REDUCTION OF THE CAUSES OF STOCK-OUTS IN ERP SUPPLY CHAIN MANAGEMENT BY PRIORITIZATION OF THE CAUSES: A CASE STUDY AT THE CITY OF CAPE TOWN

by

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DECLARATION

I, Moletsane Tarcisius Moleli, declare that the contents of this thesis represent my own unaided work, and that the thesis has not previously been submitted for academic examination towards any qualification. Furthermore, it represents my own opinions and not necessarily those of the Cape Peninsula University of Technology.

Signed

Date

ABSTRACT

Enterprise resource planning (ERP) systems have a good reputation for automation and strength in the integration of business processes (BPs), therefore more and more organisations are adopting ERP systems. The City of Cape Town (CCT), a metropolitan municipality, is one of the organisations that have adopted an ERP system. CCT provides a wide range of services to residents and citizens in the Western Cape Province of South Africa. The ERP system at CCT manages the Supply Chain Management (SCM) processes, among others, to ensure good service delivery. ERP systems are able to provide statistical reports on stock-outs; however, the information provided is insufficient to link a specific stock-out to its causes within the SCM process at CCT. This makes it difficult to select the most appropriate solution to minimise the causes and number of stock-outs.

The study aims to explore the possible reduction of the causes of stock-outs at CCT stores, therefore the study has adopted a qualitative research methodology with a case study research strategy. It uses subjectivism to understand the truth, with an inductive approach applied to five different interviewee groups, namely the ERP Support Department consultants, the Procurement Department, the Inventory and Stores Management Department, the Master Data Maintenance Department, and the reservation creators. A purposive sampling method is used because the study targets knowledge and experience on the subject from the interviewees in the investigation of the problem. The case is the SCM division at CCT, the unit of analysis is the CCT stores, and the unit of observation is the employees who work for the SCM division of CCT. All ethical procedures and policies of the Cape Peninsula University of Technology (CPUT) are adhered to.

For the data collection, in depth semi-structured questions have been developed, and the data were analysed using thematic analysis. The leading causes of stock-outs were discovered by analysing the themes. The results revealed the themes, in descending order according to the causes of stock-outs, as follows: procedures, service delivery, suppliers, stock-outs, human resources, and systems. All the objectives were achieved, thereby answering the research questions.

Keywords: Enterprise Resource Planning (ERP), Supply Chain Management (SCM), stock-outs, Theory of Constraints (TOC), municipality local content, information sharing.

ACKNOWLEDGEMENTS

DEDICATION

This study is dedicated to my beloved wife (Maramokhele Moleli) and son (Ramokhele Moleli), my mother ('Me' Laetitia Makobasia 'Moleli) and father (Ntate Andreas T'seliso 'Moleli), for all their prayers and support.

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GLOSSARY OF TERMS

Term	Description
Suppliers	The suppliers that supply the City of Cape Town with materials
City of Cape Town	Cape Town Metropolitan Municipality
Buyers	The employees who buy materials on behalf of the organisation
Reservation creators	The employees who reserve materials for own use or on behalf of others

ABBREVIATIONS

Abbreviation	Meaning
CCT	City of Cape Town
MM	Materials Management
AP	Accounts Payable
SAP	Systems Applications and Programs
TOC	Theory of Constraints
PPPFA	Preferential Procurement Policy Framework Act
PFMA	Public Finance Management Act
MFMA	Municipal Finance Management Act

CHAPTER ONE: INTRODUCTION TO RESEARCH

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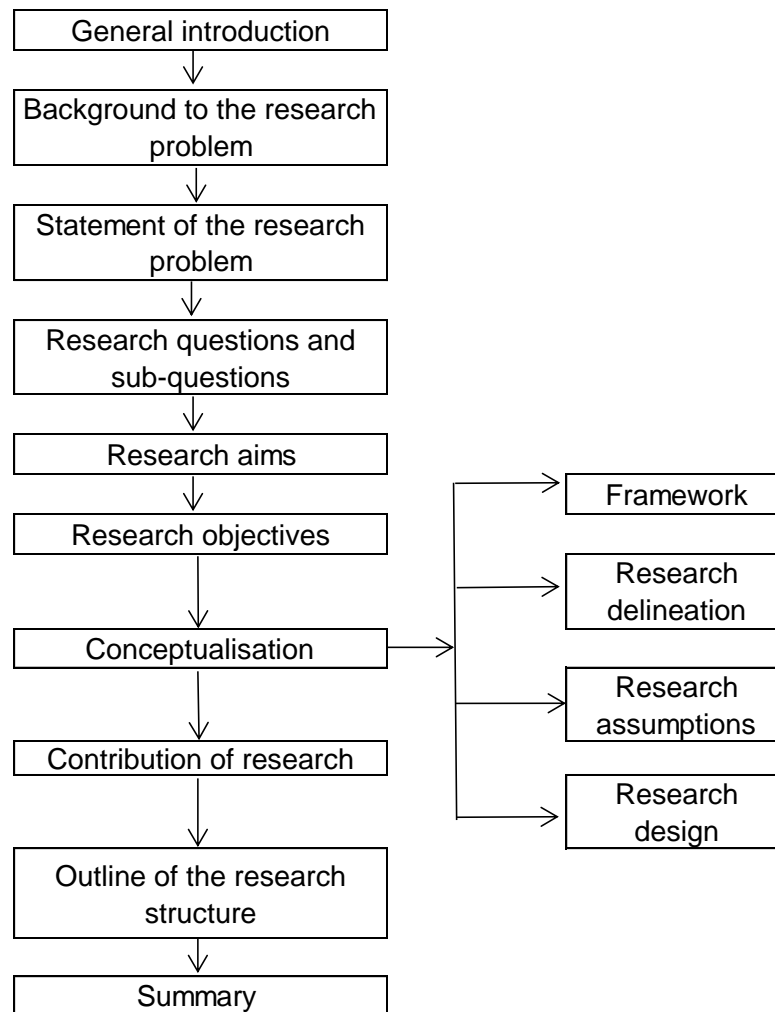
Figure 1.1: The flow for Chapter One

1.1   Introduction

There are many causes for stock-outs occurring in Enterprise Resource Planning (ERP) based Supply Chain Management (SCM). The research was conducted at the City of Cape Town (CCT) with the aim to explore the possible reduction of the causes of stock-outs at the CCT stores and to possibly reduce the number (level) of stock-outs at CCT. The reader is first introduced to the research problem through a discussing on the background of the problem. The literature is reviewed in relation to the research problem and questions. The collected data are used to identify research findings, and the discussion is done with consideration of the literature and the findings.

The City of Cape Town is a metropolitan municipality that provides a wide range of services to residents and citizens in the Western Cape Province of South Africa.

SCM at CCT is responsible for the purchasing of goods and services to ensure that service delivery is of a high quality. CCT applies best practice business processes (BPs) in an endeavour to continue improving service delivery. A specific ERP system has been implemented in 2002 with the aim to fully automate BPs and efficiently integrate the resources available to CCT, as demand from SCM at CCT is continuously increasing with the development of infrastructure and the rise in population. SCM is one of the major functions that needs to be automated so that error free transactions can be achieved.

Stock management remains a major concern for organisations (Kariuki & Rotich, 2017). The implemented ERP system has automated the CCT SCM, yet the stores still run out of stock, which means employees cannot do maintenance or perform other essential tasks. This problem results in poor service delivery at the CCT stores. It is important to identify the causes of stock-outs so that this challenge can be addressed. What also needs to be identified is how the causes of stock-outs are currently being reduced, and what else needs to be done to reduce the causes of stock-outs further. Currently, the ERP system only shows the number of stock-outs for a specific material occurring over a certain period; it does not link the stock-outs to the causes.

There have been practices applied over the years to reduce stock-outs, but managerial participation is required. In addition, these practices are often unique to organisations (Kariuki & Rotich, 2017). For example, the distributors attempt to understand and predict customer demands as this enables them to maintain adequate inventory levels (Rhee, 2010), and continuously more vendors are using extended SCM applications as a competitive measure to integrate information systems and distributors to reduce stock-outs (Masbahi, 2012). According to Mogere, Oloko and Okibo (2013), efficient vendor management can indeed reduce stock-outs. Accurate forecasting of stock levels is important to reducing stock-outs. These solutions are currently not implemented at CCT for a number of reasons, including legislative requirements.

1.2   Background to the research problem

The Procurement Department at CCT is part of SCM and responsible for tender processes, supplier adjudication processes, and selecting the source of supply. Depending on the value of the work that needs to be accomplished at CCT, an advertisement can request for either a quotation (RFQ) or a tender. On the CCT website the duration of advertisements differ; there is also an advertisement time difference between RFQs and tenders, with tenders being advertised the longest.

The advertisements are created for qualified suppliers to apply. A request for quotation process is followed for once-off jobs; however, for larger jobs, a tender process is followed. The supplier with the lowest price is generally awarded the RFQ or tender. A tender can be awarded to many suppliers, and each of the suppliers has an individual supply agreement with CCT. An agreement normally lasts for a period of three years.

An RFQ or a tender is published in order for CCT to receive materials from the supplier; CCT then stores the supplies or consumes it directly. Storing inventory is limited to the space and the availability of funds (Braglia, Grassi & Montanari, 2004). In addition, keeping stock is expensive and increases operational costs (Masbahi, 2012). Inventory management is the key function for the maintenance of the organisation because it enables the materials to be obtainable when needed (Yadav, Swami, Kher & Garg, 2017). Unfortunately, stock-outs persist in stores and this causes the delays in business operations. Delays caused by stock-outs result in a number of challenges for an organisation, for example lost sales, dissatisfied customers, increased maintenance cost, and increased idle time (Chan, Tasmin, Nor Aziati, Rasi, Ismail & Yaw, 2017). Since SCM processes are managed using an ERP system, it should be possible to measure the causes of stock-outs. To achieve this, all the bottlenecks within SCM need to be identified in order to find solutions that will reduce these bottlenecks.

Many organisations that use ERP systems develop and transfer information effectively, thus, organisational decision making and planning is enhanced through ERP (Akca, Esen & Ozer, 2013). The direction of the relationship between inventory control systems and the operational performance of organisations is still not clear, according to Mogere et al. (2013). There is a need to investigate means to improve ERP return on investment from a SCM perspective and to provide guidance to those who may consider applying ERP to improve SCM (Hwang & Min, 2013). Worster, Weirich and Andera (2017) as well as Jeffrey, Kulick, Riitters, Abbott, Papp, Schad, Wallace et al. (2017) determined ways to quantify cost but still could not justify the ERP system, as most benefits, including productivity improvements, form part of the 'soft benefits', which are mostly not quantifiable. Thus, there exists a need for further investigation to be conducted, particularly in non-profit making organisations. There are many factors affecting the operational performance even if an inventory control system operates fully. The relationship between inventory control systems and operational performance in this study is addressed by conducting in-depth interviews with the system users from the SCM division. This helps in the investigation to improve the return on investment from a SCM perspective as it

reveals ways to avoid undesirable outcomes such as stock-outs that hinder service delivery at CCT.

Information should be utilised efficiently along the entire SCM chain in order to receive the full benefits an ERP system offers (Sandhil & Gupta, 2013). Some of the causes of stock-outs are measured, but these measurements are seen as distinct, thereby making it difficult to find relationships between the causes. As a result, prioritising the causes of stock-outs is not easy. It is difficult for an organisation to determine the root cause of stock-outs, as stated by Mogere et al. (2013). Hence, it is difficult to select the appropriate approach to use to solve the stock-out problems within an ERP-based SCM. For example, it is difficult to select approaches such as forecasting and linking information systems with suppliers. By linking these components, stock control can be managed better (Kariuki & Rotich, 2017).

1.3   Statement of the research problem

ERP systems are able to provide statistical reports on stock-outs; however, the information provided is insufficient to link a specific stock-out to its causes within the SCM process at CCT. This makes it difficult to select the most appropriate solution to minimise the causes and number of stock-outs.

1.4   Research questions (RQs) and sub-questions (RSQs)

The research questions provide the means for guiding and directing the thinking of researchers (Leedy & Ormrod, 2005). The research questions are broken down into research sub-questions, so that a collective response to the sub-questions will answers the research question. Below are the research questions (RQs) and corresponding sub-questions (RSQs):

Table 1.1: Research problem, research questions, and research sub-questions

Research Problem: ERP systems are able to provide statistical reports regarding stock-outs; however, the information provided is insufficient to link a specific stock-out to its causes within the SCM process at CCT. This makes it difficult to select the most appropriate solution to minimise the causes and number of stock-outs.
RQ1: What are the factors resulting in stock-outs at CCT?
RSQ 1.1:   How are the stock-outs recognised at CCT?
RSQ 1.2:   How can the causes of stock-outs be classified at CCT?
RQ2: How can the causes of stock-outs be reduced at CCT?
RSQ 2.1:   How does CCT manage the causes of stock-outs?
RSQ 2.2:   How can the causes of stock-outs be managed at CCT?

1.5 Research aim

The research aim is to explore the possible reduction of the causes of stock-outs at the CCT stores.

1.6 Research objectives

1.6.1 Objective 1

➢ To determine the *status quo* of the major causes of stock-outs at the CCT stores

1.6.2 Objective 2

➢ To prioritise the causes of stock-outs at the CCT stores

1.6.3 Objective 3

➢ To determine the *status quo* of the challenges in the SCM processes

1.6.4 Objective 4

➢ To propose guidelines to manage and reduce the causes of stock-outs at the CCT stores

1.7 Conceptualisation

1.7.1 Research methodology

The reach design and the methods adopted are discussed in detail in Chapter Three. An Inductive research approach is used to explore the causes of stock-outs. The research philosophy covers both the ontological position, which is subjectivism, and the epistemological position, which is interpretivism. The research strategy is a case study that follows a purposive sampling method. Data are collected by conducting interviews using semi-structured questionnaires, and the data are analysed using thematic analysis.

1.7.2 Framework

A conceptual framework is a skeletal structure of justification rather than a skeletal structure founded on formal logic or accumulated experience, as it is based on previous research and literature. It includes a rational argument that states the reason for adopting certain ideas above others. The adopted ideas or concepts serve as a guide for collecting data in the study (Eisenhart, 1991). Cua and Theivananthampillai (2009) indicate that theory provides an initial guide to design and data collection. Therefore, the literature review provides the basis as an initial guide to data collection in this study. In addition, both Eisenhart (1991) as well as Cua and Theivananthampillai (2009) indicate that a literature review offers ways in which data are analysed and interpreted. Theories play an important role in

organising a conceptual framework (Cua & Theivananthampillai, 2009), therefore the concepts chosen for investigation or interpretation must be appropriate and useful given the research problem under investigation (Eisenhart, 1991).

Figure 1.2 demonstrates the framework to assist in reducing the causes of stock-outs at CCT. It demonstrates the relationship between business rules and measurement, with the external and internal causes of stock-outs.
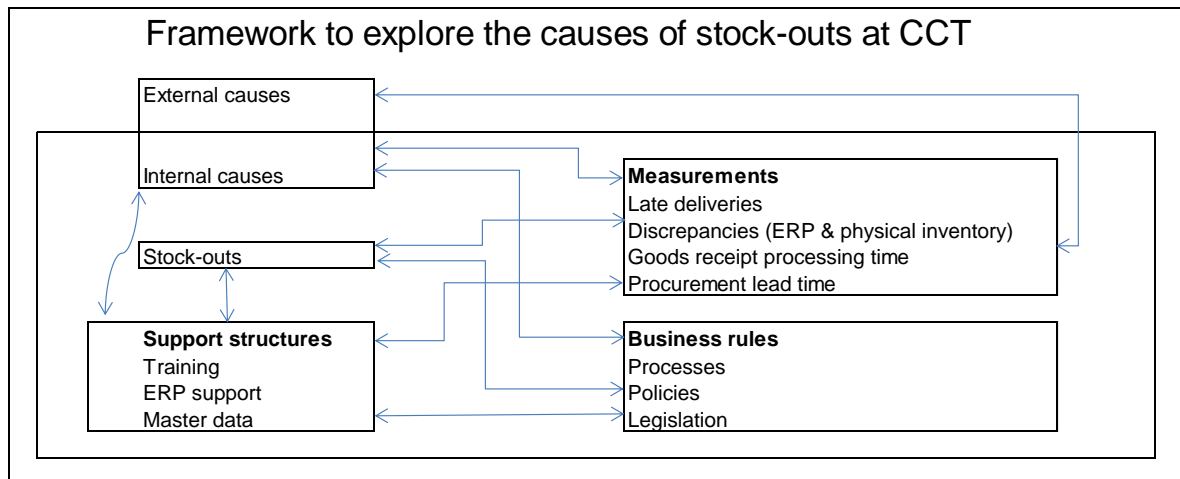
Figure 1.2: Conceptual framework

1.7.3 Research delineation

 i) The research does not discuss the details of the tender process or request for quotations for supplier selection.
 ii) The research does not include the procurement of non-stock materials (materials not kept in stores).
 iii) The research does not include the procurement of services.
 iv) Suppliers do not form part of the sample.
 v) The research does not include supplier development.

1.7.4 Research assumptions

The assumptions indicate conditions that are not viewed as major issues or conditions that are ignored for the particular study. The importance of stating the assumptions on which the research is based, is that there is a need for others to know what is assumed in the study. Assumptions are particularly important when the quality of the research is being judged in terms of clarity of purpose (Watkins, 2010). According to Grix (2002), the importance of research assumptions is to indicate an understanding of the interrelationship of the key components of research, to avoid confusion when discussing theoretical debates and approaches to a phenomenon, and to be able to recognise others' and defend one's own position.

Below are the research assumptions for this study:

 i) The ERP system is the only technological platform used to resolve stock-out problems.

 ii) Staff members only attain materials through stores via reservations, and there are no direct purchases where employees bypass the store process.

1.8 Contribution of the research

The research serves as future reference to explain the relationship between operational performance and an inventory control system. It also serves as part of the practical applications of improving the return on investment of an ERP system from a SCM perspective. This contribution is specific to reducing stock-outs in an ERP-based SCM. It will assist other engineers or SCM practitioners who may have a similar problem in their working environment, with the guidance of a methodology to follow in order to analyse stock-out problems.

This research assists the organisation in identifying the major causes of stock-outs, and to propose ways to manage and reduce the causes of stock-outs. This research study's documentation can in future be referred to as a backup document that explains the specific actions to be taken in order to resolve stock-out problems.

1.9 Outline of thesis structure

Chapter One

This chapter covers the introduction of the study, which includes a general introduction as well as the research problem, aim, objectives, assumptions, design, contribution, and ethical considerations.

Chapter Two

This chapter covers the literature review, which includes an overview of SCM, legislation theories, and stock-outs, which is the major variable.

Chapter Three

This chapter covers the research methodology, research approach, research strategy, data collection, data analysis, data validation, and ethical considerations.

Chapter Four

This chapter covers the results and findings. It has two sections. Section 1 covers the case and interviewee demographics. Section 2 covers responses to the research questions, findings to the research questions, and the summary of findings.

Chapter Five

This chapter covers a detailed discussion of the themes in relation to the research sub-questions.

Chapter Six

This chapter covers the conclusion and recommendations of the study.

