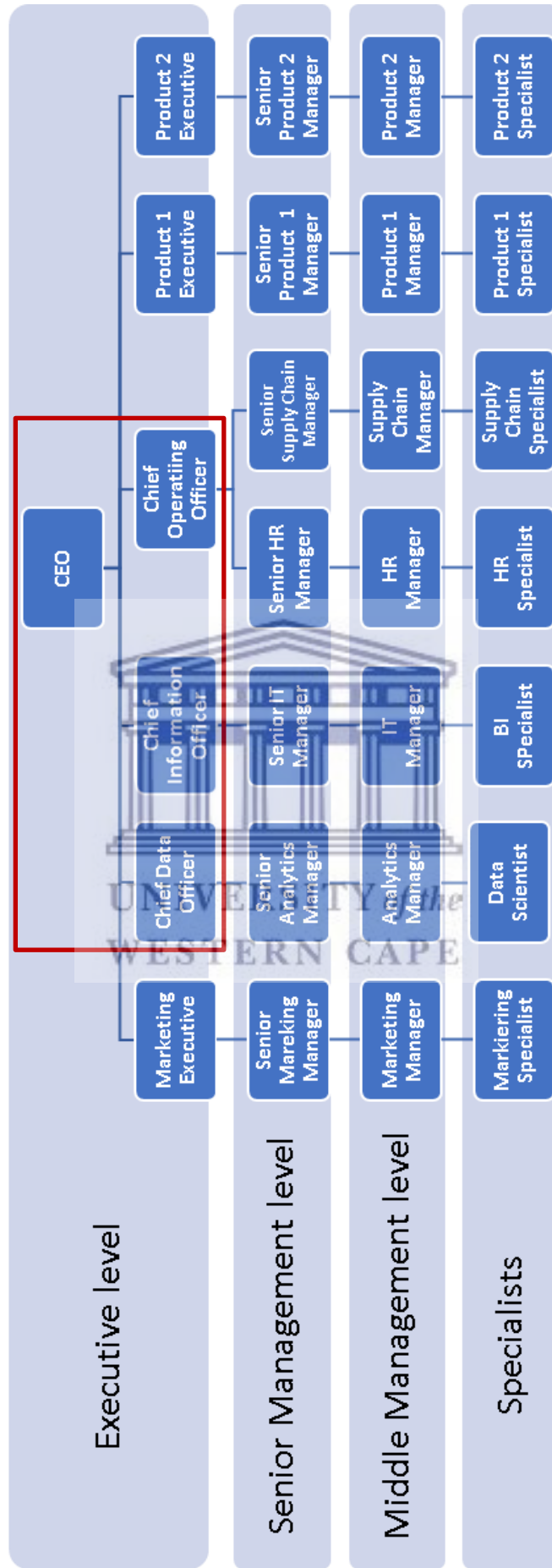


Figure 6-4. Data strategy collaboration group

Group 2 – Big data infrastructure

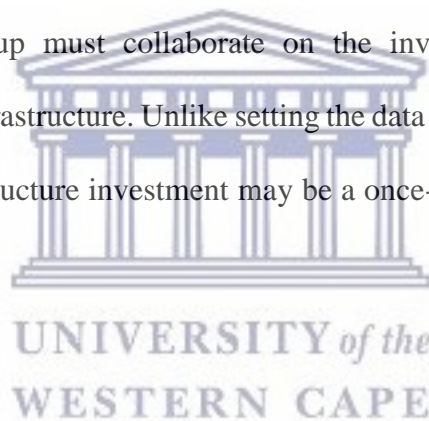
Some of the results from this research show the importance of leadership in effective collaboration. Since the CDO is responsible for driving the data strategy on behalf of the organisation, the CDO must lead this collaborative group to ensure the business is data driven and drives business value through data (Teerlink, Sigmon, Gow and Banerjee, 2014), which will ultimately lead to the optimal use of big data in marketing strategies. Figure 6-5 highlights this collaborative group in the proposed hierarchical structure.

Purpose

The same executive group must collaborate on the investment required for the organisation's big data infrastructure. Unlike setting the data strategy, being an ongoing effort, the big data infrastructure investment may be a once-off exercise signed off by these executives.

Principles

1. Trust – This forms the foundation of effective collaboration, according to Kelly (2014), but requires the members to be vulnerable. Trust is developed over time through building relationships (Ricci and Wiese, 2011) and since these executives interact on a regular basis, trust should be an aspect that will be more easily formed compared with groups who interact less frequently.
2. Power – A power struggle could exist between the CDO and CIO in the early stages of the introduction of the CDO within the organisational structure (Teerlink, Sigmon, Gow and Banerjee, 2014). Ways of working and



responsibilities should be clear and strong direction needs to come from the CEO.

3. Communication – This is crucial for effective collaboration.
4. Shared vision and purpose – These executives have a shared vision through the direction of the CEO and the purpose of setting a data strategy is to make the organisation more profitable through the use of their data for decision making (Teerlink, Sigmon, Gow and Banerjee, 2014).



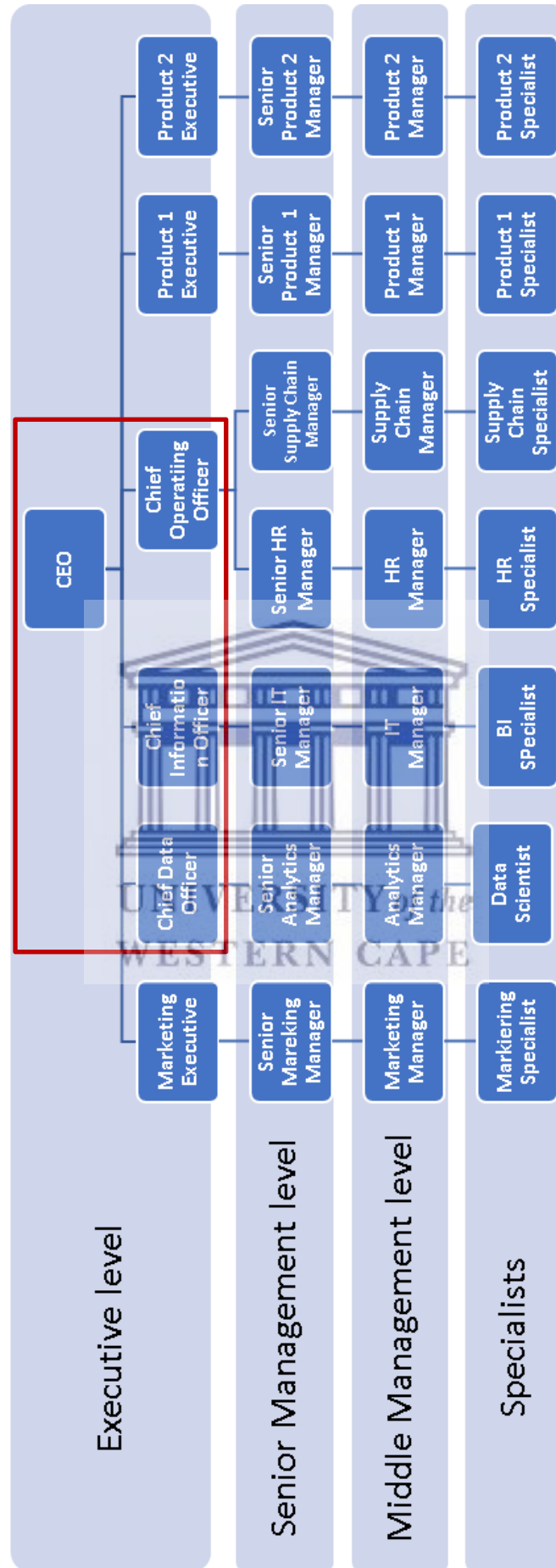


Figure 6-5. Big data infrastructure investment group

Group 3 – Implementation of big data initiatives

The next executive collaborative group comprises the marketing executive, the CDO and CIO in the use of big data in marketing strategies. Since big data is here to stay, and gaining insights from big data to gain competitive advantage is imperative (Harvard Business Review, 2012), it is important for this type of collaboration to occur effectively. Figure 6-6 highlights this collaborative group in the proposed hierarchical structure.

The Purpose

The role of the marketing executive in this collaborative effort is to brief the other executives on the marketing strategy; the CDO and CIO will give input on the data analysis and data management respectively. These three executives then collaborate to ensure that the marketing strategy is implementable.

Principles of Collaboration

1. Leadership – The CDO takes the lead to ensure the marketing executive understands how big data will improve marketing activities and that it is crucial in marketing strategies to gain advantage over competitors.
2. Knowledge sharing – This is an aspect that can influence collaboration and in this collaborative effort it is important for the stakeholders to share knowledge freely for effective collaboration. The CDO is ‘able to speak’ the languages, understands the ‘business concepts’ and is also able to speak ‘intelligently’ to the CIO regarding technology (Steele, 2017, p.10).
3. Trust – “Trust is the foundation of effective collaboration” within organisations (Kelly, 2014, p.5) and within this group it should develop over time, as they are

colleagues and sit on the executive committee of the business, all reporting to the CEO.

4. Shared purpose and vision – As executives, this group understands the vision of the organisation well. Marketing is the vehicle by which the organisation's products or services are sold to consumers (Johnson, 2015), and in respect of the importance of data in gaining profits for the business, the group has a shared purpose in ensuring the success of this collaborative effort.



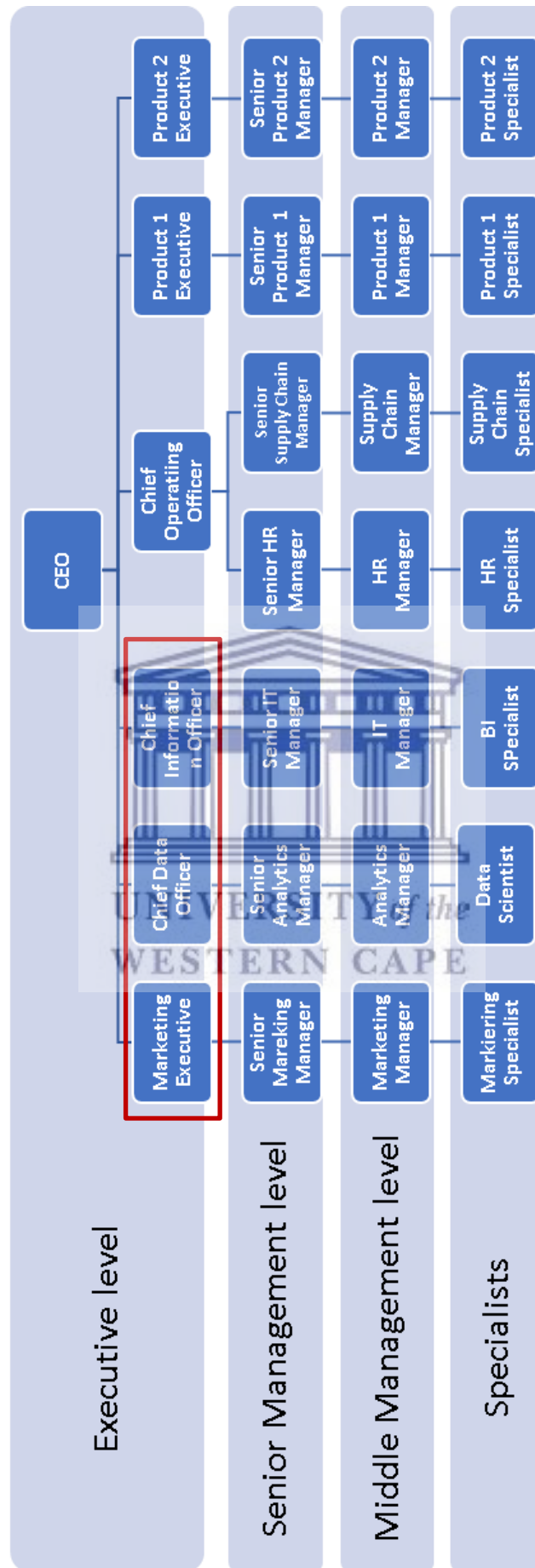


Figure 6-6. Marketing strategy group

6.6.8.2 Collaborations at senior and middle management levels

Group 4 – The marketing strategy execution team

The next collaborative group comprises the marketing senior and middle management, led by the marketing director of the organisation. This group needs to implement the marketing strategy of the business. Big data is meant to drive this marketing strategy, while the marketing team needs to work together in executing this strategy. Figure 6-7 highlights this collaborative group in the proposed hierarchical structure.

The Purpose

The purpose of this group is to understand the importance of what the customer data is saying, and how to fit this well with the brand positioning and market to their customers. The marketing executive should help others to embrace a new way of working and give direction on how to execute the marketing strategy. A change management role in the form of HR may be required, since there now exists a reliance on big data to drive the marketing strategy into the future.

Principles of Collaboration

1. Leadership – The marketing executive must lead by example and set the direction of the marketing strategy.
2. Trust – Trust issues usually exist among the senior and middle management and it is vital that this be addressed as part of the collaborative effort.
3. Communication – Since utilising big data in marketing strategies is seen as new and may require a new way of working, change management is required and the HR team may have to facilitate some of these sessions.