CHAPTER TWO: LITERATURE REVIEW

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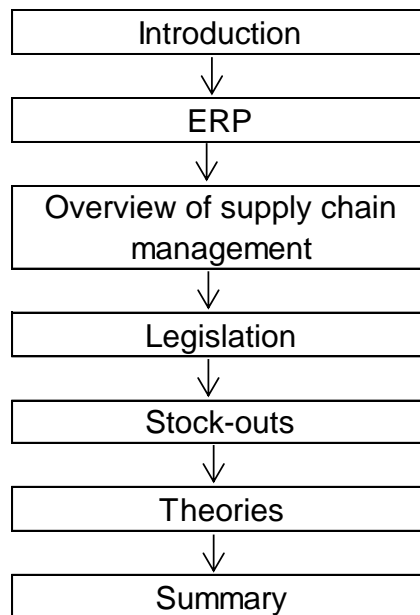
Figure 2.1: The flow for Chapter Two

2.1 Introduction

Chapter Two is dedicated to reviewing the literature, which is based on selected keywords namely ERP, SCM, stock-outs, Theory of Constraints (TOC), municipality, and local content. These keywords were used as search criteria for the Cape Peninsula University of Technology (CPUT) library and online databases. Databases such as Google Scholar, Scopus, Emerald, and ProQuest were searched. The literature review follows the process flow as shown in Figure 2.1. Theoretical perspectives regarding the problem at hand are discussed. The SCM division processes are the focus of this study. Legislation is discussed because it provides context, and it is used to govern organs of state such as the City of Cape Town. Stock-outs are the major variable of the study.

2.2 Enterprise resource planning

ERP systems have been developed over many decades. Simple inventory management systems have been developed into material requirement planning (MRP) systems in the 1960s (Akca et al., 2013). MRP development assists manufacturing, which focuses on resource needs to accomplish scheduled production (1970s). In the 1980s, MRP II has been developed to incorporate the non-production data from marketing and finance (Sandhil & Gupta, 2013). MRP II is a computer-based planning and scheduling system, designed to improve management's control over manufacturing and the manufacturing support functions

(Mogere et al., 2013). ERP is an extension of MRP II and includes all business functions that have been developed in the 1990s (Sandhil & Gupta, 2013). CCT adopted their ERP system in 2002 with the objective to place the managers in control of the internal and external environment, the people, materials, resources, funds, demands and supplies, in order to obtain an advantage among the competitors (Weng & Liu, 2013:36).

ERP systems are software packages consisting of several modules that integrate data through embedded BPs (Fatimee, Shah & Hussain, 2014). In the organisation, the ERP module that supports SCM is called Materials Management (MM). ERP systems are fully automated systems, efficiently combining and integrating internal resources in an organisation to enhance the organisation's competitive advantage, which eventually brings benefits to the organisation (Weng & Liu, 2013). In addition, Masbahi (2012:182) defines an ERP system as "a suite of application modules that can link internal and external supply chains". Le Roux (2014:217) indicates that it is impossible to get a 'perfect fit' ERP for a large organisation because of: i) the complexity of processes, ii) policies required within the same functionality, and iii) volumes of users that use the system.

ERP system customisation caters for specific business needs that are not included in the standard ERP system (Ibrahim, Duraisamy & Sridevi, 2018). The integration and automation of BPs, among other software, is achieved using the ERP system.

2.2.1 Business process

A BP is a number of activity inputs that can be converted into a desired output (Wagner, 2009). A model can be understood as an unambiguous and external representation of part of the actual BP, which can be used for understanding, changing, managing, and controlling the BP (Mendling, Reijers & Recker, 2010). BP modelling is the main tool for conducting the process actions in organisations and aims to represent the BP (Lacerda, Cassel & Rodrigues, 2010). It is supported by tools that enable the development of different actions based on specific logic (Mendling et al., 2010). According to Masbahi (2012:181), the prerequisite for an organisation to benefit from ERP generally involves:

  i)   Reengineering of BPs
  ii)   User involvement
  iii) Education
  iv)   Training
  v)   Top management support

Organisational culture and training are emphasised as the most important factors to consider in ensuring overall ERP success (Fatimee et al., 2014). According to Jinno, Abe and Iizuka (2017), by implementing ERP systems, organisations can standardise their BPs and manage these processes more effectively and efficiently. To improve the stock-out situation of the ERP-based SCM at CCT, it is necessary to know the causes that take priority and the teams that are required to exert effort to resolve the stock-out problem. Workflow forms part of BP design and continuous improvement through aiding the automation of business activities in order to complete a specific PB.

2.2.2 Workflow

Workflow automates specific business activities within the BPs in ERP systems. Non-daily activities, for example, are typical activities of workflow application to inform the user of the specific task needed to complete the BPs. This may be in the form of electronic mail, where workflow can be used for task flow analysis (Wagner, 2009). For efficient SCM, an ERP system facilitates the smooth flow of common functional information and reduces cycle times (Masbahi, 2012). Fully automated workflow performs better than humans do when the process is totally structured, but humans are better with non-structured processes where judgment is required. Many of the business processes fall between the two extremes (Ferreira, Faria, Azevedo & Marques, 2017). In the organisation, workflow informs the cost centre manager to approve the reservation of materials from stores; this informs the manager of the wanted items and the cost to approve. In addition, when stores return materials to the supplier, different teams situated at different locations need to perform specific tasks. For example, the Accounts Payable Department needs to stop payment for returned materials, the buyers need to inform the supplier to collect the materials, and suppliers need to indicate when they will supply the correct materials.

2.3 Overview of the supply chain management process

SCM is the management of the flow of material from manufacturer to customer as a finished product. The flow is not always smooth due to a number of challenges, which calls for an information system intervention. When SCM processes are managed by an ERP system, process bottlenecks and data redundancy are eliminated, transaction time is reduced, and efficiency is improved (Hwang & Min, 2013). SCM integrates the suppliers and stores effectively so that materials are sent to the stores in the right quality and quantity, and at the right time. In addition, Sandhil and Gupta (2013) indicate that the ultimate goal of integration within SCM is to reduce inventory. In order to reduce inventory and maintain high service levels, an organisation must be aware of external factors it has little or no control over and

the internal factors it has full control over (Weng & Liu, 2013). Information systems and technology enhance innovations in SCM through new logistics methods.

It is needed to investigate how to improve ERP return on investment from a SCM perspective and how to provide guidance to those who may consider adopting ERP to improve SCM (Hwang & Min, 2013). On the same subject, Worster, Weirich and Andera (2017) as well as Jeffrey et al. (2017) indicate that the costs are easy to quantify, but justifying the system needs further investigation. This means that return on investment is applicable for hard cost benefits, but benefits linked to productivity, which are the soft benefits, are particularly difficult to quantify in non-profit making organisations and government institutions. One suggested way to address this challenge is to incorporate the soft benefits into decision making. According to Ageron, Lavastre and Spalanzani (2013:266), "the innovations created by information systems and technology increase operational efficiency and service performance". This study reveals that information that can help managers make decisions on how to reduce the causes of stock-outs in the organisation.

An ERP system can improve logistics performance, as an ERP system ensures synchronisation between physical flow, financial flow, and information flow, as required by SCM logic (Masbahi, 2012). Thus, utilising information efficiently along the entire supply chain can reduce an organisation's costs (Sandhil & Gupta, 2013). Within SCM, there are a number of departments (Wagner, 2009). The ERP system enhances the communication and coordination of all interrelated functions across departments (Mogere et al., 2013).

2.3.1   Inventory management

The focus of the inventory management process is on material requirement planning as well as on storing and issuing materials. This section discusses inventory management as it is mostly influenced by internal policies, while procurement is discussed in section 2.4 as it is mostly influenced by national legislation. The presence of ERP in SCM further enhances the effectiveness of inventory control, delivery scheduling, and transportation modal planning, thereby increasing the distribution productivity among stores (Ho, 2007). According to Braglia et al. (2004), ERP systems are able to analyse unnecessarily large inventory and stock-out problems for different items. These analyses are limited as they show managers how many stock-outs have occurred for a specific item over a specific period, but these stock-outs are not linked to the causes.

In inventory management, it is important to determine the appropriate stock levels, as this can improve organisational performance and reduce inventory investment (Braglia et al., 2004). Stock levels protect against uncertainty in demand and lead-time (Masbahi, 2012). It is also necessary to buy and keep materials that have a direct impact on operations. Wen, Ying and Bing (2011) however perceive this as a challenge within a maintenance environment because any part of the asset can fail, and not all parts of an asset can be stored due to financial constraints. In addition, standard inventory control methods fall short of spare parts management because consumption is likely to be unpredictable and low, as there is no demand process that allows forecasting for future demand (Botter & Fortuin, 2000). ABC-classification is the commonly used classification to manage spare parts inventory. It is based on administrative consideration such as usage rate and inventory cost derived from historic data (Braglia at al., 2004). Service parts management is based on the criticality of those parts that can cause failure (Boone, Skipper & Hazen, 2017).

Keeping stock is expensive and it increases operational costs (Masbahi, 2012). In particular, spare parts are expensive to purchase and require large capital investments. To increase service levels, materials need to be stored at the right points or stores within SCM (Botter & Fortuin, 2000). According to Slater (2010), "squirrel store" is a term used to describe the unofficial storage of materials. Staff members resort to the squirrel storing of materials if they do not have faith in the ability of stores to provide the materials when needed. Furthermore, the largest challenge posed by squirrel stores (see section 2.5.2.2) is the lack of visibility of parts available in each unofficial store (Macdonald, Wilson & Martinez, 2009; Slater, 2010). Without knowing which parts are in stock and where the parts are in stock, squirrel stores cause the holding of inventory to spiral out of control, thereby increasing obsolescence, inviting theft, increasing down time, and therefore affecting working capital (Slater, 2010).

2.3.1.1 Material requirement planning

Material requirement planning (MRP) is the process of planning the requirements of materials by an organisation; this is also the role of the stores at CCT. The traditional MRP II system uses fixed lead-times and therefore ignores the fact that lead-time can be reduced. In addition, fixed lead-times are normally overstated and cover up bottlenecks (Jiang & Han, 2009). Jiang and Han (2009) argue that traditional MRP lacks restrictions on secure stock and therefore critical spare parts can be reserved by other departments, thereby risking the chance of down time for normal users of materials. The administrators usually make the mistake of not

considering alteration time when they do capacity planning without guidance, because it is difficult for them to decide what adjustments need to be made after there has been a change in the requirements (Mogere et al., 2013).

2.3.1.2 Safety stock

Safety stock refers to extra units of material that are carried in stock to avoid stock-outs. Safety stock protects the organisation against uncertainties in demand and lead-time (Zhang, Wang & Chang, 2008). Stock-outs result in over-investing in inventory and the more inaccurate the forecast, the more inventory investment is needed; accurate forecasts therefore reduce safety stock (Boone et al., 2017). Stock level variability occurs because of inefficient information sharing and forecasting, but the main cause of variability for organisational inventory management is when inventory control systems are not used in accordance with baseline principles (Yu, Luo, Feng & Liu, 2017).

2.4 Legislation

The City of Cape Town is influenced by national legislation, which includes the Preferential Procurement Policy Framework Act (PPPFA), the Public Finance Management Act (PFMA), and the Municipal Financial Management Act (MFMA), among others. The South African government that came into power in 1994 has been under extreme pressure to practice good governance and address socio-economic imbalances. The government reviews existing legislation and policies periodically, and if necessary, introduces new legislation and policies in line with the Constitution (Republic of South Africa, 1996) to address issues. The implementation of reforms started in 1996. SCM reforms indicate that when the organs of state—i.e. the national government, provincial government, local government, and any other relevant institution identified as national legislation—require goods or services, the acquisition must be done in accordance with a system that is equitable, transparent, competitive, and cost-effective (Republic of South Africa, 1996).

2.4.1 Procurement

The Procurement Department deals with the acquisition of goods and services, including following up with suppliers on deliveries that are due, and on quantity and price negotiations with the suppliers. In the organisation, the procurement process starts with creating a purchase requisition; then a RFQ price list agreement or a tender is created depending on the threshold value of the work that must be done. A purchase order (PO) is created for a specific supplier, where after the goods are received and the supplier is paid. Procurement reform processes are contained in the Public Finance Management Act (PFMA) (Act No. 1 of 1999). Deficiencies in the

PFMA act have led to the implementation of the Public Finance Management Amendment Act (PFMAA) (Act No. 29 of 1999). The implementation of the Preferential Procurement Policy Framework Act (Act No. 5 of 2000) was a further rectification on the problems identified in the PFMAA. According to Le Roux (2014), legislation is in place to minimise fraud, corruption, favouritism, and unfair and irregular practices in procurement and contract management, inventory management, asset control, obsolescence planning, governance, and interpretation.

2.4.2 Local content

Local content is "the portion of the tender price, which is not included in the imported content" (Republic of South Africa, 2011:11). The local content of a product is the tender price minus the value of the imported content, expressed as a percentage. It is therefore necessary to first compute the imported value of a product to determine the local content of the product. The Department of Trade and Industry (DTI) grants exemptions for special cases. In addition, the DTI identifies and calculates the local content value for products, considering the components, materials, and services used to manufacture the total quantity of the products.

Local content is one of the means to increase reliability and ensure that SMEs are economically empowered, given that suppliers are available locally (Esteves & Barclay, 2011). Furthermore, local content only benefits the small businesses if they are able to supply because small local businesses are a high risk due to capacity constraints. In addition, Wells and Hawkins (2015) indicate that the more the investment on local content infrastructure, the more the economic growth for the country and region.

2.5 Stock-outs

The shortage of materials that occurs when needed from the stores in organisations, is called stock-outs. Stock-outs are both a lack of product availability in stores and a key factor that causes operational uncertainty (Dion & Banting, 1995). A large amount of inventory needs to be reduced from an inventory perspective, however it frustrates staff when the needed materials are unavailable (Braglia et al., 2004). Bayle-Tourtoulou, Laurent and Macé (2006) specifically measure two types of stock-outs, namely when there is zero stock and when there is insufficient stock for the requirement. The results indicate that insufficient stock occurs more than zero stock in inventory. Stock is important to an industrial organisation as it represents between 20% and 60% of the total assets on the balance sheet (Masbahi, 2012). Mathuva (2013) states that the average inventory represents 43.92% of the current assets and 18.17% of the total assets of organisations. Stock-outs should be avoided

without incurring high inventory costs (Mogere et al., 2013). The reliability and availability of storage plants are important factors in modern service organisations.

2.5.1 Related studies

2.5.1.1 Contribution of management practices and processes to stock-outs

In a study conducted in Johannesburg, South Africa, Govind, Luke and Pisa (2017) investigated how management practices and processes contribute towards stock-outs in a liquor industry. The results reveal that moving average forecast methods are very basic and do not serve the purpose in the industry because variability and lead-time are not considered. Breakages are common and lead to inaccurate data, hence the stock-outs. The study also reveals that information sharing is limited and that collaboration programmes between organisations and suppliers do not exist.

2.5.1.2 Store incentive and inventory management performance

The challenge is how to incentivise managers to make economic decisions when replenish stock. A study to investigate store manager replenishment decisions on various stores, conducted by Osman and Alper (2017), addresses the problem. The results indicate that incentives that incorporate both excess inventory and stock-outs into the store manager's key performance indicators are the perfect alignment for incentives.

2.5.1.3 Stock-outs remain a significant problem

A study to assess how managers view the importance of the extent of the stock-out problem was conducted by Vasconcellos and Sampaio (2009). The study, conducted in the supermarket sector in the state of São Paulo, Brazil, reveal that stock-outs are high and that suppliers are the biggest contributors to stock-outs. The results also reveal that by taking preventative actions, managers have significant opportunities to reduce stock-outs. Wei, Idrus and Abdullah (2017) conducted a study at a multinational company that has implemented ERP. The results reveal that the company still has problems in inventory management, with thousands of raw material and parts in production. Poor inventory management has resulted in stock-outs and the recommendation is that the organisation needs to implement an additional module that deals with planning to prevent the practising of manual planning.

2.5.2 Factors affecting stock-outs

Stock-outs due to the unavailability of spare parts when needed increase down time (Braglia et al., 2004). Vasconcellos and Sampaio (2009) are of the opinion that a zero stock-outs situation cannot be achieved because it is difficult to manage

product proliferation and shorter product life cycles in modern industry, among other influential factors. According to Wagner (2009), stock-outs occur if data are inaccurate or not current in an organisation, and this can cause an organisation to miss delivery dates that it has promised. Okyuz, Uysal, Bulbul and Uysal (2017:01) indicate that stock availability is affected by:

    i) Seasonality

    ii) Promotional effects

    iii) Social events

    iv) New trends

    v) Unexpected crises

    vi) Terrorism

    vii) Changes in weather conditions

2.5.2.1 Suppliers contribution

Supplier selection decisions affect the risk profile, costs, and net sales of an organisation (Carter, Kaufmann & Wagner, 2017). In addition, supplier selection increases uncertainty, particularly when considering new suppliers where there is not enough information to make a decision. In the CCT environment, law insists that all qualifying companies be given a fair chance; this increases the chance of dealing with new suppliers. According to Stüttgen, Kadane and Boatwright (2017), suppliers need to know the root causes of stock-outs in order to align production in the organisation.

2.5.2.2 Squirrel stores

"Squirrel store" is a term used to describe the unofficial storage of materials. Deloitte and Touche (2013) reports on squirrel stores and state that one of the major causes why an organisation loses money is because of items that are bought but never used and that are not included as part of the formal organisation inventory management control. Items not returned to stores stand the chance of not being used in future and not being reflected on the balance sheet. When Deloitte and Touche (2013) explored the reasons for the existence of squirrel stores, the highlighted issue was stated as not trusting SCM to provide the critical environment when needed, including the storing of spare parts that has not been planned properly through MRP because of irregular demand. Employees believe squirrel stores help them achieve their KPI targets.

2.6 Theories

2.6.1 Theory of Constraints

Continuous improvements in SCM as well as studies to measure the success of ERP implementation in SCM have been part of academic research for many years. The Theory of Constraints (TOC) is applied as a theory because it is explorative in nature. TOC is a management approach that includes a set of principles, procedures, and techniques where every action is evaluated in terms of the goal of the organisation (Rodrigues & Mackness, 1998:249). TOC has been developed by Goltratt with the aim of initiating and implementing breakthrough improvement by focusing on constraints that hinder the system from achieving the highest level of performance (Simatupang, Wright & Sridharan, 2004). According to Pegels and Watrous (2005), TOC is a continuous improvement process that emphasises the need to maximise throughput. TOC focuses on identifying and managing the constraints that reduce the amount of throughput an organisation is able to achieve (Tanhaei, Nahavandi & Motlagh, 2017). This theory is used as a lens to explore the stock-outs in the organisation, as the aim is to explore the possible reduction of the causes of stock-outs at the CCT stores.

TOC as an approach uses a mix of pull and push systems. This mix is called the drum-buffer-rope (DBR). The buffers in the system are used to guarantee throughput (Rodrigues & Mackness, 1998). The DBR logistical system is designed to explicitly recognise and utilise the bottlenecks as control points for the movement and release of materials (Fry, Karwan & Steele, 1991). The TOC process is used to identify and focus on solving bottlenecks in any operation in an attempt to achieve the organisational goals since bottlenecks are the source of interference (Rajmane, Gupta & Desai, 2017).

The thinking process (TP) of TOC is that it is a set of tools that enables the identification, analysis, and proposition of solutions to organisational problems (Lacerda et al., 2010). Using TOC involves the process of:

    i)   identifying the bottleneck,

    ii) exploring ways on how to maximise the utilisation of the bottleneck resource, and

    iii) deciding on how to support the bottleneck resource with all other resources around the bottleneck resource in an attempt to eliminate the bottleneck.

    iv) Furthermore, if the bottleneck does not change, the bottleneck resource is improved by means of employing additional resources.

v) Finally, after the bottleneck has been resolved, the first step of the process starts again with searching for the second bottleneck in the process (Tanhaei et al., 2017).

2.6.2 Bottlenecks

In business operations, the constraints that exist are frequently in the form of capacity bottlenecks (Fry et al., 1991). According to Rodrigues and Mackness (1998), a bottleneck resource can exist in any process. A bottleneck always occurs when the resources are unavailable at the particular stage when they are needed (Kuhnle, Braun & Bühring, 1994). The elimination of bottlenecks in a system is a way to increase efficiency, productivity, and throughput (Ingemansson, Ylipaa & Bolmsjo, 2005); service delivery can therefore be improved by removing the causes of stock-outs at CCT.

There are two types of bottlenecks. A temporary resource bottleneck occurs during the time interval where the resource requirement exceeds the available resource capacity when resources are needed. A permanent bottleneck occurs when the overall resource requirement exceeds the overall capacity of the bottleneck resource (Kuhnle, Braun & Bühring, 1994). The overall throughput of a system is determined by the throughput of the bottleneck resource (Cao, Deng, Liu & Wang, 2012). A permanent bottleneck normally results in constant delivery delays. Consequently, constant failure to satisfy the demands of the market threatens companies with loss of market share. In the organisation, there is a mix of the two types of bottlenecks.

2.7   Summary

Chapter Two discusses some of the literature related to the study at hand, as there are still major challenges in inventory management that result in stock-outs. ERP in terms of the software packages that provide organisations with a competitive advantage is discussed first, as ERP is the core of the research. SCM management of the flow of goods from the manufacturer to the customer is elaborated on because there are challenges with the management of the flow of goods. Other related issues such as the relationship of legislation and supply chain in South Africa as well as the main variable of the study, namely stock-outs, are also discussed. TOC is elaborated on as it is an explorative continuous improvement methodology used to improve BPs. Finally, the conceptual framework is explained in this chapter because it provides the basis for investigation.

CHAPTER THREE: RESEACH METHODOLOGY

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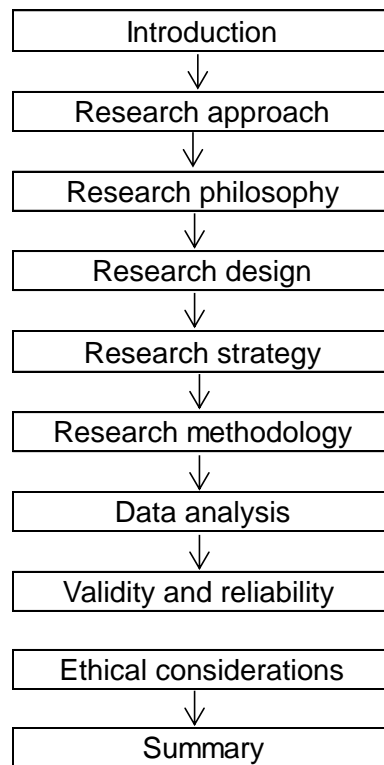
Figure 3.1: The flow for Chapter Three

3.1   Introduction

The previous chapter discussed the literature related to the research. This chapter introduces the research methodology suitable for the study. The methodology is in accordance with the research problem and the research questions. The chapter covers the research design and setting, sampling criteria, and research techniques used for data collection as well as the analysis process together with data verification and ethical considerations. The chapter concludes with a summary.

3.2   Research approach

Qualitative research assists in gaining an understanding of the subjective experience of specific individuals or groups (Cua & Theivananthampillai, 2009). In particular, qualitative methods are used to explore a certain phenomenon (Cua & Theivananthampillai, 2009). Qualitative research is reliable due to the validity, meaning, and closeness to the truth; in addition, it is possible to replicate the research (Saunders, Lewis & Thornhill, 2009). The inductive research approach begins with specific data from which more general ideas or theories are generated. The inductive approach is conceived as bottom-up and exploratory (Woo, O'Boyle & Spector, 2017). This study employs an inductive research approach.

3.3 Research philosophy

This research falls within a phenomenological research paradigm. What is designed, and how the research is designed, is influenced by the ontological and epistemological position of the researcher (Henning, Van Rensburg & Smit, 2004). Understanding reality involves exploring fundamental ontological and epistemological questions. Innovation is a vital part of organisational sustainability in the long run, and the innovative process symbolises a routine that is systematic, planned, invested in, reported on, and acted upon. It is important to know the ontological and epistemological assumptions necessary for research (Cua & Theivananthampillai, 2009).

3.3.1 Ontology

Ontology is a philosophical belief system about the nature of reality, what can be known and how it can be known; it refers to what is out there to know (Grix, 2002). Ontology is the starting point of all research and an ontological position is the conscious and unconscious questions, assumptions, and beliefs the researcher brings to the research endeavour (Grix, 2002). The two aspects of ontology are objectivism and subjectivism. The subjectivist ontological aspect is used in this research, as "it holds that social phenomena are created from the perceptions and consequent actions of those social actors concerned with their existence" (Saunders et al., 2009:109). The subjectivism stance considers the actions, experiences and perceptions of the SCM staff to provide the details when exploring the causes of stock-outs in the organisation.

3.3.2 Epistemology

An epistemology is a philosophy of how we come to know (Henning et al., 2004). It is a philosophical belief system about who can be a knower, essentially what and how we can know about something (Grix, 2002). Popper (1992) indicates that an inductive research approach mainly uses epistemology because it includes how the relationship between the researcher and research interviewees is understood. Epistemological questions search for the truth of the known, the knower, and the value of the knowledge by mean of interpretivism in order to construct knowledge (Cua & Theivananthampillai, 2009).

The adoption of an interpretivist epistemological stance is based on the interpretivist theory, which states that knowledge is constructed by describing people's intentions, values and believes as well as observable phenomena. Henning et al. (2004) propose that a discursive qualitative method is used when using the interpretivist philosophical view; therefore, for this research, data were collected by conducting

interviews using semi-structured questionnaires. An inductive research approach has been adopted to explore the possible reduction of the causes of stock-outs at the CCT stores in order to determine the major causes of stock-outs and propose guidelines to manage the causes of these stock-outs.

3.4   Research design

Research design is a logical sequence that connects the empirical data to the research questions (Watkins, 2010). It is an action plan that was followed to collect the data needed to explore the possible reduction of the causes of stock-outs at the CCT stores. According to Babbie and Mouton (2001), explorative research design reveals the salient aspects of the investigation. Explorative research design has been adopted due to its ability to provide first-hand information about the experiences and challenges of the SCM employees regarding the stock-outs.

3.5   Research strategy

3.5.1   Case study

The four major research strategy groups are categorised as experiment, survey, case study, and historical strategy. Case study is an explorative research strategy, used in areas where there are only a few theories or where the body of knowledge is inefficient (Watkins, 2010). The case study uses a variety of methods and sources as a strategy to uncover knowledge (Mills & Mills, 2017). This study has adopted the case study research strategy.

3.6   Research methodology

Grix (2002:179) indicates that, "methodology is concerned with the logic of scientific inquiry; in particular with investigating the potentialities and limitations of particular techniques or procedures". Research methodology is the coherent group of methods that complement one another, with the ability to deliver data and findings that reflect the research questions and suit the research purpose (Henning et al., 2004). Research methodology ensures knowledge building by bridging our philosophical framework and practical methods (Henning et al., 2004).

The following sections discuss in detail the coherence of the methods selected to explore the causes of stock-outs in the organisation.

3.6.1   Data collection process

3.6.1.1   Permission

The permission to conduct the study was granted by the CCT management (Appendix A). One of the conditions was that only the willing employees should take part in the study and that the study should not interfere with employee productivity,

meaning that it had to take place at a time convenient to the employees. This is in alignment with the ethics of conducting research.

3.6.1.2 Sampling

This study has adopted purposive sampling, which is a non-probability sampling technique (Leedy & Ormrod, 2005). The purposive sampling technique, as the name implies, is the choosing of the sample based on characteristics such as involvement, experience, and knowledge of the explored problem. Purposive sampling ensures that the sample is representative of the diverse perspectives of the organisation or groups when exploring the issue (Watkins, 2010). The interviewees (11 in total) selected are the employees from the departments that play a major role in SCM at CCT (section 4.3).

3.6.1.3 Unit of analysis and unit of observation

The CCT maintenance stores are the unit of analysis. According to Henning et al. (2004), the unit of analysis directs the boundaries of the research. The unit of observation is a body of individuals, the workers in the SCM division at CCT, namely the ERP Support Department consultants (2), the Inventory and Stores Management Department staff (3), Master Data Maintenance Department staff (2), Procurement Department staff (2), and the reservation creators (2), because they have first-hand experience with stock-outs.

3.6.2 Data collection method

There are many methods of data collection used for a case study research strategy (Henning et al., 2004). For this study, data were collected using semi-structured questionnaires as an interview guide to conduct interviews (Appendix B). This was done to maintain the correct direction of the interview. Interviews as a data collection method were chosen because interviews provide rich phenomenological data and enable in-depth tracing of the hands-on experience of employees (Henning et al., 2004).

3.6.2.1 Interviews

The interview is an appropriate data collection method because it is a qualitative research technique used on a small number of respondents to explore their viewpoints on a particular subject or situation (Boyce & Neale, 2006). The Individual interviews took approximately 45 to 60 minutes to complete. The interview process took eight months, including the time to transcribe the interviews (Appendix D). The interviews were recorded with the permission of the interviewees, where after it was transcribed.

3.6.2.2 Pilot study

A preliminary study was done to understand the situation and to determine the list of possible individuals that could be selected purposefully because of their knowledge and involvement in the subject to ensure data accuracy (Burke & Miller, 2001). This was achieved by interviewing business analysts and ERP Support consultants as well as conducting observations at the SCM departments. After preparation of the interview questions the pilot study was conducted, followed by the actual interview process (Appendix D).

The same criteria that were applied to sample the pilot study, were also used for the main study; however, the pilot study respondents did not form part of the main study sample. Thus, the pilot study was the 'mini-study' to verify the data collection methods, which included the relevance of the questions, time requirements, and practicing interview skills. Prior to the interviews in the pilot study, participants gave consent through signing the acknowledgement of the study content document. During the pilot study process, the respondents made recommendations to the researcher regarding questions and time. The researcher conducted the pilot study two weeks before the main study commenced. The results of the pilot study assisted the researcher in revising the questions and time interval for the interviews. The two weeks interval gave the researcher time to adjust and refine the interview questions and schedule.

3.6.2.3 Interview process

The interview questions were derived from the research sub-questions. In answering the interview questions, the research sub-questions are answered; in turn, the research questions are answered, which means the research problem is successfully addressed. The interview questions were designed to contain questions common to all respondents. There were also group specific questions designed (Appendix B) because different groups have different roles to play in SCM. The interview appointments were arranged via Microsoft Outlook, which then led to the actual interviews.

All the respondents were verbally advised of the contents of the informed consent letter, where after they were given time to read and sign the letter as an acknowledgement before the interview commenced (Appendix C). This includes permission to record the entire interview and taking notes as reference for later use during the transcription of the interview. The questions served as a guide during the interview and additional questions were posed as and when it was needed to gain more clarity. On average, the duration of an interview was approximately one hour,

and the interviewees were thanked for their participation in the study. The same day, transcription of the interviews commenced by referring to the notes and listening to the recordings. The transcriptions were mailed electronically to the interviewees for validation of correctness.

3.7 Data analysis

Qualitative data analysis is a process of steps consisting of noticing, collecting, and thinking. This process is interactive and progressive as the cycle repeats and each step is a process on its own. In addition, there may be a need to revert to the previous steps (Cua & Theivananthampillai, 2009). According to Cua and Theivananthampillai (2009:7), noticing means breaking up data into pieces and assigning these pieces to more substantive topic codes, meaning summarising, synthesising, and categorising. Thus, noticing includes recording interviews, gathering documents, and coding data. In this study, the data were summarised and categorised in order to develop themes. This allows for a close examination of data through categorising the phenomena, sorting the pieces, naming them, and then shifting them.

3.8 Validity and reliability

Data validity and reliability is guaranteed through credibility, transferability and conformability in qualitative research (Shenton, 2004).

Credibility refers to how accurately the data are collected (Morrow, 2005). The triangulation method was used to ensure credibility, meaning the researcher critically scrutinised the work, verified implications through accessing journals and mailing the transcriptions to the interviewees for validation of correctness.

Transferability refers to the extent to which the results can be generalised (Shenton, 2004). All the metropolitan municipalities in South Africa are subject to the same law and are therefore forced to have the same work practices because the KPIs are the same. The CCT is the best run municipality according to the South African Customer Satisfaction Index (SACSI), as indicated by City Press (2016). Although the results are not statistically evaluated and no comparison is drawn between the different municipalities, the results can be useful as a basis for further studies.

Conformability refers to the ability of the researcher to confirm that the guidelines of conducting qualitative research are followed appropriately (Shenton, 2004). Conformability is determined by verifying the internal coherence of the research product. The supervisor and another researcher assisted with confirming the

authenticity and the possibility of error in the research method, which includes the data, findings, interpretations, and recommendations.

3.8.1 Reflexivity

Reflexivity refers to how the researcher self-reflects on the degree to which he/she influences the study with his/her own assumptions, values and ideas during the research process (Leedy & Ormrod, 2005). To ensure the validity and reliability of the study, the researcher kept as neutral as possible in collecting and analysing the data, interpreting the results, and making recommendations.

3.9 Ethical considerations

3.9.1 Autonomy

Ethical principles should encompass respect for personal mandates, meaning that this research recognises the capability and right of all individuals' own decision-making (Cua & Theivananthampillai, 2009). In addition, Bak (2004) suggests that the researcher assures the protection of the welfare of the interviewees. Therefore, no interviewee was embarrassed or ridiculed in any way by taking part in this study.

3.9.2 Beneficence

According to Cua and Theivananthampillai (2009:7), "beneficence requires that vulnerable populations are afforded additional protection and that the risks of the research compare favourably to the benefits". The research did not involve vulnerable groups, for example, children, the mentally ill, or illiterate interviewees, as stated by Babbie and Mouton (2001), but the researcher is aware that, should the interviewees of vulnerable populations such as low social status interviewees have been involved in any way in the research, proper consideration of their rights had to be prepared for.

3.9.3 Non-malfeasance

Interviewees' age group and level of education dictate the format and language of information about the data collection. Alerts are made of any harm that can result from having participated in the study (Cua & Theivananthampillai, 2009). In addition, Watkins (2010) suggests that if the research involves even a small amount of psychological discomfort, the interviewees should know about it ahead of time and the necessary counselling should follow their participation. In this research, there was no anticipated harm to the psychological status of the interviewees, but the researcher took note of the issue.

3.9.4 Justice

Serious consideration for all interviewee rights are practiced, such that every interviewee is treated equal. This includes the rights of the interviewee to be informed about the study, to decide whether to participate in the study, and to withdraw at any time during the study without penalty. In this study, the researcher did not give any acknowledgements to one specific set of interviewees that have not also been given to the other groups (Cua & Theivananthampillai, 2009).

3.9.5 Confidentiality

Cua and Theivananthampillai (2009:7) posit that, "privacy acts in many countries cover how the collected data will be stored, who will have access to it, and the disposition of the data at the end of the study". According to Watkins (2010), it is good research practice to offer confidentiality, as interviewees then provide more open and honest responses. In addition, informing the interviewees of what is going to happen to their information and ensuring them that their feedback is purely for research purposes, is of the utmost importance. For this study, unauthorised persons do not and will not have access to the information in any way, and only the researcher and the supervisor had access for the duration of the study. The discs containing interview recordings are with the university's postgraduate data storage facility and will be disposed of after a predefined period by damaging all the discs.

3.9.6 Honesty with professional colleagues

The possibility of the results being misleading is minimised as much as possible as the researcher reported the findings in full, with honesty, and without bias (Bak, 2004; (Watkins, 2010). The researcher acknowledged the scientific and professional contributions accurately (Bak, 2004), and maintained the objectivity and integrity at all times while this research was conducted (Babbie & Mouton, 2001).

3.10 Summary

This research has adopted an inductive research approach with a subjectivist ontological stance and an interpretivist epistemological stance as the philosophical view. The research design is explorative and the research strategy is a case study. The SCM division at CCT is the case, the unit of analysis is the CCT stores, and because the research is concerned with the causes of stock-outs, the employees who work for the SCM division of CCT are the unit of observation. The data collection process was preceded by obtaining permission from the organisation to interview employees. Data were collected using semi-structured interviews, with consideration for validity, reliability, and ethics.

CHAPTER FOUR: RESULTS AND FINDINGS
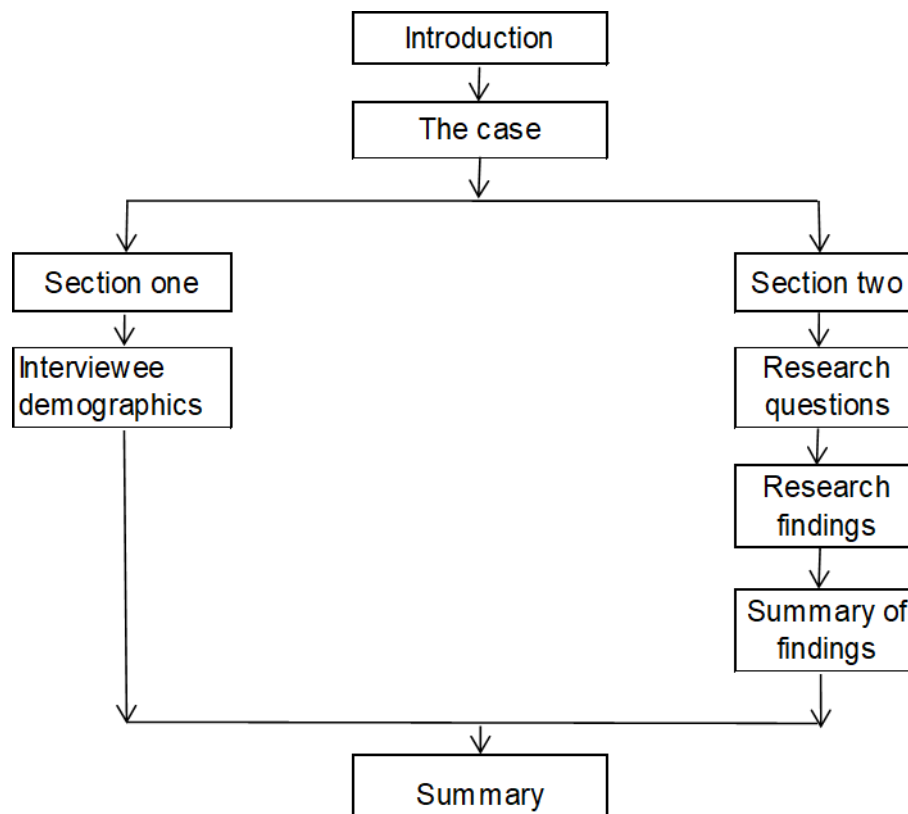
Figure 4.1: The flow for Chapter Four

4.1   Introduction

The research was conducted in the Western Cape Province of South Africa at the CCT municipality. This chapter specifies from whom and how data were collected, as well as how data were prepared for analysis. The challenges during each stage of the process are also stated. Feedback is provided on the status of the study's results in an attempt to achieve the aim, namely to explore the possible reduction of the causes of stock-outs at the CCT stores. Two sections are presented, namely the research setting and the presentation of the research findings (Figure 4.1). The research setting covers a brief narrative of the case and a detailed description of the respondents, while the presentation of research findings covers the analysis of the research questions and sub-questions as well as a summary of the findings. The research problem, questions, and sub-questions are revisited in section 4.4 as an introduction to the research findings. The research findings are derived from the transcribed feedback from the interviewees' responses to the interview questions. The interviewees' transcriptions provide the basis to forming data categories, from which specific similar findings are grouped and used to build themes through a coding process.

SECTION 1

Section 1 describes in detail the case, the different offices where the interviews were conducted, and the roles of the interviewees in the SCM division.

4.2 The case

The CCT is a metropolitan municipality that provides a wide range of services to residents and citizens in the Western Cape Province of South Africa. SCM is a division in the organisation, which is divided into several departments. SCM is responsible for determining the source of supply, the procurement of materials, and the storing of the materials for easy accessibility by line departments. The SCM employees are responsible for ensuring that the materials are available in stores, while the line departments' (reservation creators) employees are responsible for delivering services to the public. One of the major challenges in SCM is stock-outs because they hinder service delivery. The SCM department operates as follows:

In order to determine the source of supply, in the procurement process buyers give an equal opportunity to all qualified suppliers to apply. Depending on the value of the work that needs to be accomplished, either a request for quotation (RFQ) or a tender can be advertised. A tender is advertised for a longer time period that a RFQ. Midway between the RFQ and the tender is the price list agreement; this is a formal short term agreement between CCT and the supplier to provide materials at a fixed price for a period of six months, while a formal tender can expect from a supplier to provide material to CCT for up to three years. RFQs are specifically for once-off supplies.