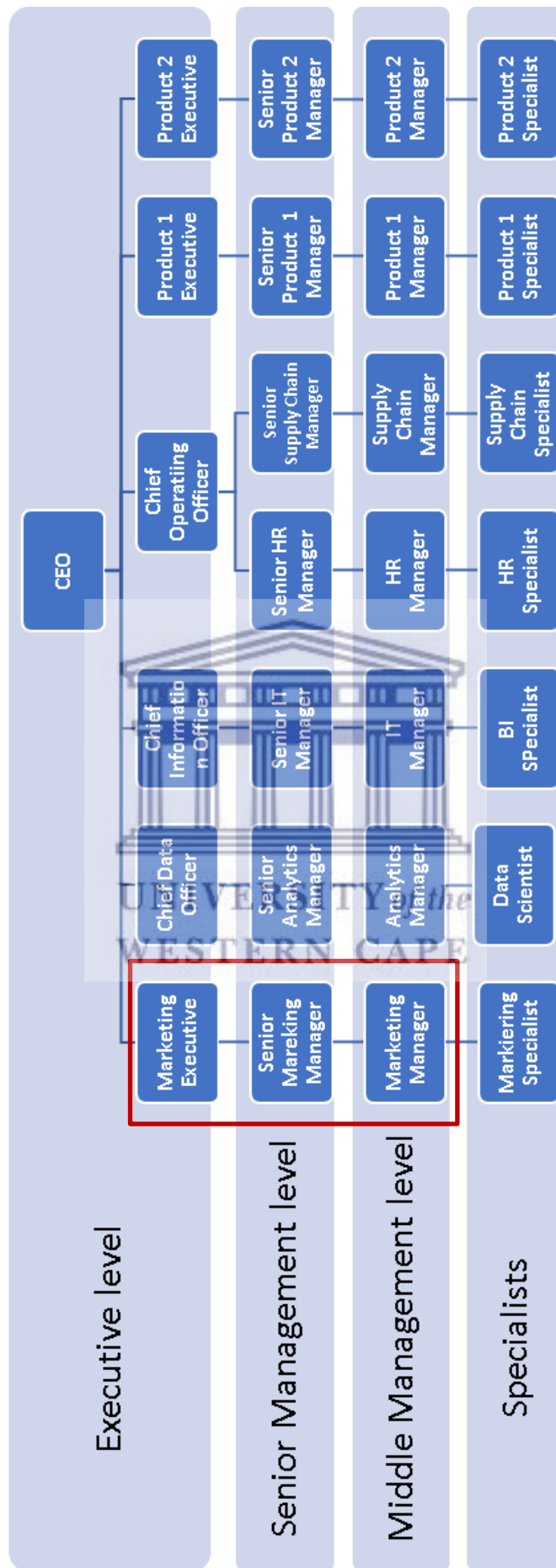


Figure 6-7. Between levels collaboration within marketing

Group 5 – The data strategy execution team

This collaborative group discusses the execution of the data strategy from an IT perspective. Figure 6-8 highlights this collaborative group in the proposed hierarchical structure.

The Purpose

The CDO, responsible for data strategy, needs to work with the CIO and IT team to implement the data strategy to “improve all the ways you acquire, store, manage, share and use data” (Levy, 2017, p.3). The CDO and IT also need to collaborate to understand how the big data infrastructure will be implemented and how to get the data to the data analysts, scientists and various business units.

Principles of Collaboration

1. Trust – “Trust anchors every successful collaboration” (Ricci and Wiese, 2011, p.120) and this is necessary in this collaborative group, where the CIO and CDO must work together. This technical role was traditionally the responsibility of the CIO, but in the era of data driving business value, it is the CDO’s role; therefore trust needs to be developed between these two executives.
2. Knowledge sharing – If no sharing exists, collaboration cannot happen (Rosen, 2007); thus it is important for the CDO to share business knowledge with the CIO, while the CIO needs to share technical knowledge.
3. Power – The power struggle could exist between the CDO and CIO (Teerlink, Sigmon, Gow and Banerjee, 2014), since the role of the CDO is new, and many of the roles of the traditional CIO in terms of data have become those of the CDO in the organisation.

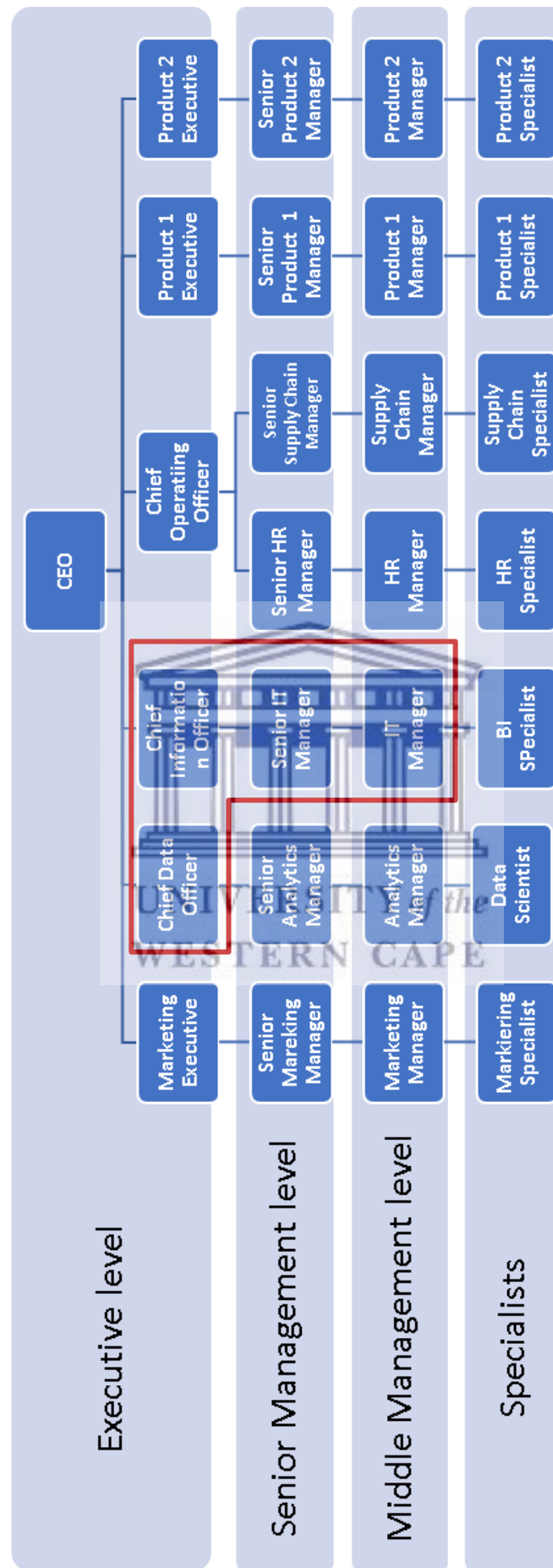


Figure 6-8. CDO, CIO, IT senior and middle management - big data infrastructure, data management and storage

Group 6 – The centralised analytics team

The next collaborative group is the hierarchical line of the CDO, which includes the centralised analytics functions in terms of its management and specialists, data scientists and analysts. Figure 6-9 highlights this collaborative group in the proposed hierarchical structure.

The Purpose

The purpose of this collaborative group is to discuss how to access data from the various sources, including big data platforms like Hadoop, and prepare the data for predictive modelling for the marketing strategies within the organisation. From the fieldwork and literature, there are those in favour of a centralised analytics team, as well as those who would like analytics teams to be decentralised. For the purpose of the model of collaboration, the data scientists and analytics team report to the CDO (Steele, 2017), and it is important for this hierarchical line to collaborate effectively to use the big data accessible via a platform set up within the IT department to use in the predictive analysis for marketing strategies. There will be amateur analytics teams across the various business units that will work directly with the centralised data science team to disseminate the relevant analytical output in the form of reports to the various business units, where appropriate.

Principles of Collaboration

1. Leadership – Direction from the CDO is important to direct the analytics team to meet the business objectives to drive sales through the use of big data. This CDO role will be new, so the CDO needs to take the lead to assure the team how such a centralised analytics team will function within the organisation.

2. Communication – Regular meetings and communication will be conducted to understand the business strategy and the analytics approach.
3. Culture – Change management is required since this is a new way of working, with the new role of the CDO.



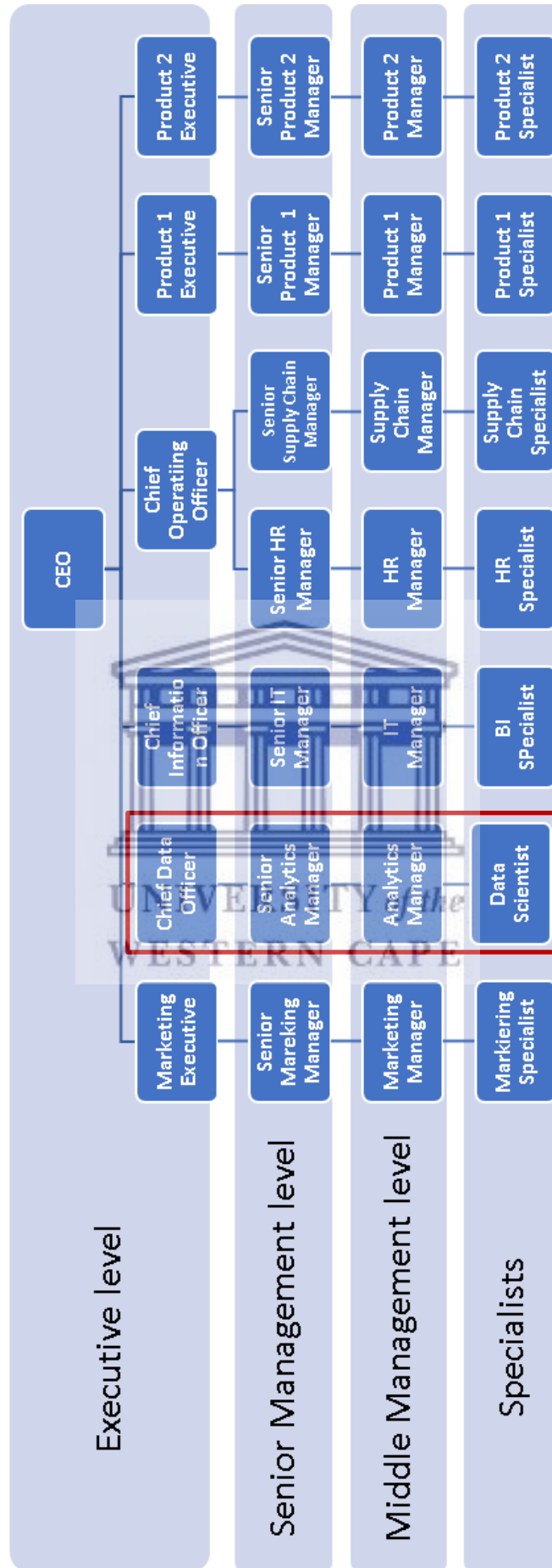


Figure 6-9. CDO, analytics manager and data scientist – big data and predictive modelling

6.6.8.3 Cross-functional collaborative groups

Group 7 – The customer experience team

This group is a forum responsible for improving the customer experience at the organisation and consists of senior managers from various business units that influence the customer in some way, like marketing, IT and other business units. Concepts like big data, IT infrastructure and an advanced analytics strategy, in terms of their impact on customer experience, are discussed at this forum. Figure 6-10 highlights this collaborative group in the proposed hierarchical structure.

The Purpose

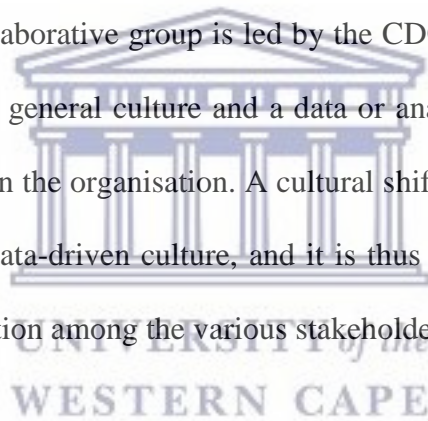
One of the mandates of this forum is to introduce various technologies to leverage data and big data in the future to improve the customer experience and to generate financial benefits from customers. This forum should be led by the CDO, as one of the business executives, to stress the importance of data and to be the ambassador of data (Steele, 2017). Another reason for the CDO to be part of this forum is that the primary role of the CDO is to “advocate on behalf of data” for the organisation (Teerlink, Sigmon, Gow and Banerjee, 2014, p.1).

Principles of Collaboration

1. Trust – From the results of the qualitative research, trust issues emerged within this group. Trust is built over time (Ricci and Wiese, 2011), and as this group collaborates over time, it will be important to build trust.
2. Knowledge Sharing – Since this group is a diverse group from various business units within the organisation, and comprises a group of senior managers with unique skills, it is important for them to share knowledge. The CDO should play

a good facilitative role, as successful evangelisation comes from “being able to speak both of those languages, to understand the business concepts that will drive the profitability of the business, and being able to talk intelligently with the technology teams” (Steele, 2017, p.10) to promote understanding among the members of this group.

3. Leadership – This forum should be led by the CDO, selected by the CEO for this task, which speaks to the commitment from the top to work at making sure this group collaborates effectively to ensure good customer experience.
4. Communication – Regular meetings or communication should be conducted to understand the business strategy and the analytics approach.
5. Culture – This collaborative group is led by the CDO, supported by the CEO, responsible for the general culture and a data or analytics culture (Davenport and Harris, 2007) in the organisation. A cultural shift is required to change the organisation to a data-driven culture, and it is thus a crucial aspect to ensure effective collaboration among the various stakeholders.