The Inventory and Stores Management Department is responsible for material requirement planning (MRP) and the storage of materials in the organisation. Once the supplier has been awarded a contract or RFQ, the system programmatically assigns the source of supply to the requirements that have been generated by the MRP controllers. Having received the purchase order (PO), the supplier delivers the goods to the stores to be kept. The reservation creators draw the materials from the stores in order to fulfil the needs of the citizens and residents. The SCM employees are strategically placed around CCT, according to the needs of the citizens.

Interviews were conducted in different regions of Cape Town, namely: i) Cape Town Civic Centre; ii) Ndabeni; iii) Bloemhof; and iv) Brackenfell. One interview per day was done. Figure 4.2 illustrates the different regions where the interviews were conducted.
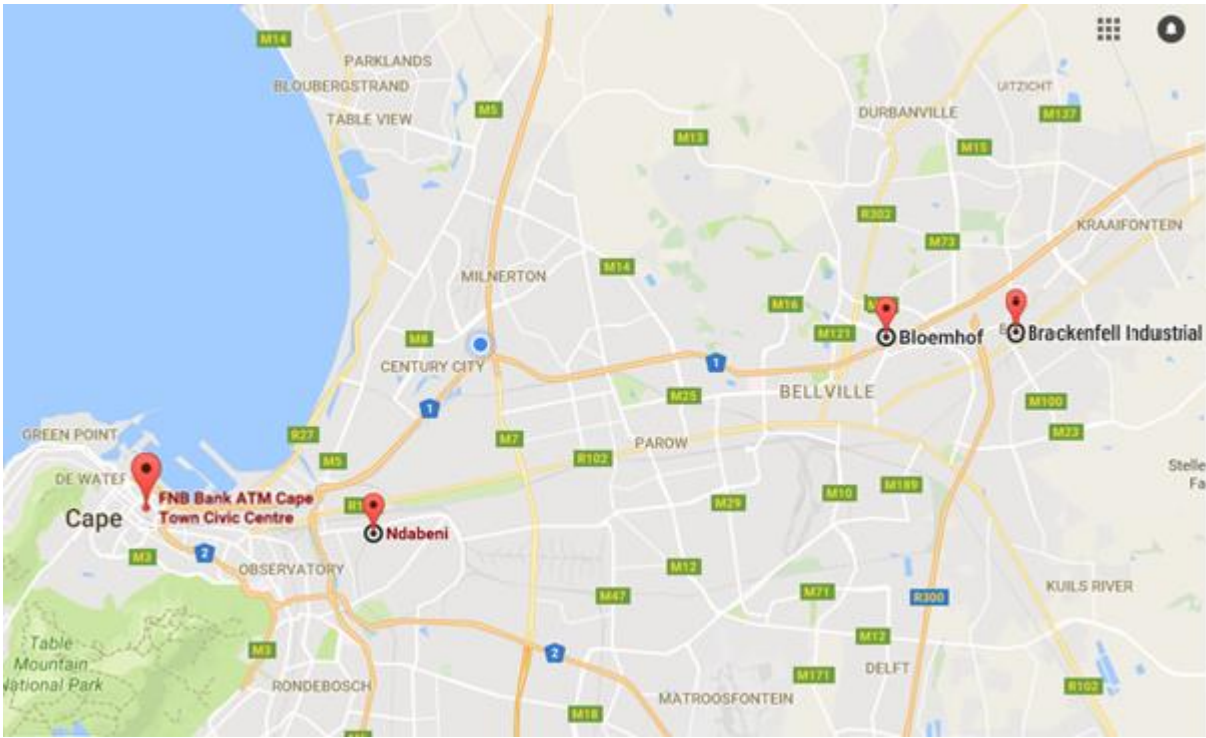
Figure 4.2: CCT offices where the interviews were conducted

4.3   Interviewee demographics

Five groups of interviewees were interviewed (Figure 4.3). The groups were from the support structures in the SCM division, namely: i) The ERP Support Department; ii) the Master Data Maintenance Department; iii) the Inventory and Stores Management Department; iv) the Procurement Department; and v) the reservation creators. In each group, a different job level of interviewees according to the organisation hierarchical structure, were interviewed. Eleven interviewees were interviewed in total. Figure 4.3 illustrates the groups of interviewees according to departments.
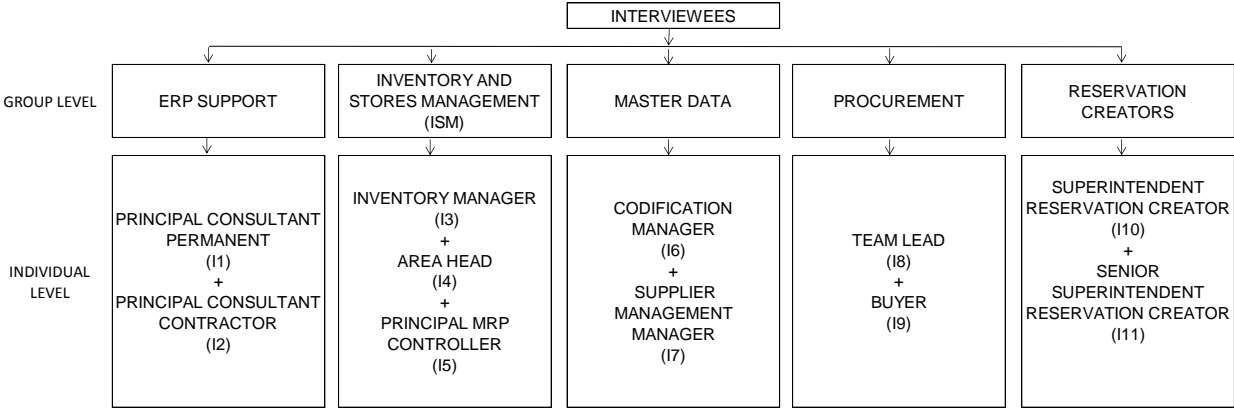
Figure 4.3: Interviewees per department

4.3.1 Consultants (ERP)

ERP consultants are responsible for implementing new projects, customising the system to meet the business requirements, and for daily resolution of system errors. Their responsibilities also include end user training and data provisioning to the business so that informed decisions can be made. The main responsibility of ERP Support is to ensure that the system is functional and usable.

Below is a description of the two interviewees from ERP Support, referred to as consultants. Refer to Table 4.1 for the summary of the interviewees.

Interviewee 1 (I1): I1 is a permanent principal ERP consultant and has 12 years of experience in ERP Support at CCT, and an additional 13 years of experience in business at CCT; thus, 25 years of experience in total. I1 is responsible for supporting the inventory management function within the materials management ERP module, but also does the support of all materials management queries according to business demand. I1's office is located in the Cape Town Civic Centre.

Interviewee 2 (I2): I2 is a contractor principal ERP consultant and has 8 years of experience in ERP Support at CCT, and an additional 16 years of experience in ERP consulting in the private sector; thus, a total of 24 years of experience. I2 is responsible for supporting Procurement within materials management, but also does the support of all materials management queries according to business demand. I2's office is located in the Cape Town Civic Centre.

4.3.2 Inventory and Stores Management Department

The main role of the Inventory and Stores Management Department is to ensure that there are sufficient materials available in the stores, and that the materials issued to staff members are efficient for effective service delivery. A single store at CCT consists of MRP controllers and goods receivers. The area head is responsible for a specific number of stores based in the areas within CCT. The principal MRP controller, the quality control manager, and the Inventory and Stores Department manager support all the CCT stores.

Three individuals from the Inventory and Stores Management Department were interviewed, namely I3, I4, and I5. Refer to Table 4.1 for a summary of the interviewees.

Interviewee 3 (I3): I3 has been (and still is) the inventory and stores manager (ISM) at CCT for the past seven years, in charge of all of the CCT stores. I3 has an additional 15 years of experience in the Inventory and Stores Management

Department at CCT; thus, a total of 22 years of experience. I3 is responsible for managing the expenditure and cash flow of the CCT stores as well as the running thereof, and ensures that the CCT stores are compliant with national legislation. I3 also addresses cross-departmental issues related to the SCM division's Inventory and Stores Management Department staff. I3 is based at the Cape Town Civic Centre.

Interviewee 4 (I4): I4 has been (and still is) the area head at CCT for the past nine years, in charge of several stores in the area East of CCT. I4 has an additional seven years of experience in the Inventory and Stores Management Department. His responsibilities are to ensure that the respective goods receipt stores receive the materials on time, to take stock periodically, and to ensure that the individual stores hold the materials that the staff need. I4 also sees to it that the MRP controllers periodically carry the MRP for effective service delivery. I4 is based at the Bloemhof CCT stores.

Interviewee 5 (I5): I5 has been (and still is) the principal MRP controller at CCT for the past three years, and has an additional 5 years of experience in the private sector. I5 in charge of planning critical materials, training all other MRP controllers, and monitoring other MRP controllers' work. In addition, I5 communicates with other departments regarding issues that influence the MRP controllers. I5 is based at the Ndabeni CCT store.

4.3.3 Master data

Master data seldom change, and it is beneficial for defaulting useful repetitive information when purchasing documents are created to avoid duplication of effort. *Vendor master* and *materials master* are two sets of master data most used in SCM. Vendor master is maintained by the Supplier Management Section at CCT, while materials master is maintained by the Codification Section at CCT. The two sections belong to the Master Data Maintenance Department within the SCM division. The main need for having master data is to ensure that the store materials and the necessary items needed to procure are mapped onto the system and that the documentation is up to date.

Below are the two Master Data managers. Refer to Table 4.1 for a summary of the interviewees.

Interviewee 6 (I6): I6 is the manager for the Codification Section. I6 is responsible for ensuring that the relevant managers approve the creation and storage of the materials master before the actual code is created. In addition, I6 is involved with

ensuring that the anomalies regarding the existing materials master are corrected. I6 has six years of experience dealing with materials master data at CCT, has been in SCM at CCT for 13 years before his current position, and possesses therefore broad business knowledge. I6 is based at the Ndabeni CCT store.

Interviewee 7 (I7): I7 is a manager for the Supplier Management Section**,** ensuring that all qualified suppliers are created on the system by staff, and that the supplier information is updated as required by national legislation. I7 has nine years of experience in dealing with supplier information. I7 was involved in SCM at CCT in different roles 16 years before becoming involved in the Supplier Management Section. I7 is based at the Cape Town Civic Centre.

4.3.4 Procurement

Procurement is the department responsible for buying materials on behalf of CCT. The responsibility extends to negotiating prices with the suppliers as well as negotiating quantities to be delivered when there is a requirement for materials. The Procurement Department, like most of the departments at CCT, is governed by national legislation on how buyers can go about the process of procuring the materials. Materials can only be brought to stores through Procurement at CCT.

Below is a description of I8 and I9. Refer to Table 4.1 for a summary of the interviewees.

Interviewee 8 (I8): I8 is the team lead in the Procurement Department, in charge of approving POs over a certain threshold, and ensuring that buyers verify and send POs to suppliers. In addition, I8 manages relationships between CCT and suppliers as well as finding solutions to issues when there is dissatisfaction by either party. I8 has been (and still is) a Procurement team lead for the past five years, and has been a buyer for nine years at CCT. I8 is based at the Cape Town Civic Centre.

Interviewee 9 (I9): I9 is the SCM buyer, responsible for communicating and negotiating with the supplier, and ensuring that the assistant buyer creates the PO within the agreed processing period. The buyer ensures that the correct supplier is selected based on the adjudication results, and that the suppliers deliver the ordered goods. I9 has eight years of experience at CCT, in procurement. I9 is based at the Cape Town Civic Centre.

4.3.5 Reservation creators

Reservation creators are not a department but rather a unique group of staff members that create reservations in order to get the approval to collect the materials

from the stores closest to their area for good service delivery. Reservation creators are situated all around CCT; they are therefore able to create reservations on behalf of others staff members. This role does not reflect the hierarchical level in the organisation; both managers and subordinates can be reservation creators. The reservation creators need to inform the stores what materials they need so that the stores keep relevant materials in the right quantities.

Below is a description of I10 and I11. Refer to Table 4.1 for a summary of the interviewees.

Interviewee 10 (I10): I10 is a superintendent reservation creator for electricity first line support. The superintendent is tasked to diagnose electrical problems, reserve the necessary materials, and collect materials from the stores for minor maintenance. I10 has 21 years of experience in first line support at CCT and is based at the Brackenfell store.

Interviewee 11 (I11): I11 is the senior superintendent reservation creator, in charge of the contractors of first line support for the Bloemhof Electricity department. When the fault is reported, I11 assigns his subordinates to do fault diagnosis, creates a reservation for the materials, and sends the contractors to resolve the problem. I10 has 23 years of experience at CCT and is based at the Bloemhof store.

Table 4.1: Summary of the interviewees

Code	Job title	Years of experience at CCT	Years of experience in private sector	Gender	Area of work at CCT
I1	Permanent principal ERP consultant	25	-	Male	Cape Town Civic Centre
I2	Contractor principal ERP consultant	8	16	Male	Cape Town Civic Centre
I3	Inventory and Stores Management Department manager	22	-	Male	Cape Town Civic Centre
I4	Area head	16	-	Male	Bloemhof stores
I5	Principal MRP controller	3	5	Male	Ndabeni stores
I6	Codification Section manager	19	-	Female	Ndabeni stores
I7	Supplier Management Section manager	25	-	Female	Cape Town Civic Centre
I8	Procurement team lead	14	-	Female	Cape Town Civic Centre
I9	SCM buyer	8	-	Female	Cape Town Civic Centre

Code	Job title	Years of experience at CCT	Years of experience in private sector	Gender	Area of work at CCT
I10	Superintendent reservation creator	21	-	Male	Brackenfell stores
I11	Senior superintendent reservation creator	23	-	Male	Bloemhof stores

SECTION 2

This section presents the research analysis based on the research questions. It further includes a summary of the findings together with the discussions and integrated verbatim responses of the interviewees.

4.4 Data analysis process

Table 4.2 shows the research questions and sub-questions. The interview questions were derived from the research sub-questions as discussed in the methodology. The interviews were verbatim transcribed. Thereafter, the transcriptions were read and re-read in order to understand the meaning and context of participants' responses, leading to the coding process. The codes were identified and then categorised by means of key concepts as demonstrated in Table 4.3. Figure 4.4 is an example of how the statements made by the interviewees on the transcriptions were analysed and assigned relevant codes. Microsoft Excel was used to input the analysis made on the transcriptions (Appendix E). Figure 4.5 is a screenshot of Appendix E1. The individual codes were then summarised for each interview question (Appendix F). Figure 4.6 is a screenshot of Appendix F.

Findings (220 in total) were drawn based on the summaries (Appendix G). Figure 4.7 shows a screenshot of Appendix G. The researcher analysed the findings and then summarised it further by searching for repeating concepts to develop the categories. From the categories, themes were developed as illustrated in Table 4.4. This reduced the number of findings to 45 (Appendix H). Figure 4.8 is a screenshot of Appendix H.

The research questions, sub-questions, and research objectives (ROs) are once again presented for the convenience of the reader (Table 4.2).

Table 4.2: Research problem, sub-questions, and objectives

Research Problem	ERP systems are able to provide statistical reports regarding stock-outs; however, the information provided is insufficient to link a specific stock-out to its causes within the SCM process at CCT. This makes it difficult to select the most appropriate solution to minimise the causes and number of stock-outs.
RQ1: What are the factors resulting in stock-outs at CCT?	
RSQ 1.1: How are the stock-outs recognised at CCT?	**RO1:** To determine the *status quo* of the major causes of stock-outs at the CCT stores
RSQ 1.2: How can the causes of stock-outs be classified at CCT?	**RO2:** To prioritise the causes of stock-outs at the CCT stores
RQ2: How can the causes of stock-outs be reduced at CCT?	
RSQ 2.1: How does CCT manage the causes of stock-outs?	**RO3:** To determine the *status quo* of the challenges in the SCM processes
RSQ 2.2: How can the causes of stock-outs be managed at CCT?	**RO4:** To propose guidelines to manage and reduce the causes of stock-outs at the CCT stores

4.4.1 The key concepts

Five key concepts were determined by grouping the related codes together. The codes represent the specific and meaningful information from the interviewee responses based on the key words and the interview questions. The relationship between the code and the key concept are shown below in Table 4.3.
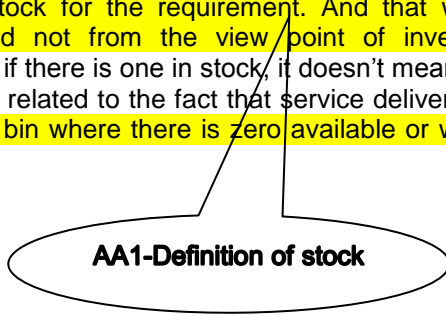
Table 4.3: Key concepts for analysis

No	Key concept	Code	Goal	Description
1	Stock-outs	AA1	Definition of stock-outs	Interviewees' understanding of stock-outs
		AA3	General causes of stock-outs	This is related to what the users find as the causes of stock-outs
		CC2	Challenges in reducing the causes of stock-outs	The challenges the employees face when preventing the causes of stock-outs
		AA2	Stock-outs experience	Interviewees' experience of stock-outs and the impact thereof, for example, in adequate service delivery
		CC1	Initiatives to reduce causes of stock-outs	What is currently done to prevent the causes of stock-outs
2	Supplier	GG1	Supplier non-compliance	When suppliers cause stock-outs
		GG2	Supplier initiatives	What suppliers do to prevent the causes of stock-outs
3	Internal factors	BB1	Interviewee use of ERP	ERP use in relation to stock-outs
		BB2	Interviewee challenges when using ERP	The challenges interviewees face when using ERP in relation to stock-outs
		HH1	Possible improvements	Suggestions made by the interviewees to prevent of stock-outs

No	Key concept	Code	Goal	Description
4	Human factors	DD2	Ignorance/incompetence	The situations where users show no interest to follow the process
		DD1	Management issues	Issues that require management involvement
5	External factors	EE1	Non-operational issues	Factors beyond the control of the employees and organisation, which can be the national requirements, e.g. local content, Labour Relations Act, strikes
		EE2	Non-operational initiatives to reduce the causes of stock-outs	Factors beyond the control of the employees and Organisation, which can be the national requirement, e.g. local content, Labour Relations Act

4.4.2 Interview transcription

Figure 4.4 is an extract of a transcribed interview (Appendix D1). It shows how the codes in Table 4.3 were identified from interviewee I1's responses to the interview questions. Each interviewee statement was analysed and assigned a code that best describes the statement as in interview IQ 1.1.1.

Me: I am going to interview I1 from the ERP at the City of Cape Town. He is responsible for inventory management form the ERP side. Amm!

I1: Amm!

Me: Here is the informed consent form that you are supposed to fill.

I1: Yes!

Me: It basically states that you voluntarily took part in this interview to contribute, to assist me to get the results that I am hoping to achieve.

IQ 1.1.1	How are stock-outs experienced at CCT?

Me: The first question that I have is: "What does out of stock mean from the ERP perspective?"

I1: The stock-out from the ERP perspective, if I can give and overview is, from the ERP side is, if there is insufficient stock in the bin, and the user required more than what is available. So, although there is stock in the system, but there is insufficient stock for the requirement. And that would constitute from the user's perspective a stock-out and not from the view point of inventory management or from the stock perspective, because even if there is one in stock, it doesn't mean that they are out of stock. But I think that you concern is more related to the fact that service delivery will not happen; therefore, I would formulate a stock-out as a bin where there is zero available or where there is insufficient quantity to serve the end user.