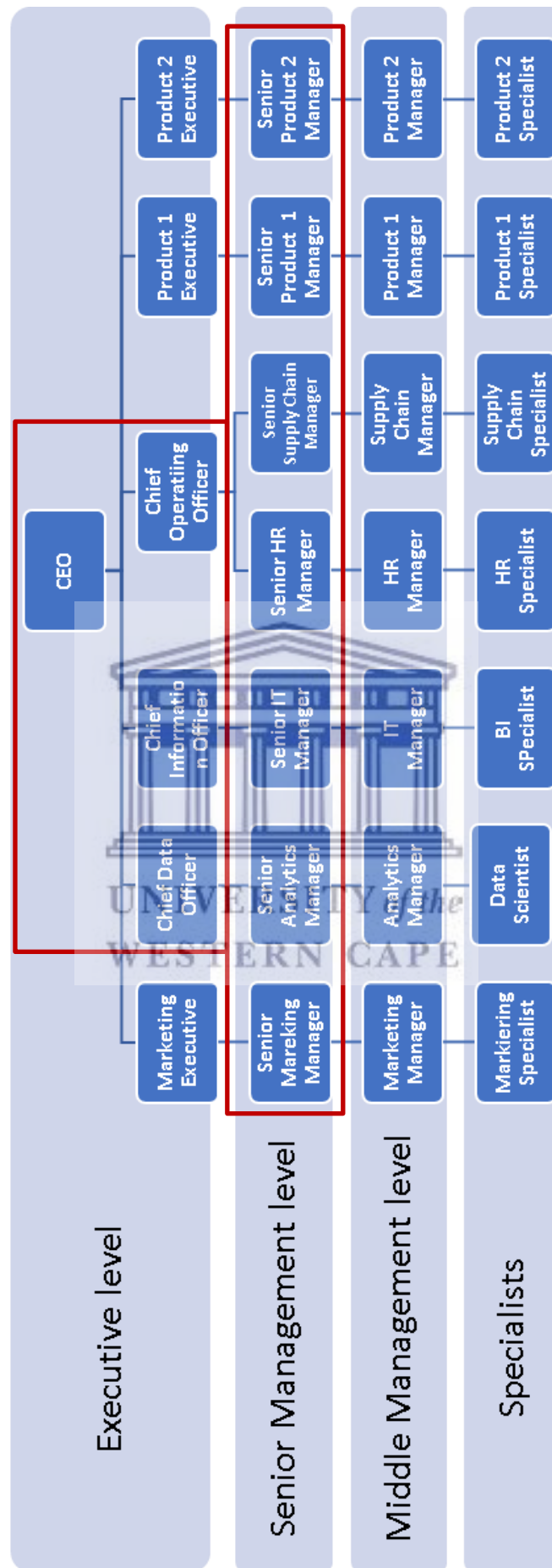


Figure 6-10. Customer experience collaboration group

Group 8 – The product and marketing teams

The next group of collaborators constitutes the product group and marketing middle managers, who collaborate on the marketing strategy and how they work together to sell the products of the organisation. Figure 6-11 presents this collaborative group in the proposed organisational structure.

The Purpose

Within the marketing business unit, the marketing executive will set the marketing strategy of the business and the middle managers will operationalise and execute the strategy. The marketing team will work together with the product groups to execute the marketing strategy.

Principles of Collaboration

1. Communication – Communication is important to execute a strategy and in order for it to happen effectively, collaborative tools need to be used to ensure an effective collaborative effort. Since implementation of big data in the marketing strategy, it may be a new way of working and may require change management and the input of the HR department to facilitate.
2. Trust – Building trust among colleagues from various business units is important in collaborative interactions, since the results of the qualitative research indicated that business units tend to work in silos.
3. Shared vision and purpose – It is necessary to include the staff in the collaborative efforts since, according to Kelly (2014), collaboration needs to happen at all levels of the organisation. The staff need to understand the importance of the collaboration and how it will benefit the entire organisation.

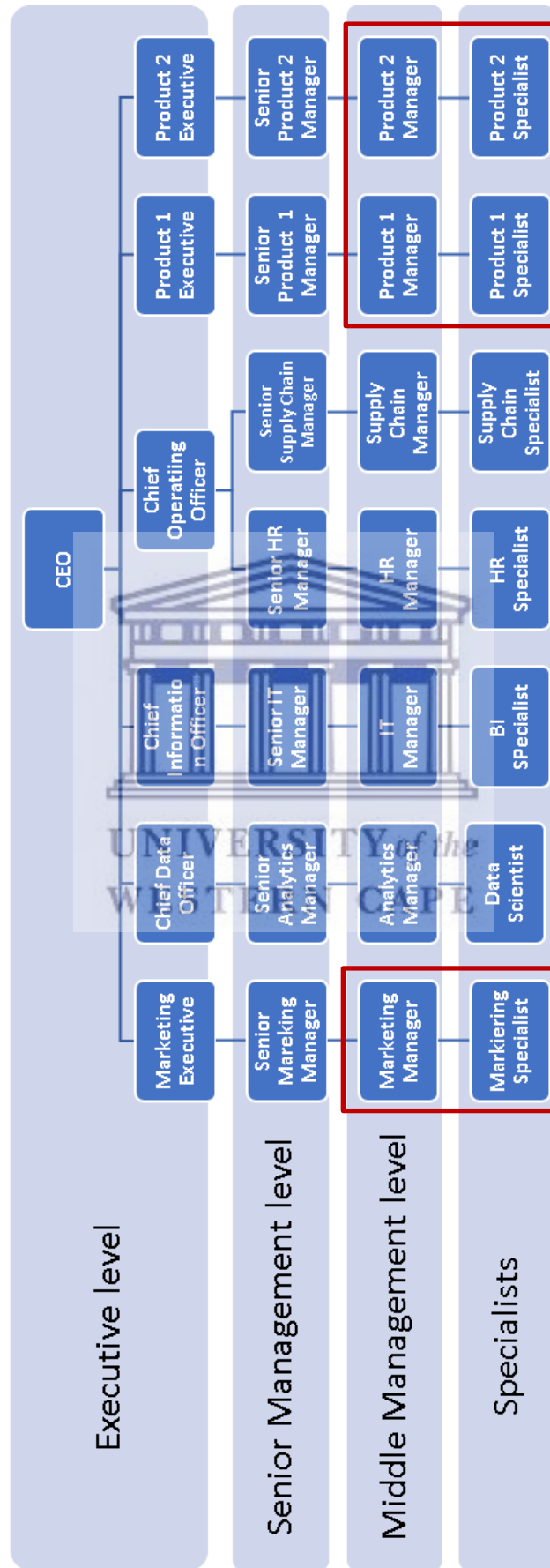


Figure 6-11. Marketing and product teams - operationalising the marketing strategy

Group 9 – The cross-functional data science team

The final collaborative group is the cross-functional data science team, who together will work to make sense of big data for use in marketing strategies. Figure 6-12 highlights this collaborative group in the proposed hierarchical structure.

The Purpose

This is a cross-functional group of both domain experts, technological experts and those with statistical skills. This group's role is to bring together all the expertise to turn the business problem or marketing strategy into a statistical model that will use big data to predict customer behaviours to ensure profits for the organisation. The data scientists (or statistical analysts) are part of the CDO hierarchical line and part of a centralised model as specified in Steele (2017). The data scientists should collaborate with the various business units like IT, marketing, and product groups to help them to build a statistical model, using big data, to be able to execute the marketing strategy. Some of the advanced analytical work may be outsourced to external consultants, and together with the CDO, the data scientists have to collaborate with them to provide the necessary analytical requirements for the execution of marketing efforts using customer data.

Principles of Collaboration

1. Trust – Since the members of this group come from different business units, and from the qualitative results it has been established that business units tend to work in silos, trust will need to be built.
2. Leadership – The CDO should lead this group, since the CDO speaks both the language of business and technology (Teerlink, Sigmon, Gow and Banerjee, 2014).

3. Communication – It is important, especially in a cross-functional collaborative team, to have HR facilitate, as the team members speak different languages: some technical, others business. Understanding what needs to be achieved is essential to the success of such a collaborative effort.
4. Knowledge sharing – There needs to be an understanding of creative output vs statistical models, etc.
5. Shared vision and purpose – The employees or collaborators need to understand the importance of the collaboration and how it will benefit the entire organisation.



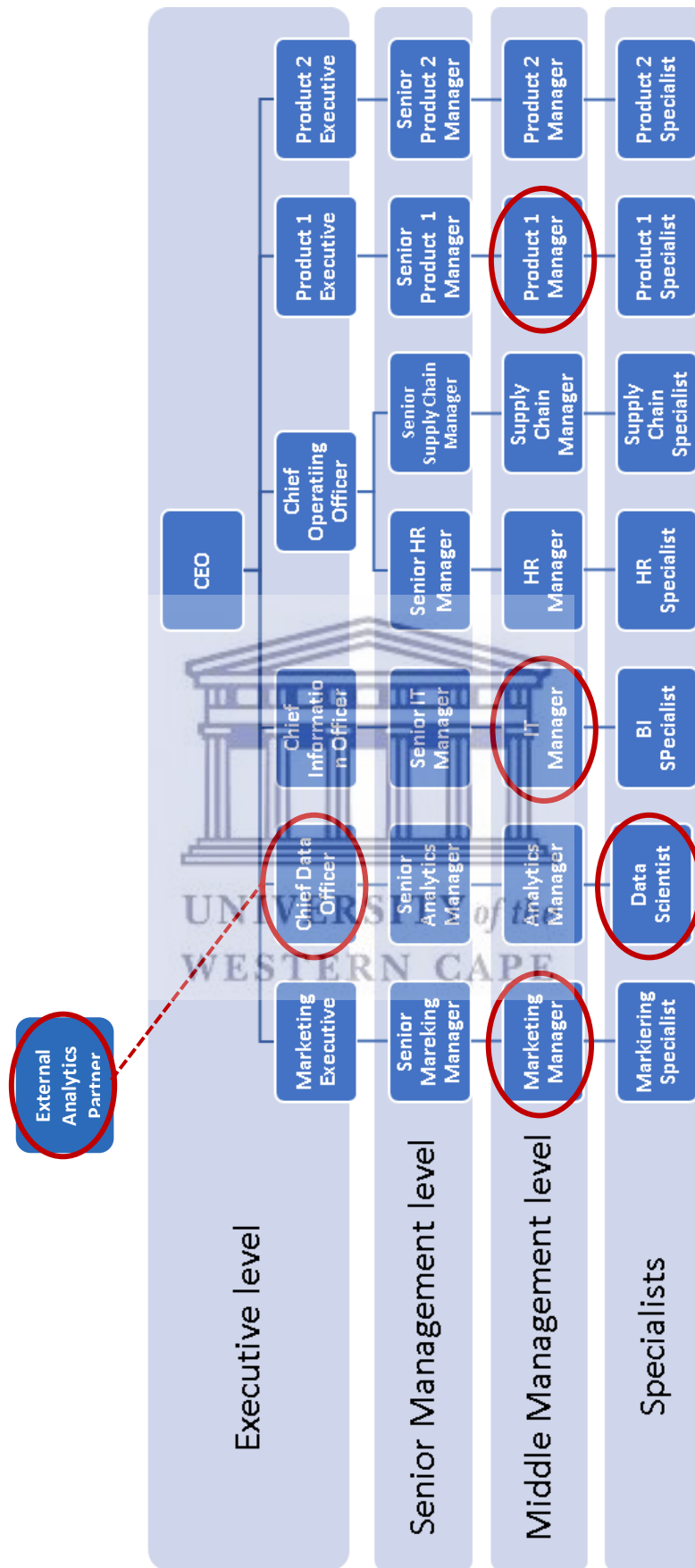


Figure 6-12. A cross functional team from marketing.

6.6.8.4 Overview of the collaborative groups

Table 6-1. Overview of all the collaborative groups

Collaboration level	Collaborative group	Purpose	Key principles of collaboration
Executive Level	CDO, CEO, COO, CIO	Data strategy	Trust, power, communication, shared vision and purpose
	CDO, CEO, COO, CIO	Big data infrastructure investment	Leadership, trust, communication
	Marketing executive, CDO, CIO	This group needs to discuss the impact of big data on the marketing strategy	Leadership Knowledge sharing Trust Shared purpose and vision
Between Levels	CDO, senior analytics manager, analytics manager, data scientist	Discuss how to access data from various sources and prepare data for predictive modelling	Leadership, communication, culture
	CIO, senior IT managers, IT managers	Discuss the execution of the data strategy from an IT perspective.	Knowledge sharing Trust Power
	Marketing executive, marketing senior managers, marketing managers	This group needs to implement the marketing strategy of the business.	Leadership, trust and communication,
Cross- functional	CEO, CDO, CIO, COO, senior management	Improve customer experience, CDO required to evangelise importance of data and be an ambassador for data	Trust, knowledge sharing, leadership, communication, culture
	Marketing and product teams	Operationalise and execute marketing strategy	Communication, trust, shared vision and purpose
	External analytics partner, CDO, marketing manager, data scientist, IT manager, product manager	Bring together all different expertise to turn a business problem/marketing strategy into a statistical model to use big data to predict customer behaviour	Trust, leadership, communication, knowledge sharing, shared vision and purpose

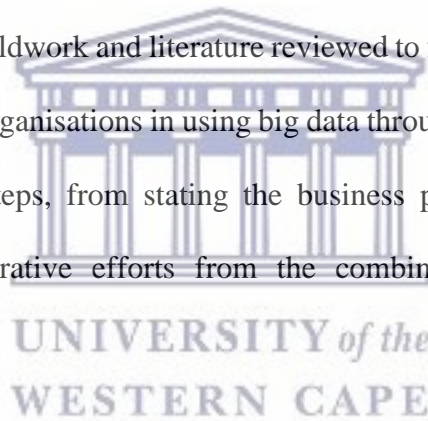
The next chapter showcases the application of the model of collaboration in practice.

CHAPTER 7: PRAXIS MODEL OF COLLABORATION IN THE USE OF BIG DATA IN MARKETING STRATEGIES

The previous chapter explained the requirements for the integrated model of collaboration in the optimal use of big data in marketing strategies. It listed the participants in the model as well as concepts like leadership, organisational culture and organisational structure, grounded from the data deemed important for effective collaboration from the fieldwork and literature. It also showed the purpose of the various collaborative groups and the principles that should govern their interactions.

This model of collaboration, grounded in the data, is thus putting into practice the theory derived from the fieldwork and literature reviewed to formulate a model that can be implemented in large organisations in using big data through data science optimally. The model follows six steps, from stating the business problem to the successful outcomes of the collaborative efforts from the combined work of the various collaborative groups.

The praxis model of collaboration in the use of big data in marketing strategies is presented in Figure 7-1 overleaf, and an explanation of how this model works follows.



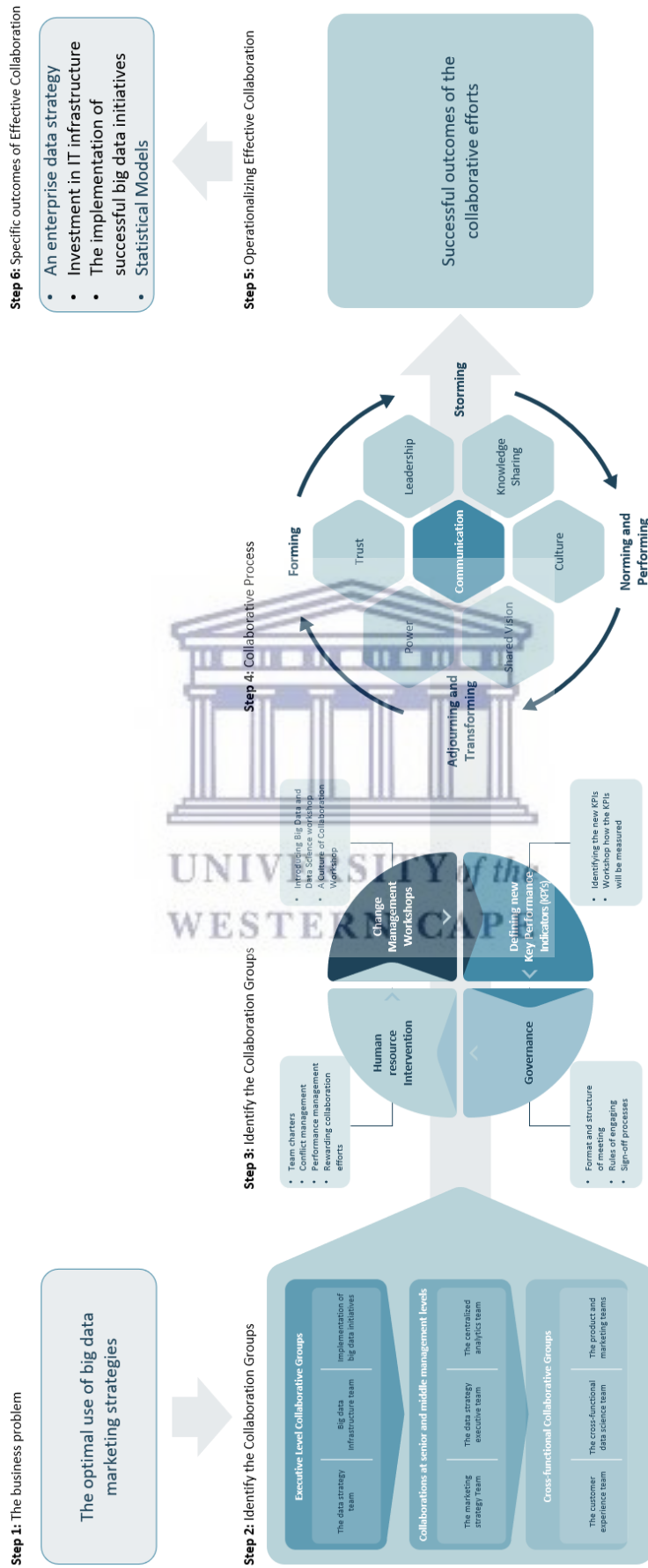


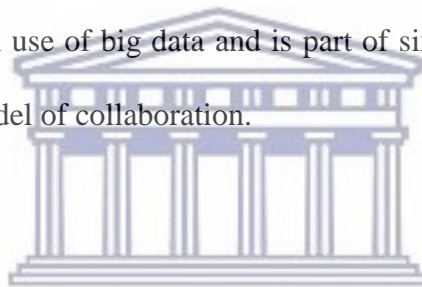
Figure 7-1. The praxis model of collaboration in the use of big data in marketing strategies

7.1 Step 1: The business problem

The business problem in the case of this research is fostering collaboration among the business decision makers, business intelligence or IT specialists, and the statistician in the optimal use of big data in marketing strategies.

From the fieldwork, a key business leader and driver of data in the organisation – the CDO, emerged. The CDO is instrumental in the model of collaboration as this role is the link to the various stakeholders in the optimal use of big data in marketing strategies as outlined at the start of the research.

It was also established from the field and the literature that the CDO is a key leader and collaborator in the optimal use of big data and is part of six of the nine collaborative groups required in this model of collaboration.



7.2 Step 2: Identify collaborative groups

This model considers nine different collaborative groups in order to have the necessary outcomes of effective collaboration. These groups play equally important roles in the optimal use of big data in marketing strategies. The collaborative groups are listed in the following Figure 7-2:

Step 2: Identify the Collaboration Groups

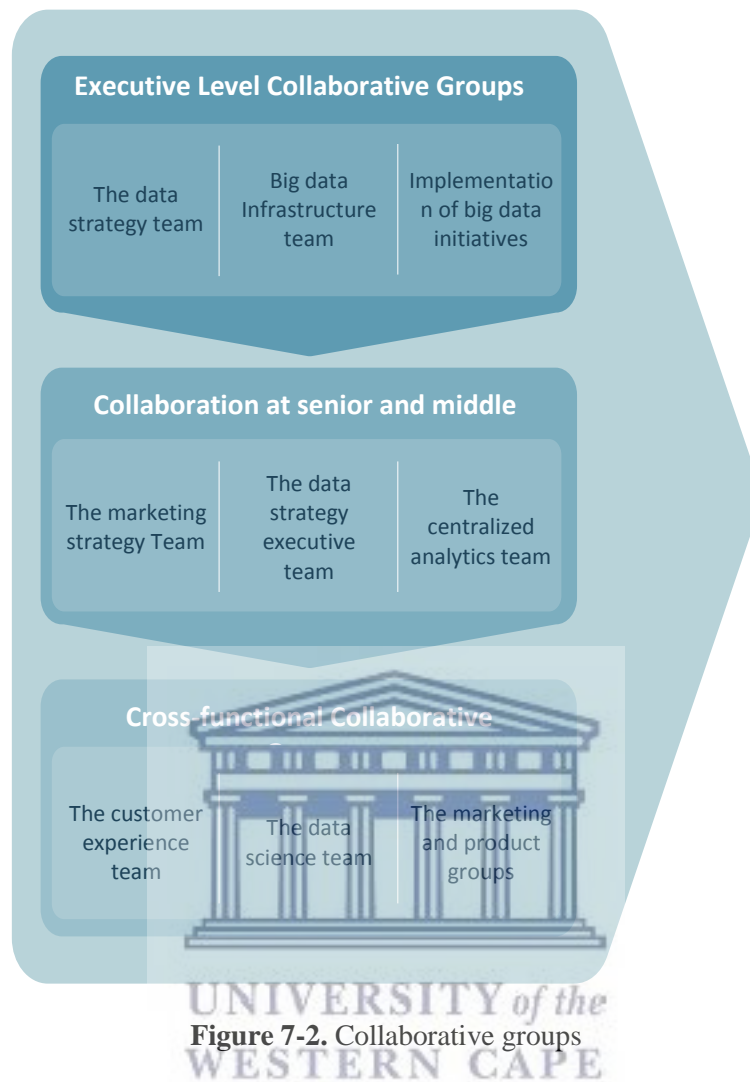


Figure 7-2. Collaborative groups

7.3 Step 3: Change management process

This process (shown in *Figure 7-3*) is extremely important in ensuring effective collaboration. Since the model of collaboration proposes a new way of working within the organisation, the HR department must assist the participants of the various collaborative groups to manage the changes in the workplace through workshops run by change managers, skilled in helping employees to successfully transition to a different way of operating.

Step 3: Identify the Collaboration Groups

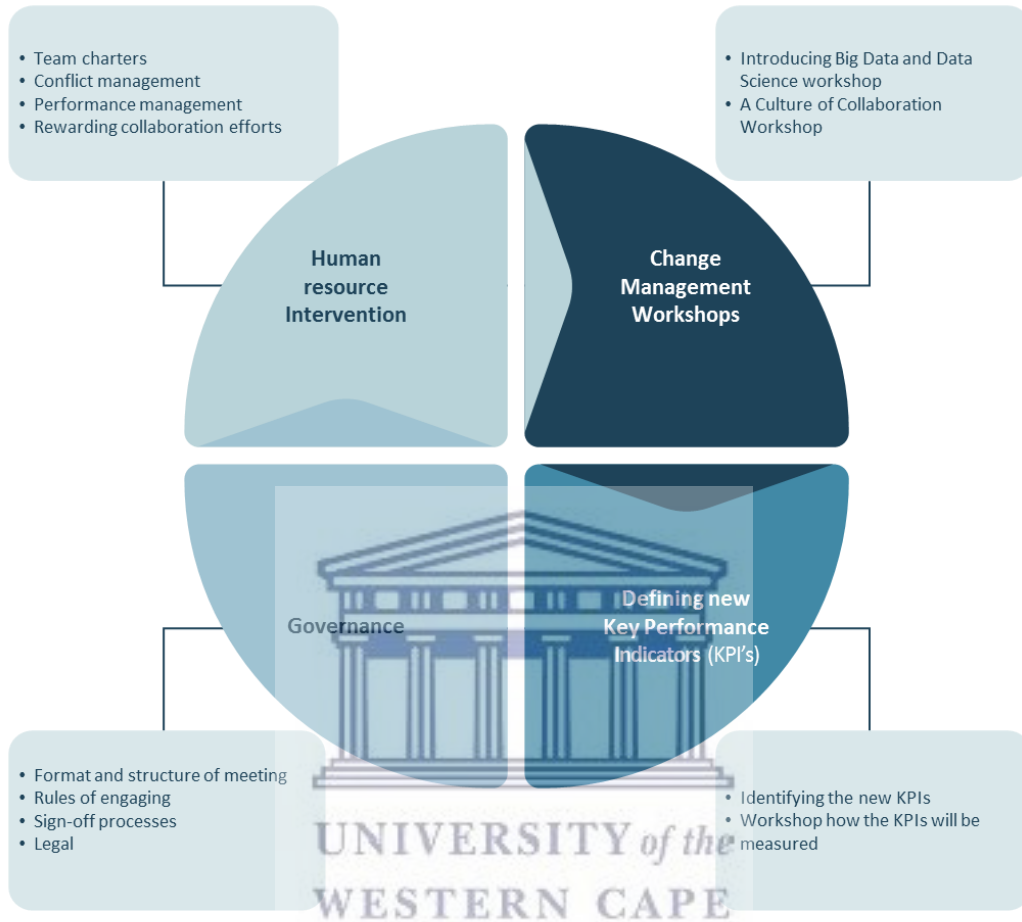


Figure 7-3. Change management process

7.4 Step 4: Collaboration process

Collaboration is a process and not an activity, which means that the effectiveness of the collaborative effort takes time. The following stages of collaboration form part of the collaborative process of this model of collaboration.

Forming

In this stage the collaboration groups start meeting and the expectations and challenges of the collaborative efforts are explained. At this stage, the collaborative groups will establish timelines and deadlines based on the targets set as part of their group key performance indicators (KPIs).

Storming

The collaborative process is underpinned by the principles of collaboration, which will govern the way collaboration will occur. In this stage, it is important for the groups to put the principles of collaboration, like trust, knowledge sharing, etc., into practice as it is the stage of collaboration where confrontation can occur. It also requires the group to make decisions on the best way of collaborating. It requires strong leadership to guide the group through this stage.

Norming and Performing

At this stage, the group members are more at ease with one another, the roles should now be clearly defined, and collaboration occur more naturally. The shared goals and the reasons for the collaboration should now be well understood and the collaborative group will have accepted the new ways of working. The performance of these stages is when the group has applied the principles of collaboration, like trust and sharing knowledge, and the group is able to make decisions effectively.

Adjourning and Transforming

This final stage is when either the collaborative effort has been successfully completed or another task is started. Some of the collaborative groups in the model have to continue with projects like customer experience; while data science teams must

collaborate where new statistical models need to be built. Other collaborative efforts like developing the data strategy and the investment in big data infrastructure may be suspended once they have been achieved.

Since the reason for the collaboration is to establish new ways of working and to use big data in marketing strategies, new business processes will have to be drafted and decisions on how and what will be done will have to be made. These changes will occur as part of the stages of collaboration.

The following Figure 7-4 is a representation of this process.