AA1-Definition of stock

Me: Thank you very much.

Me: Amm! In your experience, how does your line of work impact on stock-outs, let's say if work is not done properly from your side would result into a stock-outs? For example, say the queries logged with ERP help desk take long to be resolved? What is the impact of that towards stock-outs?

I1: Stock-out from the ERP perspective is related to the users who experience these situations, and they do not have a full understanding of the system functionality, and how the system operates.

This can be attributed to two things: Number one, a lack of planning from inventory management's side, when the reorder levels are insufficient for day-to-day usage. Number 2, form the end user where the planning cycle is not planned properly, in other words, they wait until number 99 and they expect stores to be fully compliant with the all the quantities which they want to reserve. The impact that this has from us, the ERP side is again two folded, once a call is logged by the MRP controller who requires information and training on the module, and on the other side form the end user not trained properly. Both these parties log calls with ERP helpdesk to deal with their business processes.

Me: What is done on the normal basis to overcome these challenges?

I1: The training facility form the ERP floor is limited; we have got very little number of employees [sic] that can deal with training the end user and day-to-day resolution of calls that is being logged. The challenge is more in getting business skilled up in their own BP, for them to support their own function and to understand the BP, and how that impacts on the ERP solution in getting their things sorted out. Call on our side is not to resolve the out-of-stock issue but rather how to prevent is by means of proper training.

IQ 1.1.2	**How do you identify the materials that stock-out?**

Me: Can you determine the history of the material being out of stock? Is it possible to achieve this and then record of the materials being out of stock?

I1: Yes, it is possible to determine the number of times a material was out of stock, amm! Whether that has an influence on service delivery outside there, that we cannot determine, because many users do not make the reservation on the system if they find that there is zero quantity in stock, or insufficient stock in the system. They would then just not do the reservation, but monitor stock levels externally, and only when there is stock in stores create a reservation for consumption. So, to answer the question, we are not fully able to report on how many times the stock-outs occurred and what the reason therefore was. As long as the role players and the users do not use the system properly, there will always be a lack in reporting.

Me: How do you identify when a material is out of stock at present, let's say form the end users perspective?

I1: We only look at zero balances in the system, in other words when the bin constitutes zero that will currently constitute an out of stock situation.

Me: What do you do when you have identified that the material is out of stock, or what should the end users do when they realise that the material is out of stock?

I1: If it is an urgent application, they can source the materials from alternative stores. 2. Ask the MRP controller to adapt and change the MRP perimeters, because the consumption rate or the daily average consumption rate is higher than what was anticipated. The MRP controller would then change the figures and expedite the replenishment process or the purchase orders in the system in order to service the customer.

IQ 1.1.3	How does consistency in your area work with regard to stock-outs?

Me: Have you experienced any inconsistencies with the system? Say for example reports giving incorrect information or the ……PO differing from a requisition kind of scenario?

I1: No, we have not found any anomalies on it. The biggest issue is the vendors delivering late, Amm!, but there is not; SAP is always right, if it is not, then fix it. Amm! When the report is done based on the data that is in the system seem to be correct; if there are purchase orders not delivered or reservations not being collected or reserved incorrectly, that needs to be corrected, then the reporting there after will report the correct information.

Me: What about the physical inventory, the materials in stores? Does it happen that the end user makes a reservation knowing that there are 10 items now, when the person gets to the stores, suddenly there is only 8 items?

I1: Yes, that happens, mainly due to pilferage, breakages happening, incorrect materials being picked and issued; therefore, there are some inconsistencies when it comes to physical stock levels versus SAP stock levels. This is being rectified by physical inventory procedures, which happen at least once per year. They also have daily checks on stock levels on materials that moved, and therefore they should be able to pick it up earlier. Unfortunately SAP will not be able to give you detail on these types of problems where the system reflected a higher stock value than what was physically in the bin.

Figure 4.4: Interview transcript for I1
(Appendix D1)

4.4.3   Interview categorisation by codes

The responses in Appendix D, in accordance with the codes in Table 4.3, were used to fill Microsoft Excel spread sheets per interview question (Appendix E1).

Figure 4.5 shows a screen shot of how the statements made by interviewees were put onto a Microsoft Excel spread sheet according to codes. The extract shows how I1 and I2 responded to interview question IQ 1.1.1.

Figure 4.5: Interview classification by codes

RQ	Description	RSQ	Description	IQ	Description	Key	Description	Explanation	Key	Description	Explanation
						I1			**I2**		
RQ1	What are the factors resulting into stock-outs at the City of Cape Town?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	AA1	Definition of stock out	Stock out is when there is stock in the system but there is insufficient stock for the requirement, form the user's perspective	AA1	Definition of stock out	according to the City of Cape Town is the material that should be in stock but there is no stock.
RQ1	What are the factors resulting into stock-outs at the City of Cape Town?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	Q 1.1.1	How are stock outs experienced at the City of Cape Town?	AA1	Definition of stock out	But stock out from inventory management's perspective stock out is when there is 0 in stock	BB1	Participant Use of the ERP	My function is just to ensure that the SAP system works, so that the users can manage it correctly in order to prevent stock outs
RQ1	What are the factors resulting into stock-outs at the City of Cape Town?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	AA2	Stock out experience	Users experience stock outs	BB1	Participant Use of the ERP	Ensuring that the system works, training of the end users training of the super users, so that they can train their own users, Michael and I have put a methodology that they can follow, so we have provided a methodology that the business is using to manage their stock outs. But we should not really be doing the methodology for the business.

4.4.4 Summaries of the key concepts per question

Each code was summarised individually for each interview question. For each research question, the same codes were then grouped together and summarised. The summaries are based on all the responses for the interview question where a specific code was identified. Figure 4.6 shows a screenshot (Appendix F) of how the codes were summarised. In the extract are the summaries for codes AA1 and AA2 for interview question IQ 1.1.1.

Figure 4.6: Summaries based on codes

RQ	Description	RSQ	Description	IQ	Description	Key	Description	Key concept	Summary
									Apendix F
RQ1	What are the factors resulting into stock-outs at the City of Cape Town?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	AA1	Definition of stock out	Stock out	I1 states, "Stock out is when there is stock in the system but there is insufficient stock for the requirement" therefore stock out is a situation where there is stock in stores but there is not enough quantity to satisfy the user's requirements of materials. But according to inventory management it is a situation where there is zero stock in stores, as explained by I5 "it essentially means that since we are supposed to keep stock we have zero at hand" . Both of these situations results in the inability for stores to provide stock to the reservation creators.
RQ1	What are the factors resulting into stock-outs at the City of Cape Town?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	AA2	Stock out experience	Stock out	I1 indicates that "Users are the ones that experience stock outs" but according to I11 "if there is nothing in stores then we must start going to other stores, when the people say we do not have electricity now I must sent the guy to strand, to go fetch the materials, that is what is happening at the moment" . Therefore indicating that is not only the reservation creators that suffer but also the public when the stock outs occur. He further explained that "we spend 5 hours sending vans around to stores to look for materials, which is costly, I need the labour to get the van there if it is more than 20m, I need to get 3 or 4 guys, or book out a trailer, sometimes if it is after hours the store man has to be paid overtime". Sometimes out of stock situation get out of hand and causes more problems according to I11 "the out of stock situation at some point got so bad that 4000 meters that had problems were bypassed in the south. As a result they had to get a price increase because some people when their meters are bypassed they will not come forward because they get electricity for free".
									According to I1 the reservation creators do not understand the system "The users do not have a full understanding of the system functionality, and how the system operates", therefore they log calls with the

4.4.5 Findings drawn from summaries (220)

The findings were drawn from the summaries, which are the collective response to the interview question based on the identified codes. Figure 4.7 shows a screenshot of the findings for interview question IQ 1.1.1. These findings are 220 in total (Appendix G).

▲	A	B	C	D	E	F	G
1							**Apendix G**
2	RQ	Description	RSQ	Description	IQ	Description	Findings
3	RQ1	What are the factors resulting into stock-outs at the City of Cape Town?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	There is no definite definition of stock outs at the CCT.
4	RQ1	What are the factors resulting into stock-outs at the City of Cape Town?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	When there is no stock in the reservation creator's area, they search all around the CCT stores in other areas to get the materials, which is costly and time wasting.
5	RQ1	What are the factors resulting into stock-outs at the City of Cape Town?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	There are limited training facilities and trainers Staff members do not understand the ERP system
6	RQ1	What are the factors resulting into stock-outs at the City of Cape Town?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	Separate reports are executed to check if the staff members are doing their work.

Figure 4.7: Findings based on summaries

4.4.6   Categories derived from findings (17)

Seventeen (17) categories were derived from analysing the 220 findings. These categories are the repeating concepts. The 17 categories were further grouped into six (6) themes as shown in Table 4.4.

Table 4.4: Themes and categories

Category No.	Category	Theme No.	Themes
1	Control	1	Procedures
2	Policy	1	Procedures
3	Local content	1	Procedures
4	Management	2	Service delivery
5	Communication	2	Service delivery
6	Service delivery	2	Service delivery
7	Suppliers	3	Suppliers
8	External	3	Suppliers
9	Stock-outs	4	Stock-outs
10	Planning	4	Stock-outs
11	Definition	4	Stock-outs
12	HR	5	HR
13	Training	5	HR
14	Ethics	5	HR
15	Systems	6	Systems
16	Data quality	6	Systems
17	Reporting	6	Systems

4.4.7   Summary of findings (45)

The researcher further analysed the findings based on the 17 categories to develop a summary of the findings, which reduced the findings to 45 (Appendix H). Thus, the 45 findings are a summary of the 220 findings. Figure 4.8 shows a screenshot of appendix H on how each finding is assigned to a category and a theme. The

research questions, research sub-questions, and interview questions are linked to the category and theme in appendix H. This assists the researcher with the discussion of the themes because the relationship is mapped.

Description	Research sub	Descriocion	Inteview question	Description	Finding	Category no	Category descrion	Theme
How can the link between the causes and stock outs be determined?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	Finding 1: There is more than one definition of stock out in at CCT.	4	Definition	Stockout
How can the link between the causes and stock outs be determined?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	Finding 2: CCT managers do not work well together as well as with staff members.	5	HR	HR
How can the link between the causes and stock outs be determined?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	Finding 3: Staff members are unable to determine the holistic impact, that a solution to their problem will have on other business processes.	5	Training	HR
How can the link between the causes and stock outs be determined?	RSQ 1.1	How are the stock-outs recognized at the City of Cape Town?	IQ 1.1.1	How are stock outs experienced at the City of Cape Town?	Finding 5: When a stock outs occurs the impacts on service delivery cannot be determined.	2	service delivery	Service delivery

Figure 4.8: Summary of findings

4.5   Findings of the interviews conducted

The research sub-question is indicated first, where after the related interview questions are stated together with the responses and the relevant findings.

RSQ 1.1: How are the stock-outs recognised at CCT?

IQ 1.1.1: How are stock-outs experienced at CCT?

There are too many definitions of stock-outs in the organisation. I1 from the ERP Support Department defined stock-outs as, "there is stock in the system, but there is insufficient stock for the requirement" (Appendix D1). Thus, stock-outs refer to a situation where the stock in stores is not sufficient to satisfy the user's material requirements. According to the Inventory and Stores Management Department, it causes a situation where there is zero stock in the stores, as explained by I5: "It essentially means that since we are supposed to keep stock we have zero at hand" (Appendix D5). Both these situations result in the inability of the stores to provide stock to the employees who are responsible for reserving stock from the stores (reservation creators).

Finding 1:   There is more than one definition of stock-outs at CCT

Area heads for some stores do not want to do MRP in the absence of the MRP controllers. I4 stated: "In other areas the other area heads do not like to do the MRP; for me [it] is important because service delivery is important" (Appendix D4). The area heads look after their own stores. I10 mentioned that, "some people book stock

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from Helderberg to come fetch stock here [Bloemhof, Beville] but I know I4 stopped it because they have their own store, and there is another reason why I4 stopped it – that store is not under him anyway and has got another manager" (Appendix D10).

Finding 2:   CCT store managers do not work well together; they also do not work well with staff members

For business to understand their own BPs, they need to support their own function and understand the impact of their BPs on the ERP system. I1 stated that, "the challenge is more in getting business skilled up in their own business processes, for them to support their own function and to understand the business process, and how that impacts on the ERP solution" (Appendix D1). Many users do not how the system works, which poses a challenge to management.

Finding 3:   Staff members are unable to determine the holistic impact a solution to their problem will have on other BPs

Due to stock-outs experienced on some materials, the reservation creators created a list of emergency materials and took it to the area head to ensure that those materials are always in stock. Users are only allowed to source from alternative stores when there is an urgent requirement. When an increase in usage is anticipated, the reservation creator must inform the MRP controller of the new usage requirements. The MRP controller must continuously check if there is a PO created on his requisitions, and the buyer must continuously check with the supplier that the delivery dates will be met in order to shorten the out of stock period as much as possible.

ERP Support started providing MRP training first to the team leads, then to the buyers, and then to the assistant buyers, to ensure that the seniors are prepared to assist the subordinates when the need arises. Since each ERP consultant has been trained to specialise in supporting a specific SCM area, an improvement in stock-outs can be detected. Users now see the benefits of attending system training on a bi-weekly basis, as their competence is being enhanced.

As local content is being extended to include many and various materials, more materials are stocking out. I9 stated that, "I am going to end up getting that problem also in my environment the more my commodities are put on local content" (Appendix D9). Materials on tender and price list agreements are not affected by the local content, because a request for quotation is done once for the duration of the contract. If there is no agreement, each requirement must be advertised.

Agreements are prepared and advertised for different durations by the Tenders section or by Procurement, depending on the monetary threshold.

Finding 4:   Despite many initiatives by departments to reduce stock-outs, it is still at a high level

Many times bad quality materials not according to specification are delivered, and the stores will call the reservation creators to inquire about the quality specifications. If the quality is not good, the materials are sent back to the supplier because it cannot be used: "When we get, there is a poor quality material and not according to what the PO is; then we will sent it back, because we can't use it, then they send it back and the whole process starts again" (I11, Appendix D11). The number of times an item is out of stock can be determined, according to I1, but the impact on service delivery cannot be determined when the stock-outs occur: "Whether that has an influence, on service delivery outside there that we cannot determine, because many users do not make the reservation on the system if they find that there is zero quantity in stock" (I1, Appendix D1).

Finding 5:   When stock-outs occur, the impact on service delivery cannot be determined

The causes of stock-outs are managed per incident because each incident is different. I2 indicated: "So, some of these things we can measure, some of them we measure, but we do not measure all of them" (Appendix D2). I5 indicated that sometimes, even when the system status shows "successfully sent", suppliers do not receive the POs. It is the role of the buyer to follow up with the supplier to ensure that they have received the POs. The goods receiving (GR) is done immediately in terms of quantity and quality when the supplier delivers the required goods, unless if it is late in the afternoon; in such cases, the stock is inspected and the GR is done the following day. According to I4, although seldom, the challenges with GR are that, "if we have a complete system down time or a complete system failure, because then you cannot GR, there is nothing like a manual GR, because it workflows to Accounts Payable to effect the payment" (Appendix D4). Sometimes it is load shedding and sometimes the system is extremely slow. However, I4 is of the opinion that, "we never go down completely, and when did the City go on SAP, 2003, and in my 12 years of SAP experience, maybe once or twice years ago. But I can't remember the system crashing in total" (Appendix D4).

Finding 6:   Not all the causes of stock-outs are measured

IQ 1.1.2: How do you identify the materials that stock-out?

Stock-outs cause severe problems not only for the organisation within, but also for the clients of the organisation. I1 indicated that, "stock-out from the ERP perspective is related to the users who experience these situations, and they do not have a full understanding of the system functionality and how the system operates" (Appendix D1). When stock-outs occur, employees need to action a workaround, as I10 explained: "If there is nothing in stores, then we must start going to other stores. When their people say we do not have electricity, now I must sent the guy to Strand, to go fetch the materials – that is what is happening at the moment" (Appendix D10). I10 further explains that:

> "We spend 5 hours sending vans around to stores to look for materials, which is costly. I need the labour to get the van there if is more than 20m, I need to get 3 or 4 guys, or book out a trailer. Sometimes if it is after hours, the store man has to be paid overtime" (Appendix D10).

Stock-outs can get out of hand and employees need to improvise in order to service their communities, but to the disadvantage of the whole economy. I11 gave an example where 4000 power meters were incorrectly functioning, with no meters in stock. The result was that they simply bypassed the meters to supply clients with the service, but the clients did not pay for the services rendered. "The South bypassed 4000 metres, they had to get price increase, you know, some people if you by pass a metre will never come up because [it] is getting electricity free, and every time you have to go back you make appointments, that is why me and… if they call us during the weekend to say this and this, we say ok bypass, but first thing Monday morning, make sure that he is at home otherwise we switch off" (I10, Appendix D10).

Finding 7:   The reservation creators search for materials all around the CCT stores when there are no materials in the store closest to them; this is time consuming and costly

The reservation creators withdraw high stock-out materials and place them in their personal cupboards so that they will have the materials on hand when needed, for example, circuit breakers, prepaid metre key pads, and so on. This is workaround, causing spikes in demands, as stated by I11: "We do to the same. If you see that the material is on shortage always, you go and get your material and put it in a cupboards and lock it up, and keep it there for your job when you are going to do the job" (Appendix D11). Even though the reservation creators try to manage relationships positively with the main store, the storekeepers are not interested in serving some reservation creators, as stated by I10:

"But we tried to build a nice relationship with Ndabeni, but just remember, even if I can build a relationship with Wynberg also, all of them go to Ndabeni to reserve stock. They just don't worry about East, here in the East we have about 3 stores, and when we run out of stock we must start running around" (Appendix D10).

Finding 8:   Reservation creators misuse the system by withdrawing materials that often stock-out, in excess for personal storage

Users can report on the number of stock-outs that occur, but they cannot report on the causes of stock-outs, nor can they determine whether the stock-outs have an impact on service delivery. I1 said: "We are not fully able to report on how many times the stock-outs occurred and what the reason therefore was" (Appendix D1). Users rely on the area heads for basic information available on the system regarding stock availability. The reservation creators do not know how many materials are reserved and only find out when they get to the stores. This situation is created because the reservation creators do not know how to check the stock levels.

Finding 9:   The reasons for stock-outs are not reported on the ERP system; thus, the system and cannot be used as a tool to identify the reasons for stock-outs

IQ 1.1.3: How does consistency in your area work with regard to stock-outs?

Sometimes POs do not go through to suppliers; this is indicated by a red traffic light in the external communication report that Procurement monitors, leading to the orders being re-sent. Arguments arise between Procurement and the suppliers when suppliers claim not to have received the POs. I9 stated:

"Ok, the delivery date I will change only if the vendor comes back to me. Say the stores comes back to me and say where is my things, and I call the vendor but the vendor says, but I never received the order, but I can see on the system a green light from IT, showing me that the vendor has received the order, between our system there is a waiting space where they say, what is that thing? Is it a two day? There is a report that you ran, SOST, that you run to see if all of your orders have gone out" (Appendix D9).

I9 also said that, "I can safely say form our side and from our server's side it went through so there must have had a problem with his server" (Appendix D9). Sometimes suppliers claim not to have received the POs while they actually did, as stated by I9, "he could have got the order and just did not have the money to buy the stuff or whatever" (Appendix D9). This increases the lead-time, as the vendor's lead-

time starts on the day that the PO is re-sent to the supplier, and if there is an urgent requirement, the buyer will have to negotiate with the supplier to deliver whatever quantity is available.

Procurement does not increase order prices after quotations have been captured and POs have been created, leading to some vendors withdrawing from delivering when they realise that they have under quoted, In such cases, Procurement defaults to the second supplier in line. This causes delays in procuring the materials. The price can be changed on a PO to differ from a requisition only under certain conditions, which includes an email from the Tender Department. I2 stated that it is allowed for a requisition to differ from a PO, but the buyers are informed as to why this is not a good practice.