Step 4: Collaborative Process

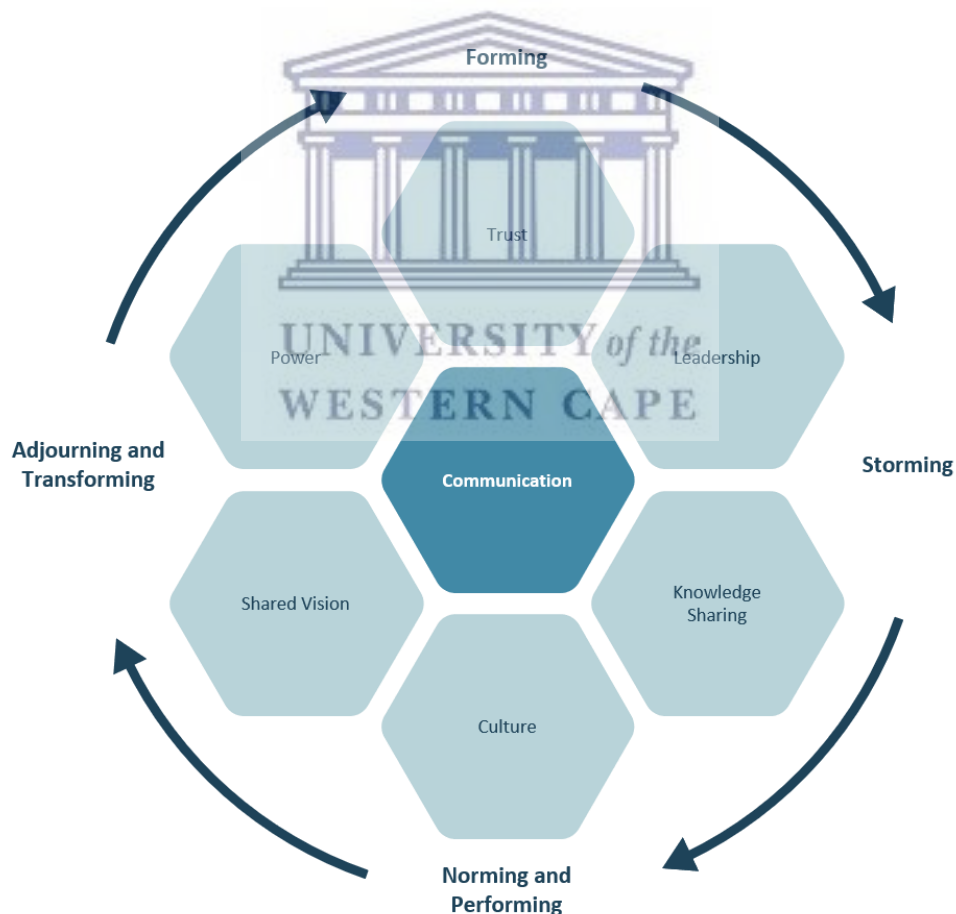


Figure 7-4. Principles of collaboration

7.5 Step 5: Operationalising effective collaboration

The step comes once effective collaboration has been achieved. This process can now be operationalised and it can be documented on how to achieve effective collaboration. Some collaborative groups may take longer to become operational than others.

7.6 Step 6: Specific outcomes of effective collaboration

The specific outcomes of effective collaboration are:

1. An enterprise data strategy
2. Investment in IT infrastructure
3. The implementation of successful big data initiatives
4. Marketing strategies based on the use of big data through data science that are profitable for the organisation



CHAPTER 8: CONCLUSION

The aim of this research was to fill the gap in knowledge with the building of an appropriate model of collaboration for large corporate organisations to benefit financially by leveraging their data to inform their decisions. Such collaboration within large corporate organisations currently does not exist in the context of data science in the optimal use of big data. The focal point of the research is to investigate how collaboration can be applicable within the context of data science to promote the optimal use of big data.

8.1 A summary of the key findings

The importance of collaboration in organisations was well understood from the fieldwork. There were differing views of what is considered analytics and how it is applied in the organisation, but its importance and financial benefits to the organisation were realised as key in the era of big data. Another finding of the research was the changing role of the statistician in the era of big data and the new discipline of data science.

The association of leadership, trust and knowledge sharing in ensuring effective collaboration was hypothesised in this research. Of the three hypotheses tested, two were confirmed. The two confirmed hypotheses were that there exists a relationship between the frequency of collaboration and the leadership of organisations, as well as that a relationship exists between knowledge sharing and collaboration. The null hypothesis tested, of whether trust issues exist among business units and how often collaboration happens, was accepted, and therefore the test determined that there is no

relationship between trust and collaboration. It is, however, known that collaboration cannot happen without trust. Trust is subjective and not easy to measure. In future research, the issue of trust should be researched, using in-depth interviews, rather than a quantitative approach to measure trust.

A key unexpected finding of the research was the role that the CDO plays in fostering collaboration among the stakeholders in the optimal use of big data. Other unexpected findings were the importance of organisational structure and culture in effective collaboration.

The research set out to answer the research questions on aspects of effective collaboration like leadership, trust and knowledge sharing in the optimal use of big data in marketing strategies. During the research, many other concepts and aspects that could influence collaboration in this particular environment were recognised.

The model of collaboration, a practical way to effectively implement big data initiatives in marketing strategies in large organisations that was grounded in the theory, was devised to guide organisations in effective collaborative efforts. This model of collaboration could be used by organisations to initiate different collaborative efforts, particularly in the field of big data and data science in large organisations today to ensure the optimal use of big data in marketing strategies.

8.2 The contribution to knowledge

The research developed a model of collaboration that will provide inputs to business organisations to aid the successful outcome of collaborative efforts in data science and the optimal use of big data in the form of financial benefits to the organisation. It also

provides an opportunity for the statistician to take a rightful place as one of the key collaborators of data science within the corporate environment.

The research has contributed to knowledge by extending the theory of collaboration in the domain of big data in the organisational context, by building an integrated model of collaboration, grounded in the data, in the context of optimising big data in marketing strategies in large organisations. Collaboration among the specified stakeholders can occur both horizontally with peers and vertically with specialists at different levels within the organisation. The research also specifically applied organisational theory by incorporating the structure of the organisation, as well as considering the influence of organisational culture in the model of collaboration in its application in large organisations. Such a model does not currently exist in an organisational environment.

There is limited knowledge within the South African context of how to successfully and effectively implement big data to benefit organisations financially, and an integrated model of collaboration provides a systematic way of incorporating the skills of the key stakeholders in achieving effective collaboration. The model of collaboration considered various processes and methodologies, from organisational change management to principles of collaboration in order to achieve effective collaboration. The application of this model of collaboration should help the successful outcome of collaborative efforts in data science with financial benefits for the organisation.

From the companies surveyed on collaboration in their organisations, it appeared that collaboration had not been deeply ingrained as a key principle of the organisations' culture. A culture of collaboration is imperative for effective implementation of this model of collaboration. There does not exist a systematic culture of collaboration in the organisations surveyed and part of the process in the model of collaboration is that the

leadership of large organisations should model a culture of collaboration, which will then be embraced by the employees at the lower levels of such organisations.

In the USA, large organisations like the Fortune 1000 companies are embarking on big data and artificial intelligence (AI) initiatives successfully. Although South African companies have started to embark on big data initiatives, these do not exist to the same extent as in the USA and Europe. The model of collaboration can benefit the South African context in establishing big data initiatives that can be successfully implemented for financial gain.

Another contribution to knowledge was the realisation that the CDO is the key stakeholder in fostering collaboration in the use of big data through data science. The research set out to assess whether collaboration could be fostered among the business decision makers, the business intelligence specialists, and the statistician. The CDO is the link to these stakeholders, as the CDO is the business executive and leader in the organisation responsible for the enterprise data strategy and for evangelising the use of data as an asset at the organisation. The CDO is also technologically astute, working closely with the CIO, the head of IT and business intelligence to ensure that an IT and data infrastructure exists to accommodate and facilitate the use of big data in the organisation. The CDO is also directly linked to the data scientists (previously the statisticians) and analytics teams as these roles are in the CDO's reporting line.

The key to the successful implementation of the model of collaboration and the development of a culture of collaboration in the organisation rests in the hands of the CDO. The introduction of the CDO in large organisations has been acknowledged and many of the Fortune 1000 organisations in the USA have employed CDOs. Even though

companies have employed CDOs, there is still uncertainty of what exactly the functions of a CDO are.

In the context of South Africa, there are not many organisations with a CDO. Such a function is becoming more and more a requirement in the financial services and banking sectors, owing to the importance of good data governance in these highly regulatory environments. However, there are many other responsibilities that the CDO hold. The importance of the CDO in managing data as an asset has become critical to gain financial advantage over competitors, and other sectors like retail and telecommunications organisations should consider introducing this role in their organisations. There is also a realisation that data is an asset and that it has become crucial to use data in driving sound business decisions. Developing a data-driven culture in order to gain an advantage over the competition is the order of the day in staying relevant in a highly competitive corporate environment.

Companies in South Africa are slowly embarking on big data initiatives and artificial intelligence (AI) has become the latest buzzword, as in many of the First World countries in the world. Many are calling this era of advanced technology the fourth industrial revolution, and as with all the previous industrial revolutions, it will eventually become the norm. Organisations need to be prepared for implementing these technological advancements. Those companies first to be successful in implementing these new technologies will be pioneers in their field and will show significant financial benefits. In order for this to happen, organisations need to equip themselves with the right tools, processes and people. There is a potential for a data-driven model of collaboration in South Africa and the seeds exist that such a model is implementable. The research has recognised this trend and the model of collaboration with the CDO as

the key stakeholder in collaborating for the optimal use of big data through data science will definitely benefit organisations in South Africa.

Organisations in South Africa are, however, slow to employ a CDO, but some have recognised the need and are recruiting for such a role. Organisations are also recruiting for professionals like data scientists, required to analyse and make sense of big data. Many tertiary institutions in South Africa have recognised the need for such skills and are offering courses to supply this impending demand. The building blocks are being put in place in South Africa for organisations to implement such a data-driven model of collaboration.

8.3 Areas of methodology improvement

There were areas not sufficiently investigated that require future research.

One was that the original qualitative study was limited to only one unit of observation. In future the methodology can be improved by increasing the number of units of observations. The findings of the quantitative study were also only limited to organisations with marketing departments in Cape Town. The quantitative study's number of respondents was small and non-random, and generalisations could not be made. However, during the research, there was the realisation that the quantitative study had some shortcomings, and to strengthen the research, triangulation methodology was considered through seven additional in-depth interviews of big data and analytics experts from South Africa and abroad to further explore the use of big data in large organisations today. The findings from these qualitative studies corroborated the

findings of the qualitative and quantitative instruments of the research design and strengthened the research.

One of the other limitations of the quantitative study in the form of online surveys was that a single respondent represented the organisation in the response to the survey. Even though it can be an advantage, it can be a limitation in that the person representing the organisation will respond from his/her own role and will not always be objective (Bryman and Bell, 2011).

In order to address the limitations of this study, further studies should extend the research to more than one unit of observation for the qualitative study, and for a quantitative study include organisations from the entire country of South Africa, rather than one city.



8.4 Recommendations for further research

The model of collaboration is for the use of big data initiatives in marketing strategies, but this model could be adapted for use in many different organisational collaborative efforts. Future research could be on the effectiveness of collaboration in terms of big data and the success of such collaborative efforts in terms of added revenue to the business, owing to the use of big data in all the various areas of the business.

Since the quantitative research was restricted to Cape Town organisations, future research could be conducted on a country-wide basis, not only JSE-listed companies, but to small and medium organisations as well, to improve the sample composition. The research should be conducted by a research organisation or academic institution with credibility in large organisations in order to obtain responses from more

organisations; further research should also provide greater insight into how organisations collaborate and use big data to make data-driven decisions. The research methodology can be extended since online surveys have limitations to more personalised interviews from senior employees at multiple organisations from different industries.

Another possible area for further research could be to investigate how organisational culture can impact data-driven decision making. As an unanticipated finding of this research, the culture and structure of an organisation and how it influences data-driven decision making was not thoroughly explored. A qualitative study of in-depth interviews with employees at various levels of organisations and across different industries will shed some light on whether certain types of industry have similar cultures or if it is developed independently of the type of industry.

As a student researcher it was difficult to interview prominent executives at various organisations. An independent research organisation with credibility within the corporate environment could conduct a broader survey to ascertain the future of organisations in the era of big data and AI, much like the surveys conducted in the USA by NewVantage Partners.

A case study of the implementation of the model of collaboration at an organisation like Woolworths, investigating how the various stakeholders experience the collaboration process, should be undertaken. Such research can serve as a pilot of the possibilities a model of collaboration in the fourth industrial revolution in South Africa and possibly leading in this area on the global stage.

Another area for further research could be to investigate the implications of the POPI act on the optimal use of big data and the possible limitations in predicting customer's behaviour for use in marketing strategies in South Africa.

8.5 Final remarks

This study started by investigating how to foster collaboration among the business decision makers, the business intelligence specialists and statisticians and lead to the building of an integrated model of collaboration that can be implemented at large organisations in South Africa. The model incorporated the key stakeholders and unanticipated new stakeholders and factors that could influence effective collaboration.