Finding 10: The ERP system sometimes does not sent POs to suppliers; on the other hand, suppliers claim not to have received the POs when they cannot deliver

Finding 11: After adjudication, once the supplier has been awarded the job, the price cannot be changed; suppliers that under quoted withdraw from the contract and do not supply CCT with the requested material

There are differences between physical stock levels and ERP stock levels; however, the ERP system cannot provide such detail, which results in master data inconsistency, as stated by I3:

> "we had an instance where the moving average price of a specific commodity was incorrect because there were price adjustments as the tender has been running for a couple of years. So, the prices that should have been captured in 2013 were only captured now. But then we say 500 of these materials were used over a couple of years, and there is only 40 in stock, so the price of the 500 is now divided by 40. So, if it should be costing R5 000.00 for a specific item, now it is costing R15 000.00" (Appendix D3).

The system sometimes reflects negative stock levels. The reason is explained by I5: "I think there were four items on hand, but the system allowed us to issue 8 of them, so the same four was issued twice though we didn't have stock" (Appendix D5). This happens mostly during month end when the system is overloaded. According to I8, the system may show slightly different quantities because of the consumption of stock during the extraction of the reports. The system allows the reservations

created via a Plant Maintenance (PM) order to save for any quantity even though the quantity is unavailable in stores.

Finding 12: The ERP system allows stores to issue more stock than available for the requirement date and therefore ends up with a negative stock level

IQ 1.1.4: How is the information regarding stock-outs communicated to staff members?

Not all expected people attend the SCM improvement meetings, yet all sections within SCM have a significant impact on stock-outs; this leads to a communication breakdown. Communication regarding stock-outs comes from ISM and not from Procurement, for instance, if a supplier cannot deliver on the required date, Procurement does not communicate back to the stores. I8 said that, "they normally send us a report and say we have 10 stock-outs, but please focus on this 5, because they know the end user and they know exactly what the end user wants" (Appendix D8). There is no communication to end users from the stores, according to I11:

> "We ordered it in June and they have actually closed the reservations, they cancelled the reservation. We haven't received the clothing and they don't let you know when they have cancelled the reservation, they don't let you know when they have received the materials and they don't let you know why the reservation was cancelled, and they don't let you know if it has to be extended or anything. It is just cancelled, that's it" (Appendix D11).

According to I11, there has not been any improvement in communication, but this applies only to stores in the South, and not to stores where I4 is the area head as they are reasonable and do communicate; they sometimes even pack the boxes for the reservation creator. Reservation creators do not receive assistance from the stores in the South, before, during, and after lunch. I11 provided some of the reasons for this: "Say for example the guy that works in a chemical store, that guy goes and prays. But where is the release man there, there is no release man. There is no one that releases those people there; there is a lot of cages there, and there is no people helping those people out, especially in an emergency" (Appendix D11). Sometimes the reservation creators have to return later when the stores are operational.

According to I11, it is faster to communicate directly with I4 when there is an issue with the store rather than with his direct manager, as there is a long chain of

communication and sending emails, if the managers remember doing so. Regarding extended lunch breaks in the South, when the incident was reported, things changed for a few months, but then they went back to the old ways. Stores in the East tried to take lunch breaks without a substitute to carry on with the job, but I4 stopped this immediately, according to I10.

Finding 13: The information regarding stock-outs does not reach all staff members because not everyone that is supposed to attend the SCM improvement meetings, actually attends

Finding 14: The stores do not communicate stock-related information to the reservation creators

Finding 15: It is difficult for other departments to raise issues regarding stock-outs with the stores, because the stores do not maintain a good work ethic when confronted

According to I2, feedback on SCM improvement is not provided to the end users, but Procurement is identifying and training the reservation creators who do not plan their reservations, as non-planning by end users is one of the main causes of stock-outs. I3 differs in opinion: "We have a business improvement plan where we measure, for example, stock-outs, and that is communicated back to the employees and the KPIs that we measure are communicated back to the employees. There is good communication around it, plus we have a SharePoint web site where the information is available" (Appendix D3). I3 further explained that the end users are called to the SCM optimisation meetings if they cause stock-outs, as the measurements are done per MRP controller, material group, vendor, for example. I3, I4, and I5 agree with I3 that stock-outs are communicated to end users during staff management meetings, especially when there are discrepancies.

Finding 16: Some SCM improvement meeting attendants provide feedback regarding stock-outs to staff members, while others do not

RSQ 1.2: How can the causes of stock-outs be classified at CCT?

IQ 1.2.1: What are the common features or characteristics of materials that are commonly out of stock?

The DTI introduced local content specifications on certain materials, but the buyers struggle to obtain such materials. According to I9, "I can give you another example – the Department of Trade and Industry have now brought another variable, the

content aspect, so we can't advertise, so we can't advertise certain things without the local content" (Appendix D9). Suppliers cannot afford the requirements of local content, according to I9: "The auditor has to physically go and say this is 100% local content. This is for every single item that is on RFQ, on the web. And now the vendors are complaining, and I agree with them, because some of the auditors charge them from R650.00 for a signature" (Appendix D9).

If the supplier does not have a compliance letter from the auditors, the submission is regarded as non-responsive, meaning the supplier is automatically not considered and the RFQ has to be re-advertised. This is a complex situation because departments such as the disaster management team, fire fighters, and traffic police need uniforms that are advertised as RFQs or tenders. I9 stated that stock-outs result due to the local content specifications because the vendors in South Africa do not meet the 100% local content criteria, as they import some parts of the product. "Because the vendors in Cape Town or in South Africa are not meeting the criteria of 100% local content, they need to import a part of their garment, but they are not allowing that because DTI says it is not 100%" (I9, Appendix D9).

Finding 17: The materials of local content industries, as identified by the DTI, stock-out more than other materials

According to I5, there are two major causes of stock-outs:

> "We basically did an assessment to find the root cause for all the stock-outs, and the result of it was that over 60% of our stock-outs was the result of the end users not planning. I think just about 30% of it was the suppliers delivering late. There are other reasons but we looked into the bigger ones" (Appendix D5).

ERP has been providing on-going training to the electricity end users on using the system better. The stores must communicate with the reservation creators regarding any changes, according to I8. Towards the financial year-end, the reservation creators clean up the stores to utilise the remaining budget. Therefore the stores and Procurement check the materials that the reservation creators draw with the extra cash and then buy more of these materials, but not too much, otherwise the cash flow is jeopardised or they end up with materials that people do not want.

Finding 18: According to the analysis, 60% of the stock-outs are the result of reservation creators not planning and 30% of stock-outs are attributed to late deliveries by the suppliers

According to I8, "clothing, the cable and the valves" are commonly out of stock. "We look at the period and then the number of times the respective materials within that group were out of stock. We look at the stats once a month and then we will say for the month of April, the materials within that material group how many of those are outstanding? And then that will be the basis and next month we will compare it with the previous one" (Appendix D8). They look at the number of out of stock material over a period.

According to I1, "we experience this on electricity metres, materials that are manufactured with long lead-times, materials that are affected by labour force where there is a lot of labour involved as well as where transport is involved, for materials that come from Johannesburg or very far away" (Appendix D1). I1 further stated that, "We commonly experience this with materials that there is import or export, component on, not specifically per product but a component used to build a product, those materials are sensitive or more sensitive, to being delayed and possibly stock-outs" (Appendix D1). I2 added that "Seasonality can be a problem, rainwear, which is now seasonal and local content, so there is a double worm here" (Appendix D2). I3 also indicated that:

> "let me think, printer cartridges we have a problem with from time to time, it varies as well but at the moment the main one is local content. Like I said come to the meeting and you will see the graphs and the graphs will tell you which ones are the main problems. I can go to SharePoint quickly to tell you, as prepared from the last meeting. Because at the moment the only one that comes to mind is clothing" (Appendix D3).

According to I9, for RFQs the responses are more for materials that are manufactured locally. There is a problem with golfer T-shirts and new meters because these have to be tested; cable goes through numerous inspections; fuses are from Germany. I10 argued that the features are "mostly random, it was streets lights or lamps, at one stage there were no joints, remember, meters,… the lamps the metres, joints, the cable. The only problem is how it works, it seems like everything is booked out in Ndabeni and from there it goes out to different depots" (Appendix D10). The cable is sorted because there is a drum put on the side for I10. I10 further explained that, "the meters run out of stock, the lamps run out of stock, the 100 amps are always out of stock, there are never 100 amps in stock, and the 100 amp breakers, they are always out of stock" (Appendix D10). Stores must increase the minimum stock level with consideration of the unit of measure, because some items are installed in packs, and this consumes stock faster than planned.

Finding 19: There are many common features of materials that stock-out often, for example, materials that are manufactured with long lead-times; imported materials or materials with a component that is imported; materials that are affected by the intensity of labour; materials that are affected by transport; and materials specified to be of local content

I6 concluded that the true measure of clear specification is when the supplier is able to deliver a correct product to the stores. Determining material specifications is a challenge, as said by I3: "In a lot of cases we have to do our own research and write the specifications. But when it comes to very technical equipment, for example, electrical distribution equipment, mini subs transformers or whatever is too technical, so there is an equipment standard specialist that writes the specification" (Appendix D3). The Codification section processes are therefore well documented before a new tender is published. All the specifications are re-evaluated to fill the missing detail. I3 and I9 stated that I2 and I6 focus a lot on master data clean up.

Finding 20: The Codification section staff are not technical people, but they are forced to develop specifications because the material specialists do not provide the material specifications on time

IQ 1.2.2: What are the significant causes of stock-outs?

According to I1, "the main cause of stock-outs is late deliveries by vendors; that is our biggest concern, where vendors cannot adhere to their own agreed terms and conditions, on contract, or the date and time that was promised" (Appendix D1). This is because people do not want to carry inventory but only produce when there is an official PO, which further delays the process. I2 differs in opinion from I1 by indicating that non-planning by the end user the main cause of stock-outs: "Number 2 is bulky stock, again, it is end users not planning, they keep stock in there vans or their offices that they use, and occasionally they replenish those squirrel stores, if they do it frequently it will not be a problem, but now they do it irregularly" (Appendix D2), for example insulation tape.

According to I3, legislative requirement takes the first position, then non-planning by reservation creators, then delivery performance by suppliers. Currently the suppliers are being managed, but the other two causes are difficult to manage because of the mind-set in the organisation. I3 further stated that the mind-set is not how to apply the law to ensure service delivery, but rather how to look for excuses not to deliver the service. I4 stated that poor planning from the reservation creators is the biggest

cause, followed by personnel shortage in Procurement. There is no proper screening of suppliers, especially for large jobs. I4 further explained that someone from CCT must physically go to the supplier premises to ensure they have the capacity. "I just want to think because stock-outs is one of our biggest concerns biggest concern, because the mayors keep driving service delivery, service delivery" (I4, Appendix D4).

I5 agrees with I4 that non-planning by the reservation creators is the biggest cause of stock-outs, making up 60% of the causes. Thirty percent (30%) of stock-outs is due to suppliers delivering late. MRP controllers not doing the MRP is another cause. Suppliers that are not the original equipment manufacturers—meaning that they themselves must be supplied with the materials before supplying CCT—sometimes quote on specifications they do not understand, thereby providing incorrect information; this increases lead-times. In I5's experience, in the previous companies he worked for there was an order confirmation system where the suppliers physically confirmed that they would be able to supply the goods. "But the city says maybe they got it, maybe they did not. Maybe with the fax services they got it. And they refer to the 97% chance" (Appendix D5).

According to I6, tenders not being in place as well as the MRP controller and the reservation creator not planning, is a problem. "But I think with regard to planning is time management the major concern there…" "Obviously form the procurement side if there are late deliveries it does have a huge impact, and for stores for having stock-outs. And I believe that this local content also plays an important role, for them not having materials" (Appendix D6). I10 pointed to late deliveries as a problem, because quality was resolved by management agreeing to the conditions of procuring materials with specifications.

According to I8, the major cause of stock outs is the human factor. There is are no tenders for materials to be procured automatically, therefore stock cannot be procured easily. When a new material master data is created, the reorder point is estimated, and the red traffic lights is automatically shown on the system for the material master data; this is a reflection that the new material is out of stock and must be procured. According to I8, another solution needs to be found to differentiate between the materials that are out of stock historically due to poor planning and the new materials data that have just been created. I9 indicated that stock-outs happen as a result of unplanned orders (meaning project managers do not plan properly), late deliveries, and external factors such as load shedding,

strikes, and theft. "Yes, vandalism and theft, that's the major problem; you can even put that right at the top" (I9, Appendix D9).

Finding 21: interviewees have different opinions about the main cause of stock-outs, but collectively their responses indicate that policy related causes are number 1, management related causes are number 2, and suppliers related causes as well as not planning related causes are number 3.

RSQ 2.1: How does CCT manage the causes of stock-outs?

IQ 2.1.1: What are the challenges with regard to master data?

According to I3, the material specialist does not provide specifications to the Codification Section, thus forcing them to develop their own specifications. The Supplier Management Section does not always update the vendor master, according to I8: "The suppliers sometimes do provide the necessary documentation to the Supplier Management Section, but it does not get captured onto the system, so that causes a problem for us and then we need to engage" (Appendix D8). The problem is that suppliers want the job after it has already been awarded to another supplier, because these suppliers submitted the necessary documentation before the closing date.

Finding 22: The Supplier Management Section does not maintain the supplier details timely, and that creates problems between Procurement and the suppliers since it affects adjudication

Management take a long time to make decisions regarding the specifications, they do not communicate properly, and they do not take the necessary measures to ensure that the required changes are implemented, as alluded to by I9:

> "She said white, but when she went to a meeting somewhere in February, some of the clinics did it in white and some of them did it in yellow, and she needed to make a decision there, whether white or yellow. So she did send Codification section a message to change it to yellow. But she didn't know where in the system to check if it was changed, she only knows that it brings up the query, she noticed that it has not been changed" (Appendix D9).

> "White paper printing is R11.00 and yellow paper printing is R19.00" (Appendix D9).

Finding 23: When managers, excluding store managers, require changes to be done on the materials master, they do not follow through to ensure that the required changes are implemented; this results in the procurement of incorrect materials

IQ 2.1.2: What are the influential platforms in deciding on the supplier?

I5 meets quarterly with the MRP controllers for issues of concern and continuous improvement. I5 stated that some of the issues they discuss, are "conflicting MRP data, stock-outs, reporting that we can use to check up on certain things in stores, so there is continuous training to ensure, and try and improve on these things" (Appendix D5). It was further explained that there is a MRP user manual that includes a MRP guide stating what to do, how to do it, and when to do it as an MRP controller.

Duplication when creating a materials master has to be avoided at all costs, as stated by I6. The material code cannot be created until most of the people agree in terms of what information should be filed on the materials master, especially where the material can belong to more than one valuation class. Updating an existing materials master is managed differently but it happens seldom. Once a decision has been reached, the following steps, according to I6, are that, "we will check if there are still outstanding reservations and outstanding contracts; at the end of the contract we will do the change, or we will keep it on hold and what we can do is, do create a new code for the new item and delete the rest, not to hold up the process" (Appendix D6). I6 continued by saying that, "it all depends on the emergency of the item, if they can wait until the end of the contract, then we will only change then" (Appendix D6).

To minimise stock-outs, a materials master is created so that the item is available on request and purchased in advance. According to I8,

> "we will still consider his quotation but we will not give him the preference points for his BEE levels and he will not get the points for the particular quotation because at the date and time he was marked for deletion on the system. We will consider him because we assume that he will get the necessary information. So we give him price points but no preference points" (Appendix D8).

For example, Procurement negotiates with a vendor that was ranked second in terms of BEE to be placed first, and then the vendor delivers earlier.

Finding 24: Supplier lead-time is not taken into account when adjudicating; BEE and price, among other things, take priority depending on what is needed

Qualifying criteria for the Item to be supplied is critical, but the BEE level is advantageous for scoring points. According to I8, "a product that we buy might have its own qualifying criteria. But if we do not stipulate that to the vendors up front, we cannot use it to exclude them" (Appendix D8). All vendors can supply any product regardless of specialisation, as stated by I8: "but there is not rule that says you are registered as a supplier for electrical therefore you can only supply electrical; as long as they meet the criteria of being a valid vendor and having a tax clearance certificate" (Appendix D8).

I9 argued that suppliers only submit what they specialise in: "[A] stationery supplier will not quote by me. [The supplier] won't quote by electrical because he does not know what is going on there, most of our vendors… Only our new vendors try their luck, but the soon find out that they can't manage because there is certain, there is certain   products that you need a huge capital and a huge bank account for" (Appendix D9). I9 further explained that the suppliers who make mistakes in quoting, are trying to supply outside their field of specialisation.

Finding 25: When material has no qualifying criteria to assist with the elimination process, all suppliers are allowed to quote whether or not the material is within their specialisation; this results in suppliers that are unable to supply according to promise

IQ 2.1.3: What are the challenges with regard to supplier performance?

CCT only recently began practising the default process strictly because parameters and controls have been set, which are now being monitored; therefore, only of recent is Procurement able to identify the suppliers that are not delivering on time. According to I8, it is difficult to manage the process because there are too many suppliers and orders going out to suppliers daily. According to I10, Procurement tries to buy less-expensive materials that are not usable and then forces staff to use these materials. According to I10 and I11, the procurement policy for purchasing from the supplier that quotes the lowest price compromises the quality, and this happens often.

Finding 26: Monitoring supplier delivery lead-time is difficult because there are too many POs going out to too many suppliers daily

Thirty per cent (30%) of the deliveries are not on time or are not delivered when needed. According to I8 and I1, planned delivery time was never adhered to at CCT and therefore suppliers ignored this specification. Delivery time was either too short or even out-dated, and therefore not relevant. I8 further explained that another reason for late deliveries is that the CCT suppliers are the middleman, buying materials from original equipment manufacturers. In addition, I8 stated: "We have noticed [that] people [are] quoting outside of their business core function" (Appendix D8). This happens when suppliers are not awarded enough bids, but they have a friend specialising in a specific commodity who is able to supply them. This affects adjudication as they do not understand what is required and they do not even make an effort to call the technical specialist at CCT for details; they quote based on the assumption that they know.

Finding 27: Suppliers ignore planned delivery time because in the past it was irrelevant, they therefore continue to deliver late

IQ 2.1.4: What are the challenges with regard to managing suppliers' information?

In the SCM improvement meetings, reports are drawn and the managers are questioned for any deviations from the normal process, for example, why the PR were not converted on time. Most of the deviations can be explained, such as staff being off sick. I9 stated that, "It could be that the company's tax clearance certificate has expired, and we send an email down stars to our Supplier Management Section to un-block the supplier so that we can still use them. Because the system blocks you out as soon as your tax clearance certificate expires" (Appendix D9). The unblocking is done for the supplier whose tax clearance certificate has expired, but it is a manual process whereby the supplier keeps getting blocked daily by the system, every evening.

Finding 28: The system is misaligned with the supply chain policy. If the supplier was compliant at the time of the award, they are supposed to trade with the organisation until the end of the contract, in accordance with to the policy, but the system blocks the supplier if any documentation becomes dated. This causes delays because the resolution between the Procurement Section and the Supplier Management Section is manual

Bad suppliers remove themselves from the CCT books by starting a different company and making the wife the owner of the business, but according to I6, the service will still not improve because only the books change—the company is still

the same. In addition, there is no legal obligation against such a supplier, as said by I7: "Is not like we can do any legal thing to him, unless if he has stolen from the city or something, then we would get the forensics involved to investigate him." (Appendix D7).

When a supplier has registered a new company in his wife's name, there is no way to detect this unless someone informs CCT. The informants are normally the suppliers that do not get work, but they prefer to remain anonymous. I7 indicated that, "you cannot do anything; it is a different company and it is under a different person; it has different directors and members so you cannot do anything; however you can note it." (Appendix D7).