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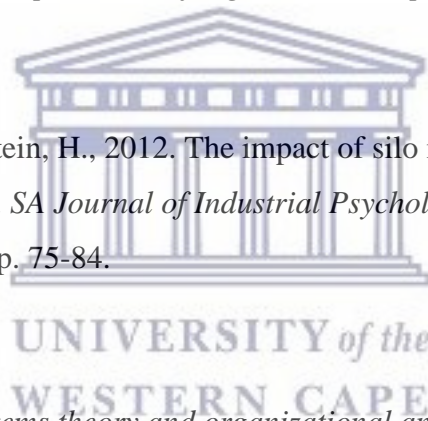
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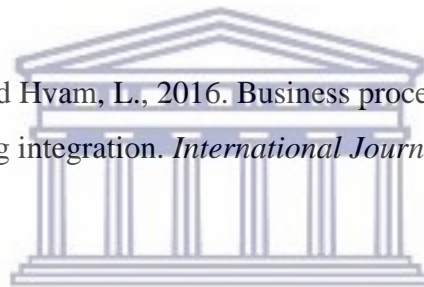
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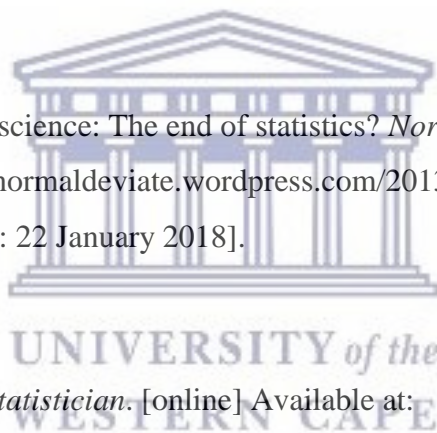
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APPENDICES

Appendix A

A questionnaire to the Connected Customer Council (CCC) at Woolworths.

Start by setting up 30 minute appointments with the various people on this team, sending the consent letter. Once a meeting has been confirmed and set up, start the meeting by explaining the PhD study.

Questions

General

1. Ask about the role of the customer connected council in the organisation.

2. Ask about the various members on the team.

3. a) What is the role of Marketing in the organisation?

How can this role be improved to make the business more customer-focused?

b) What is the Role of IT generally in the organisation?

How can this role be improved to make the business more customer-focused?

c) What is the Role of the Business decision maker (execs) generally in the organisation?

How can this role be improved to make the business more customer-focused?

d) How do these stakeholders currently work together in this organisation?

Probing Examples - Project -by- project, ongoing, knowledge sharing, trust, conflict, organisation structure

Big Data

4. a) Have you heard about big data?

If Yes....

b) How did you come to know about this term?

c) Please define this term- Big data - as you understand it.

- What type of data is considered as Big data?
- How do we use such data in the organisation?
- How is data captured, stored and accessed?

d) Interviewer then defines Big data in plain language

- **Big data is an evolving term that describes any voluminous amount of structured, semi-structured and unstructured data that has the potential to be mined for information.**

If No ...

- a) Explain using the google search example, data collected online, social media data, cell phone data
- b) Interviewer then defines Big data in plain language
- **Big data is an evolving term that describes any voluminous amount of structured, semi-structured and unstructured data that has the potential to be mined for information.**

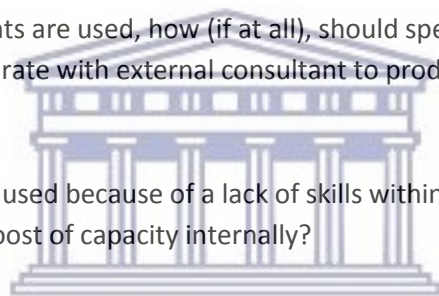
5 a) What should the role of Marketing be in the use of Big data for marketing strategies?

c) What should the role of IT be specifically in the use of Big data for marketing strategies?

d) What should the role of Business decision makers (product group execs) be specifically in the use of Big data in marketing strategies?

Statistical analytics role within the organisation

5. a) As part of your role, have you ever required statistical analysis for decision making?
- b) What type of analysis was needed?
- c) Who (which department) did the statistical analysis?
- d) Is this function important to have in the organisation? Is it a core function of Woolworths?
- e) Should all statistical analysis be done internally or should part of this be done externally (using Consultants)?
- f) If external consultants are used, how (if at all), should specific people (depts.) from the organisation collaborate with external consultant to produce statistical analysis?
- g) Are external parties used because of a lack of skills within the organisation and if so, should there be a boost of capacity internally?



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Questions around the Statistician

- What is the role of a Statistician?

If not known, then give an interpretation from literature of the role of a Statistician.

Statistician

The Oxford Dictionary (2015) defines a statistician as ‘an expert in the preparation and analysis of statistics.’

Statistics

Although the term is widely known in the scientific domain, along the lines of big data, Statistics is defined by Kuonen (2015) as ‘a science of ‘learning from data’ (or making sense out of data) and measuring, controlling and communicating uncertainty’.

If known...

- Is there a role of the Statistician in your organisation?

- If yes, what is the role for the Statistician in the use of Big data in marketing strategies?

If no, give my understanding based on literature what the role of the statistician is.

Although the term is widely known in the scientific domain, along the lines of big data, Statistics is defined by Kuonen (2015) as 'a science of 'learning from data' (or making sense out of data) and measuring, controlling and communicating uncertainty'.

Questions around future Collaboration (and the factors influencing it) –assuming CCC gets involved with Big Data in Marketing strategies

- a) What is the process the CCC will follow to ensure the decisions made will be implemented?

Eg interaction of management, Leadership style?

- b) Do you think (in your own experience) there are trust issues to be resolved in effectively implementing the decisions of this council?

- c) Do you think (in your own experience) knowledge sharing exists amongst those who have to effectively implement the decisions of this council?

- d) Is the role of leadership to ensure effective collaboration amongst different groups in the organisation?

i. If yes, how does this happen?

ii. If no, why not?



Appendix B

Questionnaire to the CEO of Woolworths SA.

CCC

6. Ask about the role of the Connected Customer Council in the organisation.

7. Why the CCC was established? What was the intention and once established, has it lived up to the original intention?

Stakeholders

8. a) What is the role of Marketing in the organisation?

How can this role be improved to make the business more customer-focused?

- b) What is the Role of IT generally in the organisation?

How can this role be improved to make the business more customer-focused?

- c) What is the Role of the Business decision maker (execs) generally in the organisation?

How can this role be improved to make the business more customer-focused?

Specific questions

9. How do these stakeholders currently work together in this organisation? **Probing Examples - Project -by- project, ongoing, knowledge sharing, trust, conflict, organisation structure.**

In the book, competing on analytics, the authors feel that the CEO and executives are responsible for the analytics orientation and capability and setting an analytics culture at the organization. Do you agree? If so,

Please list reasons why you think analytics and data science in important in an organization like Woolworths?

Questions around Collaboration (and the factors influencing it)

- e) What is the process the CCC will follow to ensure the decisions made will be implemented?
- f) What is the role of the CEO in this process.

Eg interaction of management, Leadership style?

- g) Do you think there are trust issues amongst the different stakeholders that need to be resolved in order to effectively implementing decisions from this council?

- h) Do you think knowledge sharing exists amongst those who have to effectively implement (middle managers) the decisions of this council?

- i) Is the role of leadership to ensure effective collaboration amongst different groups in the organisation?

iii. If yes, how does this happen?

iv. If no, why not?

Do have a question or anything else to add to this discussion?

THANK YOU FOR YOUR PARTICIPATION

Appendix C

A questionnaire to Middle Managers.

General

10. a) What is the role of Marketing in the organisation?

How can this role be improved to make the business more customer-focused?

b) What is the Role of IT generally in the organisation?

How can this role be improved to make the business more customer-focused?

c) What is the Role of the Business decision maker (execs) generally in the organisation?

How can this role be improved to make the business more customer-focused?

e) How do these stakeholders currently work together in this organisation? **Probing Examples - Project -by- project, ongoing, knowledge sharing, trust, conflict, organisation structure**

Big Data

11. a) Have you heard about big data?

If Yes....

b) How did you come to know about this term?

c) Please define this term- Big data - as you understand it.

- What type of data is considered as Big data?
- How do we use such data in the organisation?

- How is data captured, stored and accessed?

d) Interviewer then defines Big data in plain language

- **Big data is an evolving term that describes any voluminous amount of structured, semi-structured and unstructured data that has the potential to be mined for information.**

If No ...

e) Explain using the google search example, data collected online, social media data, cell phone data

f) Interviewer then defines Big data in plain language

- **Big data is an evolving term that describes any voluminous amount of structured, semi-structured and unstructured data that has the potential to be mined for information.**

6 a) What should the role of Marketing be in the use of Big data for marketing strategies?

g) What should the role of IT be specifically in the use of Big data for marketing strategies?

h) What should the role of Business decision makers (product group execs) be specifically in the use of Big data in marketing strategies?



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Statistical analytics role within the organisation

12. a) As part of your role, have you ever required statistical analysis for decision making?

h) What type of analysis was needed? Do not prompt Eg. Reporting (Summary statistics), Basket Analysis, Predictive analysis. etc

i) Who (which department) did the statistical analysis?

- j) Is this function important to have in the organisation? Is it a core function of Woolworths?
- k) Should all statistical analysis be done internally or should part of this be done externally (using Consultants)?
- l) If internally, should the function be centralized or in each business unit?
- m) If external consultants are used, how (if at all), should specific people (depts.) from the organisation collaborate with external consultant to produce statistical analysis?
- n) Are external parties used because of a lack of skills within the organisation and if so, should there be a boost of capacity internally?

Questions around the Statistician

- What is the role of a Statistician? Who qualifies as a Statistician?

If not known, then give an interpretation from literature of the role of a Statistician.

Statistician

The Oxford Dictionary (2015) defines a statistician as 'an expert in the preparation and analysis of statistics.'

Statistics

Although the term is widely known in the scientific domain, along the lines of big data, Statistics is defined by Kuonen (2015) as 'a science of 'learning from data' (or making sense out of data) and measuring, controlling and communicating uncertainty'.

If known...

- Is there a role of the Statistician in your organisation?
- If yes, what is the role for the Statistician in the use of Big data in marketing strategies?

If no, give my understanding based on literature what the role of the statistician is.

Although the term is widely known in the scientific domain, along the lines of big data, Statistics is defined by Kuonen (2015) as ‘a science of ‘learning from data’ (or making sense out of data) and measuring, controlling and communicating uncertainty’.

Questions around Collaboration (and the factors influencing it)

- j) What is the process that leadership teams like CCC should follow to implement the decisions made around data and specifically Big data in the future?
- k) Do you think (in your own experience) there are trust issues amongst the different stakeholders that need to be resolved before effectively implementing the decisions of this council?
- l) Do you think (in your own experience) knowledge sharing exists amongst those who have to effectively implement the decisions of this council?
- m) Is the role of leadership to ensure effective collaboration amongst different stakeholders in the organisation?
- v. If yes, how does this happen?
- vi. If no, why not?
- n) What role does middle management have to play to ensure effective collaboration amongst different stakeholders in the organisation?

Do have a question or anything else to add to this discussion?

THANK YOU FOR YOUR PARTICIPATION

Appendix D

Questionnaire – Online Survey

Section 1:

Please indicate your industry from the list below. **Select only one industry**

Retail
Financial Services
Banks
Life Assurance
Property Investment
Other, please
specify.....

Section 2:

Being a data driven organisation – Should the definition be paraphrased?

Data-driven decision management (DDDM) is an approach to business governance that values decisions that can be backed up with verifiable data. The success of the data-driven approach is reliant upon the quality of the data gathered and the effectiveness of its analysis and interpretation.

1. On a scale from 1 to 10, in your opinion, how important is using data in decision making?

Not important 1 2 3 4 5 6 7 8 9 10 Extremely important

2. Does your organisation use data to make business decisions? **Select only one**

Yes, No, Don't know

3. If yes, then...

What type of data is used in making business decisions? (Select all that apply)

- Customer Data
- Sales Data
- Economic Data
- Environmental Data
- Other, please specify.....

4. Who does the data analysis for the organisation?

- External Consultants

- In-house Analysts
 - Both in-house and consultants
5. If analysis is done within the organisation - List the people in the organisation who analyse and interpret the data for decision making purposes. (Select all that apply)

- Statistical Analysts
- Business Analysts
- Business Intelligence (IT)
- Managers
- Executives
- Others.....
- N/A

6. Where in the business are the data driven decisions used? (Select all that apply)

- Financial Department
- Marketing Department
- Product Groups
- Management Teams
- Other



7. Who are responsible for ensuring relevant data is available for use in decision making in the organisation? (Select all that apply)

- Executives
- Senior Management
- Middle Management
- Financial Department
- IT Department
- Marketing Department
- Other

Section 3

Big data

BIG DATA can be defined by the three V's: Volume, Velocity and Variety. Volume speaks of the amount of different types of data from transactional data and more recently, unstructured social media data. The second V, Velocity, talks to the speed at which this data is generated in almost real time and organisations are struggling to deal with this. Variety also defines big data because of the different types of data i.e. unstructured social media data, structured numeric data from traditional databases as well as text data.

1. Does the business have a big data strategy/vision? **Select only one**

Yes, No, don't know

2. What type of data do you consider as big data? (Select all that apply)

- Social Media Data
- Transactional Data
- Weather data
- Customer response data
- Customer Research Data
- Other

Section 2:

Collaboration

1. Do the business units at the organisation work together on projects? **Select only one**

Yes, No, Not sure, Don't know

2. If yes, how frequently does such collaboration happen? **Select only one**

- Often
- Sometimes
- Infrequently

3. Are there common or shared key performance indicators across the different business units that ensure collaboration amongst the business units? **Select only one**

Yes, No, Not sure, Don't know

4. Is collaboration with peers across business units encouraged from the top management in the organisation? **Select only one**

- Yes
- No
- Don't know

5. In your opinion, does a culture of collaboration exist at your organisation? **Select only one**

Yes, No, Don't know



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6. If collaboration exists within your organisation, how effective do you think it is on a scale from 1 to 10? **Select only one**

Not effective 1 2 3 4 5 6 7 8 9 10 Extremely effective

7. What do you consider aspects or characteristics that may hinder or promote effective collaboration? **Multiple selection**

- Organisational Culture
- Leadership
- **Communication**
- Knowledge Sharing
- Organisational Hierarchy
- Trust
- Other (please specify)

Section 3

The next section will take you to some of the influencing aspects of collaboration, leadership, trust and knowledge sharing.