Finding 29: **The suppliers with issues are blocked on the ERP system until the issues are resolved. These blocked suppliers start a separate business using their spouse or their child's name, and the organisation cannot stop them unless they owe CCT. This results in the same issues arising again**

IQ 2.1.5: What are the challenges experienced with regard to following the supply chain processes?

According to I11, the electricity's first line of support has a specific set of materials that are required, but Procurement purchases different materials because a different supplier is awarded the tender. The supplier does not deliver the materials according to the description, and the store man should pick that up. If is the store man is uncertain, the technicians are asked for clarity. In cases where wrong materials are not detected, it becomes items in the stores that cannot be used. Another cause of stock-outs is poor quality, as indicated by I4:

> "And now the stuff that we get, even if it is the same colour green, it runs out like water. I mean, you have to use half a bottle to get to use the soap, no honestly. It is the same with other materials as well, for example a pen. At Brackenfell about a couple of months ago, [a] guy… he called me to go to Brackenfell store. The pens were manufactured in China, you could put it like this and it would bend, and we are not allowed, the ink does not dry properly, it smudges" (Appendix D4).

Sometimes vendors quote on a formal tender and then realise later that their quoted prices are too low; they therefore stop supplying CCT. I4 gave an example of this:

> "So they just stopped supplying and we ran out stock because it takes ages, you cannot just terminate a contract; there are letters, you have to call them in, you have to give them a warning. If it has to go to legal, from there it must go

to the city manager, from the city manager, you know it can take 6 to 7 months to terminate a contract" (Appendix D4).

I9 indicated another issue – suppliers do not have the funds to manufacture the materials: "If he does not have money to pay his own people or suppliers, but he is not going to come out straight and say he has a problem with finances" (Appendix D9).

According to I3, the quality control officer is not the person that receives stock, and the goods receivers do not necessarily know if the material is correct when it is delivered by the supplier. I8 stated that, "it can be the materials master that we created, from the very first time and he will have nothing to gauge it against" (Appendix D8). Although the goods receiver knows and understands the criteria for specific material, a small deviation can cause the stores to think there is something wrong, and the quality control officer is called to resolve the matter. Companies are however in general more than willing to go to the stores and demonstrate that what they have provided is indeed correct and according to specifications. I3 indicated that the stores will take any product back unless there are other issues constituting the rejection, for example items that already expired. I10 stated that when the electricity first line of support visits the stores to verify the sizes of material to ensure that they reserve the correct materials, the store rejects their request to keep the clothes for them, as items are on a first-come-first-serve basis.

Finding 30: **Stores cannot detect poor quality materials delivered by suppliers as they do not have the specifications regarding the quality of the materials they keep, and the quality controller is not present when the materials arrive**

Improvement in the communication between the stores and Procurement has reduced the number of unconverted PRs significantly within three days. Since suppliers still claim not to have received the POs, CCT is now implementing e-procurement, as stated by I2: "But we are now implementing supplier self-service, where the suppliers can online see their own POs, then we will not rely on fax or email to get the POs to them, and we hope that that will improve the process" (Appendix D2). The statistics regarding the KPIs are seen monthly; it is not available online, but according to I2, the intention is to make these statistics available online. In addition, it will become part of business intelligence (BI) reporting so that it will be available to the managers in real-time.

Finding 31: A specialist compiles the statistics on the KPIs once a month, which means managers are unable to monitor the process timeously by themselves and therefore react too late

IQ 2.1.6: What are the challenges with regard to ERP availability?

I2 indicated slow system response as a challenge, but it does not happen enough to warrant a manual process to be implemented at the stores. I2 further explained: "So if the system is down you just wait for the system to come up again so that you can transact. Some organisations may have manual processes, the stores might have manual processes, but in general, when the system is down nobody works, because the system is usually up" (Appendix D2). Contrary to I2, I10 indicated that there is a process of issuing manually when the system is down. The cause for a slow system response is mixed. Sometimes the speed is slow due to the network – users further away from the servers experience more slow speed challenges than those who are closer. The recommendation to the users is that a call should be logged when a speed problem is encountered as there is a technical team dealing with slow system responses.

Finding 32: It is not clear what process to follow when the ERP system is down

Resolving a call can take from a few hours to a few days for a normal day-to-day query, and this is usually dealt with by the ERP help desk. This is an application used by the ERP Support that monitors physical calls. The support team provides solutions to the users, but where an investigation is necessary, it takes a week to resolve an issue. However, a system error can take from a week to a few months, depending on the urgency. When it is a showstopper, the call is assigned a critical status and everyone works towards resolving the issue at hand. ERP does go down, according to I11: "And that is quite often. It was down on Thursday when we wanted some materials to do the job on Sunday. If it was don't on the Wednesday, then the Thursday and the Friday morning" (Appendix D11). I11 argued that it is not the norm for they system to be down, but agreed that the stores do have an emergency procedure for issuing materials if the system goes down. A disadvantage of manual issuing is that the users forget to update the system afterwards.

Finding 33: When goods are issued manually, users forget to update the system when the system is back on

IQ 2.1.7: What are the challenges with regard to policies and regulation in SCM?

According to I3, there are many internal policies that contribute towards stock-outs: "A lot of it is around regulatory issues, compliance issues" (Appendix D3). The procurement process has to be transparent and compliance is emphasised, at the disadvantage of service delivery. An average time to set up a contract, according to I9, is nine months. Because of legislation requirements such as local content, it is becoming more difficult to award a contract. Suppliers can appeal the local content requirements when there are exceptional circumstances, and if the appeal is successful, permission to supply CCT is granted. According to I1, the delays are "due to the policies and the times that we must adhere to according to the national government" (Appendix D1). If the previous tender has expired while the materials have long lead-times, for example, a tender for cable, then the result will be a stock-out.

When the product being procured is a local content product, a vendor must apply to the DTI for the specific PO to be approved, and it takes 2 weeks for the DTI to respond. For both RFQs and tenders there are many checks and balances, and this is frustrating, according to I3. DTI's strict regulation on local content results in no stock on clothing, protective wear and boots. I3 further stated that basically, imported leather cannot be used for shoes; imported materials simply cannot be used. Suppliers import the materials not only because it is not available in South Africa, but also because it is less expensive, and this creates a serious problem. I5 stated that local content is a major problem for CCT because is hampers service delivery and if it is not addressed, the problems will snowball, leading to stores without stock, as more materials are made to be local content compliant. This can lead to an extremely angry public, as they need electricity, but there are no materials available to provide this service due to the legislation requirements. Polices at CCT are a major issue.

Finding 34: Internal policies contribute towards stock-outs, for example, the advertisement duration for a tender or RFQ is predetermined and procurement must comply, at the disadvantage of service delivery, which is frustrating to the CCT stores

Finding 35: Imported materials are less expensive and are of a better quality, but the DTI requires of suppliers to buy locally, which affects their business models and profitability, causing established suppliers not to supply CCT

According to I10, clothing as commodity is the most difficult to procure: "Clothing is a total mess, is a disaster, some of the guys need special boots because of sore feet, so we used to buy out from intecro, sent the guy there to fit the shoe. If it fits, happy, give me that quote, I buy, or book it out from them, not going through the stores" (Appendix D10). Several suppliers of clothing informed CCT that they will not change they processes simply to be awarded work from CCT. According to I10, the suppliers do not need CCT to be in business: "…they said they are not going to do all that paper work, to get work so get lost. [Names deleted], not [name deleted], they told me get lost. We don't need the City to buy our shoes, if you don't like our shoes get lost. I buy my own now, R1400.00 for a pair of boots" (Appendix D10). In addition, I10 stated that managers do not want staff to work with normal clothes: "I booked out last year all flash clothes in January, it was reserved, everything, we are still waiting, no clothes, now we start looking for normal jeans for the guys and normal T-shirts. Now our bosses start jumping on our heads, asking where is PPE approved, clothing, how can you do that?" (Appendix D10).

Finding 36: **When established suppliers do not supply CCT with materials due to the local content specification, employees need to purchase work shoes and protective clothing themselves, or they are forced to work with normal clothes, which management does not want**

According to I8, there are HR policies stating directly that if an employee does not do their work, it is their direct line manager's responsibility to address the matter, as employees only respond to their direct line managers, but there is no solution to manager-to-manager conflict. I9 stated that, "no there are the major problems. I don't think there is something we can do, our bosses can go to the bosses meetings and complain there, please sort out your planning" (Appendix D9). In addition, I11 indicated that he is not sure if the stores have a standard inventory management policy because of the variability of their service, as some stores assist immediately whereas others do not work during lunchtime; yet they are all CCT stores, but they do not operate the same. In agreement with I8, I5 said that, "I am responsible for the MRP controller, but I am not responsible for the stores that work with them, even though there are instances where I have reported that the guys are not doing what they are supposed to be doing and this is the result of it, there was no improvement, so those are some of the major risks but not the challenges for me, so what can I do?" (Appendix D5). The human factor is the primary issue to be addressed, according to I8. CCT is ISO certified, and therefore every step of the process needs

to be documented. Furthermore, CCT has to be up to date with all its business practices:

> "It is easy for me to say that I will do it, because everybody sits here but it might be more difficult for the ISM environment because they are so scattered. Yes you have an area head but he has about 12 stores that he must get to, he must close the stores for operational requirements to get his stuff in one place at one time. And it might be more difficult, that is why I say I think it is the human factor that is the problem. But I think in general our internal policies and procedures are outlined to reflect what we are doing" (I8, Appendix D8).

If the direct line manager does not intervene, a problem arises, meaning the team lead will not directly address the assistant buyer; rather, the team lead will talk to the buyer to address the issue with subordinates when there is a concern. It is thus the duty of the direct line manager to ensure that the process is followed and to determine how serious the subordinates view the process. I9 indicated that there has been an improvement in the number of materials that stock-out, and that there is a weekly meeting where all the issues are raised. If there is a concern, the buyer is addressed by the team lead, where after the buyer then takes up the matter with the assistant buyers.

Finding 37: Staff members only respond to their direct line manager and not to other managers; if the direct line manager does not take up a matter, it means policies are not adhered to, which results in different offices in the same department conducting their work differently, leading to SCM performance being affected negatively

The DTI set a specific percentage in terms of local content for a specific industry. Clothing has the largest effect in terms of local content on stock-outs. I8 indicated that, "our external policies have a direct link to our stock-outs, more than the internal policies" (Appendix D8). With exclusion of local content tenders and RFQs, the normal policies that govern SCM, i.e. MFMA, indicate that three quotes for a specific item must be sourced to enable Procurement to conduct a purchase.

I8 also pointed to the local content challenges: "It has been with us, since November 2013, and not getting proper guidance even after engaging with the Department of Trade and Industry is our main issue" (Appendix D8). The DTI says no, but according to I8, "there is no guidance as to where they must go and buy it in south Africa. They will just say no, this product is available locally, and we will not get any responsive bits because nobody can supply it" (Appendix D8). The DTI must respond within two working days after the supplier has submitted an application to

be exempted from supplying local content, but according to I8, they have documented proof that it can take up to a week to receive a response from the DTI. Other major challenges include strikes and load shedding.

Finding 38: There is a practical contradiction between the SCM policy and the DTI policy, which has led to proof that the DTI takes up to a week to respond to suppliers instead of two days as specified in the DTI policy; the 14-day RFQ policy is therefore not feasible

According to I1, I7, I8, and I11, the CCT employees do not know the SCM policies, which leads to delays in the SCM processes and as a result, the possibility for stock-outs increases.

Finding 39: Employees do not know the SCM policies

IQ 2.1.8: What are the challenges with ERP with regard to resolving the reported calls by the staff members?

According to I4, the supplier must be given proper lead-times that include packaging, not only production processing time. I8 opined that the buyers are in need of further training as more tasks such as expediting are being added to their plate. Since the buyers have recently been given training by I2 to monitor their stock-outs, they should be able to prioritise expedition: "They should also use the training that [I2] gave them to prioritise their PR, because you can have 20 PR and buy 10 items that nobody needs, is not a need in stores, so they should be using the tools that [I2] is giving them to identify" (Appendix D8). I8 added that besides legislation, they still have other issues: "It doesn't mean that I am ordering because somebody needs it. The system is also giving the MRP controllers different reasons why he needs to order. If you take the legislation out of it, we still have a lot of work within our environment to ensure that the buyers understand the training they are receiving and are utilising the training they are receiving" (Appendix D8).

Finding 40: Buyers do not use the tools and training provided by ERP Support

IQ 2.1.9: What are the challenges to the process of goods receiving?

I1, I8, and I9 mentioned that as a rule, all goods receipt should be captured at the latest by 09:00 the following day, because after 09:00 every day the buyers send the letters to suppliers to remind them of missed deliveries. In addition, I9 indicated that stores management are notified if the goods receipt are not done on time: "they

have to GR before 9:00 am the following morning, and they are accountable for it because you go and tell their bosses" (Appendix D9). If the supplier delivers but the store does not capture the goods receipt on the ERP system, there is a possibility that the supplier will ignore the reminder letters from the buyer, believing that the letters were sent in error. In most cases the suppliers do get back to the buyers but if this does not happen, more time is wasted on the issue for no reason, as indicated by I8:

> "So when we do our expediting 2 days before delivery, the service provider gets a reminder letter. And this is a reminder that says, please note that you have a delivery due in two days, please ensure that you deliver. If he does not deliver, he gets a secondary notice. That reminds him that you should have delivered a day ago. If you do not deliver today this PO will be cancelled. In most cases they will get back to you after the secondary notice to say that, this is my problem. Please extend the date. But if the supplier does not respond then we will take it to a totally different realm, because it now becomes a performance issue. And now we will be checking the supplier's performance in general, not just related to the specific PO" (Appendix D8).

According to both I8 and I9, for the departments to work together is a problem.

> "Look, there are HR policies that directly say if you do not do your job, it is your direct line manager's job to directly counsel you, and they need to outline it to you. I am saying to you are doing the wrong thing, you probably think who am I, because I work in another department, and I don't do report to you. Your direct senior is obliged to tell you that you are doing the wrong thing and if you do not want to, they can take it into a more formal arena, and there are HR policies that guide on how to address these things with the staff members (I8, Appendix D8).

I8 further opined that the users need to be disciplined because their actions directly affect SCM at CCT, since suppliers are called unnecessarily. It is wasting time for both the buyers and the supplier to verify that the delivery note that was signed, but CCT, and most importantly, the vendors' performance is affected, because one of the vendor performance indicators is based on delivery time. CCT can be in breach by penalising the vendor, only to find out later it is the stores that did not GR in time. The Supplier Management Section's time is wasted because they have to document the entire dissatisfactory process; legal services' time is also wasted.

Finding 41: Certain CCT stores do not conduct their goods receipt processes on time due to ignorance and a lack of training, among others, regardless of how many times the matter has been raised with them

RSQ 2.2: How can the causes of stock-outs be managed at CCT?

IQ 2.2.1: How are the suppliers assessed for capability to adhere to the contract requirements?

I4 indicated that CCT does not screen the suppliers properly, therefore non-compliant suppliers, according to the requirements, still get the jobs. I4 gives an example: "It is not just screening of vendors, [it] is also the government legislation, Triple B EEE, (BBBEEE), that also has a lot to contribute because a lot of companies are fronted, that show you as a director, but behind the scenes there are 20 white people, so that should be looked into more closely" (Appendix D4).

On the other hand ,some suppliers that would qualify are excluded for not following instructions. Therefore, even if the RFQ number has already been created by the assistant buyer, the RFQ is cancelled as an indication that the supplier is incapable of delivering the required materials. I9 stated that, "They have to because this is my quotation document and in here I tell you how to complete this thing. I tell you everywhere in this document what will make you non-responsive. You must physically familiarise yourself with this document" (Appendix D9).

Finding 42: Suppliers that do not follow Procurement's instructions are regarded as incapable and are marked as non-responsive; they are then excluded from bidding, which results in suppliers unfamiliar with the process being denied the opportunity to bid

IQ 2.2.2: How do you know what materials to stock, when, and in what quantities?

According to I5, "I think the MRP calculator is quite useful, and also it is unique to the City. Also I haven't come across it anywhere or any other organisation that I have worked for" (Appendix D5). It was further explained that the MRP calculator is time-consuming, but the information that it provides is up to date and accurate. In addition, the challenge is that the MRP controller does not always understand the graph and the reason for this, as explained by I5, is "basically due to the lack of mathematical understanding, because most of them are 50+ already, so the time they went to school, those were like the 1970s so, yes, that is challenging" (Appendix D5). I5 further stated that, "it is based on what is currently happening,

whereas if you had the forecasting tool, it would be based on the estimated numbers and complicated mathematical sum, that nobody really understands" (Appendix D5).

Finding 43: The MRP controllers do not conduct proper MRP because they do not have the mathematical understanding and background to use the MRP calculator provided as an aid

IQ 2.2.3: What processes should be followed to ensure that the normal reservation creators are not affected by planned or unplanned material withdrawals?

Sometimes drawing stock from other stores that are located further away, is intentional, as stated by I3:

> "because some times, guys just like to drive around just to waste time you know, say from Wynberg to Brackenfell just to go and fetch screws, or something, so that when they come back, it is almost home time. It is a nice outing, maybe they want to go and drink coffee at Cape Gate or something, or there is a drinking place on the way, I don't know" (Appendix D3).

I4 added:

> "Then I looked into the system and said what Muizenberg people wanted, internal ignite sodium lamps, so they had taken or reserved all grand stock. And I looked at Wynberg which is their area head office, Wynberg had 336 in stock with no reservation, 336 in stock. so I told [name], send those guys back we are not interested, so I don't know if those guys think we have something to do, on that side of the world, so let's save our own petrol and so you know, rather reserve from that side" (Appendix D4).

Finding 44: Reservation creators intentionally reserve stock from stores that are located further away so that they can to do personal things in the process; this creates an imbalance in the stores, and stores run out of stock

IQ 2.2.4: What should be monitored in order to manage the causes of stock-outs?

I3, I4, and I1 agree that the consumption of stock items per day should be monitored in order to determine if the reservation creators did planning when they reserved the materials. When there is an incorrect buyer maintained on the materials master, the purchase requisition (PR) goes to the wrong buyer, who often ignores it, according to I5. The researcher then asked a follow-up question: "If you ignore it, who is going to pick it up?" (Appendix D5). According to I5, the buyers make changes to the purchasing group directly on the requisition but not on the materials master, which is

not solving the problem because every time a new requisition is created, the purchasing group is pulled from the materials master.

Finding 45: The buyers ignore purchase PRs that are sent to them in error; when they are told to correct the purchasing group, it is done on the requisition but not on the materials master, which does not solve the problem

4.6   Summary of the findings

4.6.1   Findings and interview questions

Table 4.5 shows the relationship between the themes, findings, research sub-questions and research question. RQ1 and RQ2 are addresses in five themes, namely *procedures*, *suppliers*, *HR*, *systems*, and *service delivery*, while the *stock-outs* theme addresses RQ1.

Table 4.5: Findings per theme
(See also Table 4.4)

Theme	Findings	Research sub-question	Research question
Procedures	6,17,20,22,23,24,26,28,30, 34,35,36,38,39,44,45	1.1 & 1.2 2.1 & 2.2	1 & 2
Service delivery	4,5,13,14,16,32,37	1.1 & 2.1	1 & 2
Suppliers	10,11,25,27,29,42	1.1 & 2.1 2.2	1 & 2
Stock-outs	1,7,8,18,19,21	1.1 & 1.2	1
Human Resources	2,3,15,40,41	1.1 & 2.1	1 & 2
Systems	9,12,31,33,43	2.1 & 2.2	1 & 2

4.6.2   Themes arranged in descending order

Table 4.6 shows a summary of the number of findings per category and the total number of findings per theme, in descending order. It is compiled in accordance with appendix H (refer to Figure 4.8).