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Leadership

1. Does the leadership team influence how business units collaboration in your organisation? **Select only one**

Yes, No , Don't know

2. Does the leadership team encourage data innovation in your organisation? **Select only one**

Yes, No , Don't know

Trust

Trust amongst co-workers from different business units is important in coordinated efforts or teamwork in various situations. Trust is usually easy to talk about and it always assumed that it already exists in organisations but it is often vague and frequently misinterpreted.

With this definition of trust in mind, please answer the following question on trust.

1. Are there trust issues amongst the different business units' ito data use? **Select only one**

Always, most of the time, sometimes, seldom, never

Knowledge Sharing

Knowledge can be defined as 'a combination of experience, values, contextual information and expert insight'. Use this definition to answer the following question. **Select only one**

1. Do the different business units share knowledge generally amongst themselves?
 - Yes
 - No
 - I don't know

2. On a scale from 1 to 10, how would you rate knowledge sharing amongst the different business units' ito data use at your organisation? **Select only one**

Bad 1 2 3 4 5 6 7 8 9 10 Great

Thank you for completing the survey.

Please submit only one survey.

Submit!



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Appendix E

1. How frequently does such collaboration happen?

The FREQ Procedure

Industry	collaboration happen?			
	Q11			
Frequency	Infrequen	Often	Sometimes	Total
Int Retailer	0	1	4	5
Retail	1	10	1	12
Total	1	11	5	17

2. Rate how collaboration with peers across business units is encouraged by top management in the organisation?

The FREQ Procedure

Industry	business units is encouraged by top management in the organisation?				
	Q13				
Frequency	Always	Often	Rarely	Sometimes	Total
Int Retailer	0	3	1	1	5
Retail	5	4	0	3	12
Total	5	7	1	4	17

3. In your opinion, does a culture of collaboration exist at your organisation?

The FREQ Procedure

Table of Industry by Q14: In your opinion, does a culture of collaboration exist at your organisation?

Industry	Q14		
	No	Yes	Total
Int Retailer	2	3	5
Retail	3	9	12
Total	5	12	17



4. If collaboration exists at your organisation, how effective do you think it is on a scale of 1 to 10?

The FREQ Procedure

Industry	on a scale of 1 to 10?							
	Q15							
Frequency	3	4	5	6	7	8	Total	
Int Retailer	2	1	1	0	0	1	5	
Retail	0	0	3	1	2	6	12	
Total	2	1	4	1	2	7	17	

5. Are there trust issues amongst the different business units with regard to data use?

The FREQ Procedure

Table of Industry by Q19: Are there trust issues amongst the different business units with regard to data use?

Industry	Q19					
	Always	Most of the time	Never	Seldom	Sometimes	Total
Int Retailer	0	1	0	1	3	5
Retail	1	2	2	3	4	12
Total	1	3	2	4	7	17

6. On a scale of 1 to 10, how would you rate knowledge sharing amongst the different business units in terms of data use at your organisation?

The FREQ Procedure

Table of Industry by Q21: On a scale of 1 to 10, how would you rate knowledge sharing amongst the different business units in terms of data use at your organisation?

Industry	Q21						
	4	5	6	7	8	9	Total
Int Retailer	1	2	0	1	1	0	5
SA Retailer	1	1	3	4	2	1	12
Total	2	3	3	5	3	1	17



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Appendix F

Fostering collaboration amongst business intelligence, business decision makers and statisticians for the optimal use of big data in marketing strategies.

A study conducted in selected companies in Cape Town, 2015.

Identification.....(for computer use)

Place.....

Name of researcher: Louise De Koker

CONSENT FORM

1. I confirm that I have read or received all the details pertaining to the study and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.
3. I hereby agree to voluntarily participate in this study.
4. I understand that data collected during the study may be looked at by the supervisor of the researcher; I give permission to this individual to have access to the data collected from me.
5. I understand that if I choose to withdraw from the study; I will need to inform the researcher.
6. I am not expecting to get any benefit from being on this research study.

Signature of participant.....

Date.....

Appendix G

Fostering collaboration amongst business intelligence, business decision makers and statisticians for the optimal use of big data in marketing strategies.

A survey conducted at Woolworths in Cape Town, 2016.

Identification..... (Anonymous code only known to the Principal investigator)

Place.....

STRICTLY CONFIDENTIAL

To be read verbatim to all respondents before the beginning of the interview

Good day Sir/Madame. My name is Louise De Koker. I am a student of the University of the Western Cape. I am currently working on my research project for a PhD degree and part of it is a qualitative case study of the Woolworths experience regarding fostering collaboration amongst business intelligence, business decision makers and statisticians for the optimal use of big data in marketing strategies.

The information from the interview will not reveal your identity and your responses will be kept confidential. Please be as accurate as possible as the success of the research depends partly on the accuracy of your response to the questions asked in the interview. Also remember that you are free to answer questions or to stop the interview at any time.

For any other queries on this project, you may contact me on 084 6965825.

The interview should take no longer than 30 minutes.

Are you ready to go ahead?

Signature of the Respondent.....

Signature of interviewer..... Date.....

Appendix H

A transcript of one of the respondents of the qualitative study

A questionnaire to Middle Managers at Woolworths.

General

13. a) What is the role of Marketing in the organisation?

- A. I think marketing is quite a broad role. Marketing builds the brand, it builds the brand standing, it builds the brand in terms of the mind of the consumer as well as the internal and external stakeholder grips, so there is a whole brand ... this perception role that marketing does. Marketing also plays a very clear role in driving commercial value to the business even in engaging with your consumers, driving them into the business to drive value and revenue effectively and then I think marketing also drives the perception of people and measures the perception of people, so in there promote a score is measured but it's under the marketing perception of what a customer or a stakeholder will have of the brand, so it is a very diverse role.

How can this role be improved to make the business more customer-focused?

- A. I think again you would need to look at marketing from two perspectives, you would look at it from an internal perspective and you will look at it from an external perspective. Marketing should drive personification of our different customer sets and segments very much into our business to become a customer led business so that in whatever we do from a business is always through a customer lens with a specific intent in mind. I think also on an external stakeholder grouping the customers, it is how you engage with that customer and really making it very very personal and almost close the gap between a brand standing and the customers' understanding of that brand.

b) What is the Role of IT generally in the organisation?

- A. For me IT is an enabler and often also a disabler but IT's intention should be to enable the business to meet current needs and future needs. IT is also there to drive the infrastructural component that keeps the business operational, but IT should also be very clear and understand what the future needs of customers would be and how that translates is for an example would be that the whole world is moving towards digital. If you are not digitalizing your business and you are not enabling your business through IT, you can't meet the customer needs so if I had to summarise what is the role of IT ... IT is there to enable businesses meeting their customer needs better.

How can this role be improved to make the business more customer-focused?

A. I think IT in terms of the way we reporting business at the moment is very much driven from a product sales perspective, from a business looking at the customer through the lens of what are we selling to the customer, whereas if you place the customer central to your business and all your reporting supports that engagement that enablement of driving more value to the customer and also getting more value from the customer, that is in very different layers, that mean the IT enabling focus is to whatever you do is to make the life of the customer simpler, more convenient and easier to engage and also to access the business in different ways ... so for me that is a very different approach, its placing the customer at the heart of an organisation, building your infrastructure around that rather than putting product in the center of the business and then try to marry that with the customer data that sit outside of that world.

c) What is the Role of the Business decision maker (execs) generally in the organisation?

A. Let me just clarify the question ... if you asking what are the head of product doing with customer information or*not the customer, just what their role is, so the product groups and like Myschool would be part of ...and so it's that hat but that is also a product that we are selling* ...the product head, the role of that head is to actually get more customers using more of our product on a more frequent basis to maximize the value for the business so the aim for the product head is really selling more merchandise more often at better margins and lower markdowns and meeting the customer needs, so I am really putting that as a ??? because I think very often that is the way we look at it. We firstly look at how do we do all of these thing that the business need and basically what does the customer need, so for me it would be the old four P's effectively that the product heads would bring in, there is the other three P's which we can cover if want.

How can this role be improved to make the business more customer-focused?

A. I think if a buying head truly understands who they are buying for, what are their customer segments in the broader market place that they are buying merchandise for, they would be able to actually meet their needs better, they will be able to provide merchandise that is more acceptable and invariably drive more sales ... so this role should know their customer extensively well at every point of that customer's life stage or life location because it is about meeting their needs where they at and being able to provide through the product when and where they need it.

f) How do these stakeholders currently work together in this organisation? **Probing Examples - Project -by- project, ongoing, knowledge sharing, trust, conflict, organisation structure**

A. I think if we have to look at what are the things we using as product in level person, we would use the customer information, we would shape our strategies to drive greater commercial value and we would use the customer information to try and meet their needs to the best of our ability. How are they working together ... I think when you are a product head and you look at marketing, you look at it sometimes just with the lens of 'what can marketing do for me to sell more merchandise', 'how can IT enable me to meet the need of the customer better' rather than 'how do we work in collaboration

to drive the right message at the right time with the right product offer when the customer needs it. *So what you are saying or I am going to summarise it and you can correct me ... it is almost like the business decision makers they use marketing but it sounds like a one directional and they use IT, are they giving back, are they proactive, do you have views of how that working relationship goes the other way ...* I think often your service areas are purely seen as that, as a service area rather than a complete business partner building a path or a journey together that deliver success, so it is often seen in the old way of marketing, IT, HR are all service areas rather than being a true partner that moves the business forward. *Is that what you think it should be?* I think if you see organisations that really work well together is where all of those key functions are working against a common strategy together to deliver the best value to the business. *So it is all of them working together with a common strategy...* yeah that is my view and each of those different areas would have different building blocks that they need to provide to meet the strategy of the business.

Big Data

14. a) Have you heard about big data?

A. Yes,

If Yes....

b) How did you come to know about this term?

A. I think Big data is pretty much one of the key buzz words in the industry or in the world today, I don't think everybody has the same understanding of what Big Data really truly is.

c) Please define this term- Big data - as you understand it.

A. Big Data is essentially what information individuals are creating in the world through every single interaction every single day, be it through your engagement with the business and buying on a credit card, buying on cash, swiping a loyalty card linked into your social media communication, linked into our marketing, linked into how you use websites on your phone, what areas you are actually visiting ... it is really a magnitude of your foot print as an individual rolled across every channel of engagement that you use on a daily basis and Big Data is trying to bring all of that together in a structured way that you actually able to mind information from that, that can derive value for the organisation but also for the individual.

• What type of data is considered as Big data?

A. Your footprint on the website, where you go ... on your navigation on your phone, it actually touches and leaves a footprint as to where you have been. Your cell phone has a tracking device wherever you move when it's on, whether you on youtube, on Wi-Fi, all of these things are leaving a footprint so it is a magnitude of different interactions and often it isit is conscious and subconscious footprints because some of these you just do, you draw

money from a ATM it leaves a footprint, you walk through a bank and you leave a footprint, you on a website going to Media24 reading a news clip you leave a footprint ... *and I think it is better understood now by people than it was before we did this and we didn't know, but now people are more aware of the data that they leave behind. I think like ten years ago we didn't think and even from the 80's since the ATM was there since the store cards were there, that was something that we could track you on and we could tell something about youand it is millions and millions of transactions that you are doing consciously or subconsciously, the fact that you click to open an email onto something, the mere fact that you are responding to an email leaves a foot print ...yeh that sound very interesting the data just ... but know the thing is how do we use such data, do you think we have a handle on it?* I don't think we have. I think we have a better understanding. Are we really optimizing the data that is available, I don't think so. Have we got the tools that allows us to optimize this full picture into air and a 360 view of the consumer, no we don't, so I think it is a journey of discovery and some people are better at it. You are getting tools that is enriching your data but unless you can structurally mind that data in a proper format with the right tools, the fact is that you are going derive very little value from it if you do it in the traditional single minded approach.

- How do we use such data in the organisation?
 - A. I think it is about what you set out to gather and you need to very clear as to what strategy you want to meet and again understand that these strategies are evolving far quicker than ever before. So your strategy of gathering and bringing in data that your require, so for instance attitudinal data, comments on face book, you need to very clear that when you bring that data in is how are you going to use it, you need to have a strict intent of 'I want to be engaging with my customer in a far more relevant tone on a relevant content and there for build your data gathering and your data tools to enable that and then to actually be agile enough to be able to change this because consumers will change with all new trends coming in, they change continuously.

- How is data captured, stored and accessed?

d) Interviewer then defines Big data in plain language

- **Big data is an evolving term that describes any voluminous amount of structured, semi-structured and unstructured data that has the potential to be mined for information.**

If No ...

- i) Explain using the google search example, data collected online, social media data, cell phone data
 - j) Interviewer then defines Big data in plain language
 - **Big data is an evolving term that describes any voluminous amount of structured, semi-structured and unstructured data that has the potential to be mined for information.**
- 7 a) What should the role of Marketing be in the use of Big data for marketing strategies?
- A. I think marketing should play a leading role, marketing should have their ears on the ground and have the understanding of the change in customer environment and the change in world environment, the stage that we engage with and marketing should play a leading role taking the rest of the business on a journey. Decision makers need to understand how this change in world and change in engagement with consumers are going to impact their business and what does it mean for them. The fact that they would need to make decisions a lot quicker against the set strategy from a customer perspective. Marketing really is the voice of the customer in an organisation. IT is there to help and to enable through technology because they got the expert knowledge and they are generally the people who looks after processes and tool sets and so forth but they need to be very closely aligned with the change in trends and the lead that marketing is providing. At the same time they play a leadership role in technology, so therefore they need to be providing that back into marketing to say this is how we believe we can best meet the need that you identify.
- k) What should the role of IT be specifically in the use of Big data for marketing strategies?
- l) What should the role of Business decision makers (product group execs) be specifically in the use of Big data in marketing strategies?

Statistical analytics role within the organisation

15. a) As part of your role, have you ever required statistical analysis for decision making?
- A. All the time.
- o) What type of analysis was needed? Do not prompt **Eg. Reporting (Summary statistics), Basket Analysis, Predictive analysis. Etc**
- A. I think just for my personal use if I say from the role that I play, which is product ??? as well as the loyalty practitioner if I can put it that way ... for me to really understand our

consumer base, how they engage us, where they engage us, what are their needs, the information the data often helps me understand what those customers are requiring, what they want to be engaged on and how we can sell more merchandise, keep customers more engaged, so analysis for me often confirms an intuition that you have from commercially engaging with the customer and that statistical analysis often can show the gaps where there is opportunities or where there is threats, so data for me is a critical part of what I do.

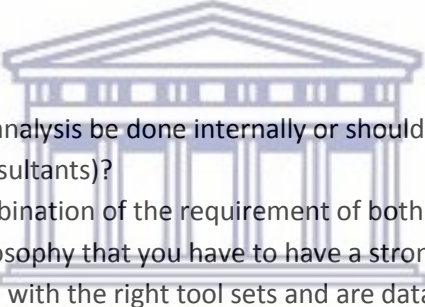
p) Who (which department) did the statistical analysis?

A. At the moment we working obviously with customer insight analysis team quite extensively (indistinct) teams we use BI to a lot of our reports and a lot of our static reports are automated from BI. The more in-depth analysis is done from the internal analytical team and there is often more questions than what the teams can produce answers quick enough, so I think it is getting the basic reports through BI but then using other analytics to actually compliment what we thinking or trying to understand.

q) Is this function important to have in the organisation? Is it a core function of Woolworths?

A. Critical! I think is it a core function in our business, very much in my mindset –yes. But if you ask a person selling apples in a store in a rural area it probably would not be as clear to them – at Woolworths. The criticalness of the information although it is lot more important now that what it was a couple of years ago, I think it depends on where you sit in the organisation and your usage of the information and data. *I like the example of someone you use in the rural area with apples, selling apples, it is not important to them. Is it not an indictment on the decision makers for not having gone that far because if he or she understood the importance of data in selling apples they would use that information?* You have intuitive retailers that can sell a lot of merchandise but they go through a process of analyzing their trading environments very effectively on rands and cents and engagements from customers. They do not see enough of the real opportunities so the interconnectedness of a customer and I am going to use my example again ... if you know that a customer who is buying apples is also buying most of your lingerie, what are the opportunities ... and that you can only get through data insight, so have we driven these insights down to every part of our business, I don't think we have. *So is it we didn't do it because we don't have the tools or there is not enough education and they don't find it useful because they don't understand it or lack of leadership?* I don't think it is a lack of leadership, I think the lack of education of how to use information, the translation of a report into an action is often lacking the insights, so what you finding is that you have people that can read the report but are not able to make the right insight deductions of that and say this is how ... interpretation... that whole interpretation – so is there a leadership role? Absolutely!, so as a business we need to be driving information into our core business more and more so that the right information is driven out for the right decision making. *So I know from knowing you, you are a merchant at heart and you like to substantiate with data, so it is almost like we shouldn't lose the gut but we can*

complement it ... I think it is very much ... and again you have true traders that use information very effectively, too often leapfrog the competition and work quicker with the decision whereas not true traders without information will grow but very small incremental steps so it does not allow you to move ahead quickly if you don't have the opportunity in the information and in the data. It is almost like if you have good traders and you have good information the combination could be a lot better ...so I would use the synergy definition of exactly that if traders is one, information is another one which is one plus one, if you combine that you are going to get three, if you don't have the ability to bring the two pieces together, because what is the synergy definition ... it is really taking this information with your trading ability and coming up with that opportunity that take you forward much quicker which is why I said it leapfrogs, otherwise you will just have reports and traders and they will look at how much have we sold, we sold x lets grow it by another 5% and that will go ... whereas if you used your information you would know ... but you know what there is another 15 or 20% out there and what is the quickest way and where do we go let's put the apples with the lingerie and they will pick it up – just to follow up on what you said.

- 
- r) Should all statistical analysis be done internally or should part of this be done externally (using Consultants)?
- A. I think there is a combination of the requirement of both. I think you always and I have always have the philosophy that you have to have a strong internal competence but you also need people with the right tool sets and are data scientists and can do a lot more with the data in the consulting world or in an enabled IT world where you got all these tools doing these churning of information and coming out with the key hypostasis, that needs to be fed back into your specialist in your organisation and combined with business, so I always see this as a collaboration ... it's a partnership
- s) If internally, should the function be centralized or in each business unit?
So you believe it should be a combo so internally it should be strong – should the function be centralized or should it be decentralized within the business units ?
- A. I think for me it is a very interesting question because centralized you get the core competency being built in one single place and you have similar people doing similar work constantly engaging with each other and therefore they learn more, having them decentralized to be in the product area meets the need of that product area because that person's focus is very much as to how do I make this part of the business better, so a very in-depth knowledge of that trading area brought together by the knowledge that if you had to push me where would I see it like to be sitting, I think I would probably go with a centralized model with dedicated support analyst for different trading parts of our business so that you get the combined skills sets together but you also have people working specifically on portions of the business that they get to know very well and that you again have a partnership role with the trading part of the

business so that you get the combined skills sets together but you also have people working specifically on portions of the business that they get to know very well and that you again have a partnership role with the trading part of the business.

- t) If external consultants are used, how (if at all), should specific people (depts.) from the organisation collaborate with external consultant to produce statistical analysis?
- A. I think if I had my preference I would boost capacity internally and I would use consultants to help guide and move the business forward into newer thinking newer opportunities, so it is a guidance role rather than a reliance role.
- u) Are external parties used because of a lack of skills within the organisation and if so, should there be a boost of capacity internally?

Questions around the Statistician

- What is the role of a Statistician? Who qualifies as a Statistician?

A. A statistician for me is often an individual that got all the knowhow of how to use statistics in a very clever way to confirm or to identify opportunities. Often what I find with statisticians and Louise this is not focused at you 😊 it can be very theoretical and the practical application is lacking and therefore I think it is always good that you have a very good statistician working with a very good trading insights person, that they can co-develop opportunities together so have we got enough of them – no I don't think so. Have we got enough confidence in the business to meet our needs, we got way more questions than we got people to answer them. *I like what you said and I agree completely that I am a statistician and I am quite theoretical, my age and my experience help me to be a little bit more practical, I hope, but what do you think the qualifications of such a person, just that theoretical person, and I like that you need to work with other people but that person ...is there a requirement for someone with that theoretical and what would that be in terms of qualifications ...You know what I think, depending on your needs from a business you can have an actuary levelled up individual doing very high level strategic business decisions about for instance acquiring a new business, or what is the value of a data base or what is ... whereas a statistician could probably be just a level below that and has the ability to mind that statistics in a way that it now has business value, but it would be agreed that just business need would depend on where that individual engages in the business.*

If not known, then give an interpretation from literature of the role of a Statistician.

Statistician

The Oxford Dictionary (2015) defines a statistician as 'an expert in the preparation and analysis of statistics.'

Statistics

Although the term is widely known in the scientific domain, along the lines of big data, Statistics is defined by Kuonen (2015) as 'a science of 'learning from data' (or making sense out of data) and measuring, controlling and communicating uncertainty'.

If known...

- Is there a role of the Statistician in your organisation?
 - If yes, what is the role for the Statistician in the use of Big data in marketing strategies?
- A. I think a statistician should be able to bring very complex sets of data together in a way that you can drive out insights that is simple enough for the lowest trader to understand. So it is not just about making it very complex it is also the ability to dilute it into key actions that is stating these are the key opportunities that the data is telling us and these are the things that we should be worried about, so it is using that ability to take data and translate it into insight which then can be developed into strategies to drive value into the business with trading or the product heads.

If no, give my understanding based on literature what the role of the statistician is.

Although the term is widely known in the scientific domain, along the lines of big data, Statistics is defined by Kuonen (2015) as 'a science of 'learning from data' (or making sense out of data) and measuring, controlling and communicating uncertainty'.

- A. Well if you look at my previous statements it actually confirms exactly what you just saidI just wanted to confirm that so I am glad that my thinking around what a statistician would want to do so I like what you said that there is that theoretical person but in terms of Big data there is different part of your statistical brain need to be used for that ...

Questions around Collaboration (and the factors influencing it)

- o) What is the process that leadership teams like CCC should follow to implement the decisions made around data and specifically Big data in the future?
- A. I think firstly any decision made at a customer council level should be grounded in a very clear understanding of what Big data needs, with a very clear understanding is to the impact and the opportunity of implementing that what was found in the data in correct way, if we had that in a solid foundation and we prepared to put the necessary resources behind implementation of it, then effectively it will

confirm your strategic intent of what you discovered in the data to a strategy that is then fully implemented and measured, so for me it is not just about identifying the opportunity, it is also about enabling the rest of the business to successfully implement it.

p) Do you think (in your own experience) there are trust issues amongst the different stakeholders that need to be resolved before effectively implementing the decisions of this council?

A. I think if you take any business at any type of level, not just at a decision making level but also at an implementation level. The level of trust and support or the broad stakeholder group as well as the trust and support for the strategy or the intent that you set out to do is the foundation for success. because the enablers won't work together well enough to deliver at the best possible way for the business, so for me it is a foundation of trust and support of each other against the bricklayer strategy. *Do you think that it exist or there is a value we want to believe in or how far along are we in getting there – no ones perfect 😊* Firstly I don't think trust is always 100%, I think trust also evolves because trust is such an emotional, personal thing ... you can have 100% trust today and tomorrow 20%, it depends on how that involvement happens and often trust is built and I like the Coronation ad that says 'trust is earned', based on what you built over time and what you have actually done and you will find that customers move up and down but at minimum you should have a fairly high level of trust across the organisation to be able to deliver ...*and amongst the stakeholders ? Absolutely!* So I think you always trust transparency, all of these values can only deliver results if there is a high level of trust amongst those stakeholders that the individuals that are engaged are going to deliver what they said and will do. *On a scale from 1 – 10 where do you rate Woolworths now ?* across which, the Customer Council or ...*just as a value amongst stakeholders ...* I think it will vary from area to area, I think if you look at Woolworths holistically I would probably say the best case scenario and there is no science behind it, it is probably 7 at best case, I think if you look at group like foods who for years have had a really successful business, the trust would probably be high or depends on how they work together but a lot depends on the leadership ... the leadership sets the tone for trust. *Oh perfect! That is exactly what I wanted to hear... but WFS.* Is that a trick question now ... so if you ask the question between Woolworths and Financial Services, I think there is a relatively low level of trust and would probably see it (indistinct) because as a business that don't work in a collaborate way, with the same end in mind, and why am I saying the same end in mind is that there end of mind is purely to build a financial services book and a business around it, whereas our end of mind is the customer and making Woolworths better from a customer perspective. If this is an enabler and as an enabler they need to play the role of an enabler rather than dictating the pace for Woolworths. *Whose fault is that?* I think it is a leadership fault.

q) Do you think (in your own experience) knowledge sharing exists amongst those who have to effectively implement the decisions of this council?

A. I think it can be more effective, I think it has improved significantly, I think this whole piece of work we are busy with on nodal analysis and really addressing business challenges and trade issues are forcing people to share information in a collaborative way and looking for solutions that is cross business which is the only way we can resolve some of these big challenges.

r) Is the role of leadership to ensure effective collaboration amongst different stakeholders in the organisation?

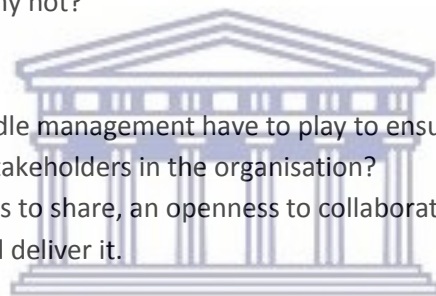
vii. If yes, how does this happen?

A. I would say it is one of the roles that they have. I think it has to be a structured approach, structured is probably not the right word, but it has to be a conscious approach to work in a collaborative way cross business silos to meet the end in mind of what the Council is intending to develop.

viii. If no, why not?

s) What role does middle management have to play to ensure effective collaboration amongst different stakeholders in the organisation?

A. It is an openness to share, an openness to collaborate, an openness to mutually agree a plan and deliver it.



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Do have a question or anything else to add to this discussion?

A. It would be interesting to know why you lifted out FS specifically. *No it just came to mind, I just wanted to probe trust issues 😊 and I wanted your view that is not part of the question, I just wanted to know and we can have a discussion*

End

THANK YOU FOR YOUR PARTICIPATION