Table 4.6: Themes arranged in descending order according to the number of findings

Theme	Category No.	Category	No. of findings	Sum per Category
Procedures	1	Policy	5	
	1	Control	8	
	1	Local content	3	16
Service delivery	2	Management	4	
	2	Communication	2	
	2	Service delivery	1	7
Suppliers	3	Suppliers	6	6
Stock-outs	4	Stock-outs	2	
	4	Planning	2	
	4	Definition	2	6
Human Resources	5	HR	3	
	5	Training	1	
	5	Ethics	1	5
Systems	6	Systems	2	
	6	Data quality	2	
	6	Reporting	1	5
		Total	**45**	**45**

4.7 Summary

Chapter Four covers the results and findings of the study in detail. The chapter is divided into two sections. Section 1 discusses the case, which gives the necessary background of the interviews and how their roles interlink with SCM. The demographics of the 11 interviewees who partook in the study, are indicated. The interviewees are representatives from five (5) departments that run SCM in the organisation, namely two (2) ERP Support consultants, three (3) employees from the Inventory and Stores Management Department, two (2) Master Data employees, two (2) employees from Procurement, and two (2) reservation creators.

Section 2 discusses the data analysis process. Firstly, five key concepts were determined by grouping the related codes together. The codes are the specific and meaningful information from the interviewee responses based on the key words and the interview questions. Each code was then summarised per research question, and 220 findings were deduced from these summaries. The repeating concepts in the 220 findings were grouped together to form 17 categories, which were further grouped to form six (6) themes. The researcher analysed the findings based on the 17 categories in order to summarise the findings, which reduced the findings to 45. The 45 findings are a summary of the 220 findings.

The individual findings were discussed in detail as derived from the transcriptions for traceability purposes. Thereafter, the themes were arranges in descending order according to the number of findings, the number of times the specific word was mentioned, and the criticality of each finding, as follows:

i) Procedures (16)
ii) Service delivery (7)
iii) Suppliers (6)
iv) Stock-outs (6)
v) Human Resources (5)
vi) Systems (5)

CHAPTER FIVE: DISCUSSION

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│   Theme 6: Service delivery  │
└─────────────────────────────┘
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│          Summary             │
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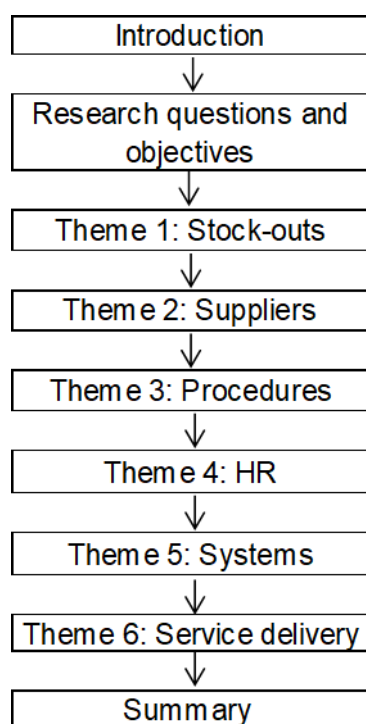
Figure 5.1: The flow for Chapter Five

5.1 Introduction

ERP systems are used for the automation of BPs, and more organisations are adopting ERP systems. A further benefit of ERP systems is their strength to integrate BPs. ERP systems consist of many sub-systems assisting organisations to optimise their operations. One such a system is the Inventory Management System. As indicated earlier (section 2.3.1), the inventory and procurement environments are complex and challenging to manage. In this specific case, the ERP system does not deliver the required results. Themes have been developed from the findings (Table 4.4 & Table 4.5). In this chapter, the themes are discussed in relation to the research sub-questions, literature, and feedback from the interviewees in order to answer the research questions. Each theme is introduced and the responses to each research sub-question are discussed in detail. The themes are: i) Procedures; ii) Service delivery; iii) Suppliers; iv) Stock-outs; v) Human resources; vi) Systems. The themes are discussed individually from section 5.3 onwards.

5.2 Research questions and objectives

Table 5.1 shows the relationship between the research sub-questions and the research objectives. The aim is to explore the possible reduction of the causes of stock-outs at CCT stores.

Table 5.1: Research questions and objectives

Research Problem	ERP systems are able to provide statistical reports regarding stock-outs; however, the information provided is insufficient to link a specific stock-out to its causes within the SCM process at CCT. This makes it difficult to select the most appropriate solution to minimise the causes and number of stock-outs.
Research Aim: To explore the possible reduction of the causes of stock-outs at CCT stores.	
RQ1: What are the factors resulting in stock-outs at CCT?	
RSQ 1.1: How are the stock-outs recognised at CCT?	**RO1:** To determine the status quo of the major causes of stock-outs at the CCT stores
RSQ 1.2: How can the causes of stock-outs be classified at CCT?	**RO2:** To prioritise the causes of stock-outs at the CCT stores
RQ2: How can the causes of stock-outs be reduced at CCT?	
RSQ 2.1: How does CCT manage the causes of stock-outs?	**RO3:** To determine the *status quo* of the challenges in the SCM processes.
RSQ 2.2: How can the causes of stock-outs be managed at CCT?	**RO4:** To propose guidelines to manage and reduce the causes of stock-outs at the CCT stores

5.3 Theme 1: Procedures

The procedures are the issues regarding controls and local content at CCT, as well as the issues around the policies at CCT. This theme consists of the most findings, 16 in total. This means that procedures are viewed as one of the major concerns in terms of stock-outs.

RSQ 1.1: How are the stock-outs recognised at CCT?

In an endeavour to answer RSQ 1.1, it is clear that stock-outs are difficult to recognise in the organisation, because firstly, not all the causes of stock-outs are measured, and secondly, there is misalignment between the policy and the ERP system. These statements are aligned with Le Roux's (2014) opinion that it is impossible to find a perfect fit between the ERP systems and the procedures for large organisations due to the complexity of processes, the policies required within the same functionality, and the volumes of users that use the system. At CCT, the SCM policy states that when the supplier's documents are valid at the time of awarding the tender, the supplier is allowed to do business with CCT for the duration of the specific awarded contract but cannot to bid for any new job. This is a loophole in the policy. The ERP system is set up to prevent PR creators and buyers from procuring from a supplier with expired documents. This contradicts the loophole in the SCM policy (Finding 28).

The buyers ask Supplier Management to unblock the supplier in order to procure according to the contract, but the buyers forget to remind Supplier Management to

block the supplier again after the PO has been created. Two statuses can be assigned to a supplier – blocked or unblocked. If the supplier management practitioner forgets to block the supplier after the PO has been created from the contract, the supplier with the expired documents is able to bid for RFQs. This poses a bigger problem, because by law, and organ of state should not conduct business with a supplier that has expired documents. CCT cannot achieve a clear audit for ensuring fairness, as required by PPPFA, if a supplier with expired documentation can be awarded a new job.

RSQ 1.2: How can the causes of stock-outs be classified at CCT?

In an endeavour to classify the causes of stock-outs in order to answer RSQ 1.2, it is clear that materials cannot be classified from one perspective only. Local content emerges as the major cause of stock-outs for this theme, not because of the number of findings, but because of criticality. This is justified by the fact that the materials identified as local content have more stock-outs than other non-local content materials. Control has been linked to the most findings, and the most outstanding cause is that materials without specifications lead to more stock-outs because of wrong deliveries from suppliers. This is attributed to the non-technical people from the Codification Section being forced to develop specifications to meet the project deadlines, as the material specialists do not provide the material specifications on time. In addition, when non-store managers require changes to be made to the materials master, they do not follow through with the change in order to ensure that the material master is updated accordingly. This results in yet another cause of incorrect procurement of materials. On the other hand, it is difficult to classify the causes of stock-outs in terms of quality supplied at the time of receiving the goods, because the stores do not have materials quality specifications. Stores rely on staff members to inform them of poor quality. If there is no feedback given to stores to return the goods to the suppliers, they continue to supply poor quality materials.

RSQ 2.1: How does CCT manage the causes of stock-outs?

The organisation has many initiatives to manage the causes of stock-outs as per RSQ 2.1. Part of the problem is that not all causes of stock-outs are measured, which means it is difficult to know the major causes of stock-outs. Among other things that make it difficult to manage the causes of stock-outs is supplier lead-time monitoring, because there are simply too many POs created and sent to too many suppliers on a daily basis (many-to-many relationship) (Finding 26). Procurement runs a report on late deliveries and sends it to the relevant suppliers; the responsibility is then left with the supplier to prove that they have delivered on time, even though the stores staff are the ones that did not capture the goods receipts on

time and this is unfair to the suppliers. Another example is that of cross-departmental issues where the Supplier Management Department delays capturing the supplier information on the ERP system (Finding 22). This creates problems for the Procurement Department because suppliers with expired documentation are excluded from the eligible supplier list when adjudicating. However, procurement policy states that all suppliers meeting the qualifying criteria before the closing date of the tender or RFQ must be considered for the job. When the excluded supplier comes back with the evidence that the fault lies with CCT, and the PO has already been issued to a different supplier, the PO needs to be cancelled, creating problems for Procurement. A PO is a legal document between two companies, therefore it is then up to the wrongly awarded supplier to agree that CCT may cancel the PO.

Employees do not know the SCM policies of CCT (Finding 39) and this frustrates them because they do not understand why the specific procedures are followed; they are therefore unable to find a workaround that can solve the stock-out problems, which results in departments blaming one another for stock-out occurrences. SCM Policies contribute towards stock-outs, in that the duration of the advertisement for an RFQ or a tender is predetermined by national legislation. This duration policy must be adhere to even in the case of an emergency, therefore the needed materials cannot be purchased on time, leading to poor service delivery. In addition, the supplier lead-time is not taken into account when adjudicating the suppliers that submitted for the job. Instead of taking the lead-time into account to improve service delivery, the BBBEE level of the supplier and the material cost are considered. As a workaround, Procurement uses the supplier adjudication ranking to persuade the supplier that is awarded the job to reduce the lead-time, by informing them of the lead-time comparison between the suppliers for that bid. The Codification Section staff are not technical people, yet they are forced to create material specifications as a temporary solution, which results in suppliers supplying wrong materials to the organisation.

While the DTI policy indicate that they take only two days to respond to suppliers in terms of sending local content approval letters, collected evidence by Procurement indicates that the DTI takes up to a week to respond to suppliers (Finding 38). The 14-day RFQ policy is therefore negatively affected, which forces Procurement to re-advertise the RFQs. There is a need to amend this policy. There is a contradiction between the local content requirement of the DTI and the suppliers' interest in imported goods, among other things, as imported goods are less expensive and of better quality (Finding 35). In addition, the local content requirement also directly affects staff members negatively, as the reputable suppliers do not want to change

their business model to accommodate local content and therefore simply choose not supply CCT with materials. This leaves employees with the need to purchase working shoes and protective clothing for themselves, using their own funds, as management does not want employees to go to work without wearing protective clothing and safety boots (Finding 36).

RSQ 2.2: How can the causes of stock-outs be managed at CCT?

Currently, departments apply 'quick fixes' to resolve the problems at hand. PR reports are drawn on daily basis to create POs. Each buyer creates POs for the PRs assigned to them. The problem is that buyers ignore wrongly allocated PRs. After some time, when the PR creator follows up, the buyers re-allocate the PR to another buyer but do not contact the Codification Section to change the allocation of the purchasing group (buyer) on the materials master. Therefore, whenever these materials are procured, they are sent to the wrong buyers.

Some of these factors include management not controlling the reservations of materials, the correctness of the material specifications, and the ordering of stock at different locations outside the reservation creators' areas. There are two processes that can be followed to create a reservation. One way is a direct reservation, which requires the manager's approval; the second way is creating the reservation through a Plant Maintenance (PM) order, which does not require the manager's approval. Employees choose the PM order route to avoid waiting for their mangers' approval, because PM order reservation do not require management approval. Furthermore, employees create reservations to draw from stores in the areas they intent to run their personal errands, specifically in areas outside their dedicated stores areas. This results in many challenges for the effective management of stock. Managers are therefore trained to approve only the reservations for materials with the dedicated stores within their area.

5.4   Theme 2: Service delivery

This theme focuses on matters regarding management and communication. There are seven findings in total attached to theme 2.

RSQ 1.1: How are the stock-outs recognised at CCT?

In an attempt to recognise stock-outs at the organisation, as indicated in RSQ 1.1, one problem is that when a stock-out occurs, the impact on service delivery cannot be determined (Finding 5), and despite many initiatives by departments to reduce stock-outs, it is still at a high level. This can be linked to information on stock-outs not reaching all staff members due to the poor attendance of the SCM improvement

meetings (Finding 13) and because some managers do not share the information with their staff despite attending these meetings (Finding 16). The stores also do not communicate stock-out related information on the material they need with the reservation creators (Finding 14).

RSQ 2.1: How does CCT manage the causes of stock-outs?

It is difficult to manage the causes of stock-outs. Service delivery is still a challenge. It is not clear what process to follow when the ERP system is down (Finding 32). Some stores staff issue the materials and fill out a record on a book for the reservation creator to create the reservation later when the ERP system is up. But the problem is that reservation creators do not always remember to create the reservation later, which leads to discrepancies in the ERP system and the physical stock. For this reason, some stores do not issue the materials on the ERP system, at the expense of service delivery. Employees only respond to their direct line manager's instructions, therefore the work only gets done under management supervision or micromanagement (Finding 37). If the direct line manager does not act on policies that are not being followed, services do not get delivered, hence different service delivery is experienced at the different offices in the same department depending on the department manager.

5.5   Theme 3: Suppliers

This theme focuses on the issues regarding suppliers at CCT as well as on other external factors resulting in stock-outs. The theme has six findings in total.

RSQ 1.1: How are the stock-outs recognised at CCT?

In attempting to answer RSQ 1.1, stock-outs can be recognised by the reoccurring causes, although there is no immediate solution to the problem. Most suppliers at CCT are not the original equipment manufacturers, therefore their lead-times and ability to supply the CCT is dependent on their suppliers. Suppliers are required to select the industries that they will compete in upon company registration at CCT, but these are not used when selecting a list of suppliers. According to the policy, all suppliers that meet the required criteria for a job have to be given an equal opportunity to be awarded the bid, even if the job is not within the supplier's selected competency industries (Finding 25). This results in suppliers withdrawing from supplying materials because they under quoted or provided impractical lead-times, meaning CCT has to look for another supplier to complete the job (Finding 11). Another related problem is that suppliers sometimes claim not to have received the POs when they cannot deliver the materials for whatever reason. On the other hand, the ERP system is sometimes unable to send the POs to email addresses that the

exchange server does not recognise (Finding 10). Another reoccurring problem with suppliers is that after all the effort of legal process and finally blocking a supplier that does not perform, the blocked suppliers start a separate business using their spouse or child's name, and there is nothing CCT can do unless the supplier owes CCT (Finding 29). This results in the repeat of undesirable suppliers supplying CCT.

RSQ 2.1: How does CCT manage the causes of stock-outs?
The organisation implements many initiatives to manage the causes of stock-outs, as per RSQ 2.1. In giving a fair opportunity to suppliers as required by PPPFA, CCT Procurement does not consider the industries in which suppliers specialise in order to limit the list of available suppliers. The problem is that most suppliers that are quoting outside their areas of specialisation, are actually the ones that struggle to meet the delivery dates and quality requirements of the organisation. In addition, although the suppliers' conformance to delivery dates is now measured at CCT, older suppliers continue to deliver late because delivery dates were not measured in the past (Finding 27). These suppliers eventually are excluded from bidding because of a bad delivery record, yet in some cases CCT has to negotiate with the supplier because of the scarcity of the materials.

RSQ 2.2: How can the causes of stock-outs be managed at CCT?
In attempting to manage the causes of stock-outs as indicated in RSQ 2.2, the supplier's ability to supply CCT is judged by their ability to follow instructions given by the City, and there are no additional assessments done. Suppliers that do not follow the instructions are regarded as incapable and are therefore not given an opportunity to supply the CCT (Finding 42). Another perspective on this issue is that the instructions of CCT may not be sufficiently clear or may be too cumbersome to non-regular suppliers, which causes them to make mistakes. A representatives must physically visit the suppliers' premises to assess the supplier's capability of maintaining the quantity and quality standard required by CCT.

5.6 Theme 4: Stock-outs

This theme focuses on the meaning of stock-outs at CCT, the planning around stock-outs, and the causes of stock-outs. There are six findings in total linked to theme 4. The theme addresses research sub-questions 1.1 and 1.2. According to Vasconcellos and Sampaio (2009), stock-outs are characterised by an inefficient stock replacement process and can be measured as the percentage of unavailable materials out of all materials that are kept in stock.

RSQ 1.1: How are the stock-outs recognised at CCT?

It is easier to recognise stock-outs through defining them. Stock-outs are defined for the reader to understand the interviewees' point of view. Stock-outs are defined because it is the major variable of the study. The study's results reveal that stock-outs cannot simply be defined in general terms as unavailable stock; there is a deeper meaning to it, which is conditional (Finding 1). Inventory management views stock-outs as a situation where there is zero stock in the stores. Most interviewees also defined stock-outs as a situation when there is no stock in the stores, and some interviewees were able describe stock-outs from a service delivery perspective. This correlates with the definition of Dion and Banting (1995) who define stock-outs as the lack of product availability in stores, which is it a key factor in causing operational uncertainty.

According to other opinions, stock-outs result from a situation where there is stock in the system but there is insufficient stock for the requirement of materials. Staff members know what materials are prone to high stock-outs, and whenever these materials are available, they draw the materials from the stores to stock up their own cupboards for future needs (Finding 8). In a paper written by Deloitte and Touche (2013), squirrel stores is defined as a term used to describe the unofficial storage of materials. According to Deloitte and Touche, one of the major causes of an organisation losing money is on items that have been bought but never used, and which are not included as part of formal organisational inventory management control. These items are not reflected on the balance sheet, because they are not returned to the stores and might potentially not be used in future. Thus, while squirrel stores might solve an individual's problem or a departmental problem, it does not solve the organisation's stock-out problem because it creates uneven stock withdrawal from stores, resulting in MRP controllers not being able to plan.

Deloitte and Touche (2013) also explored the reasons why squirrel stores are being established in companies. The authors state that poor trust in SCM to provide the critical spheres when needed is a challenge. Spare parts planning is not done properly by MRP because of irregular demand and squirrel stores are believed to help individuals achieve their KPI targets. According to the reservation creators, there are sometimes no materials when they go to the stores; this is a situation that has led to the creation of squirrel stores. Another practice of the reservation creators is to create partial reservations to avoid wasting time going from store to store to collect materials. For example, if the total materials needed is 100 items, the reservation creators reserve 20 items from 5 stores to make up the full order. To collect, the reservation creators still go from store to store but with a better chance

of getting the materials upon arrival whereas with reserving the whole 100 items in one store, there is an increased chance for a store to only offer a portion of the order. This is supported by a study conducted by Bayle-Tourtoulou et al. (2006), who measured the frequency of two types of stock-outs, namely zero stock and insufficient stock for the requirement. The results indicate that insufficient stock occurred more than zero stock in inventory. Therefore, stock-outs is a situation where there is stock in stores, but the available stock is not sufficient to satisfy the staff member's material requirements. These situations result in the inability for stores to issue materials to the reservation creators. Service delivery is therefore hampered.

RSQ 1.2: How can the causes of stock-outs be classified at CCT?

In classifying stock-outs, there are many common causes for frequent material stock-outs, including materials that are manufactured with long lead-times; imported materials or materials with a component that is imported; materials that are affected by the intensity of labour; materials that are affected by transport; and materials specified to be of local content.

There are different opinions regarding the main causes of stock-outs. In general, the interviewees mostly mentioned issues that directly affect them and did not provide a holistic overview of stock-outs. This is said to be one of the disadvantages of qualitative research, according to Henning et al. (2004). Some interviewees classified stock-outs in terms of percentages and indicated that according to analysis, 60% of stock-outs can be attributed to reservation creators not planning, and 30% of stock-outs are a direct result of late deliveries by suppliers, which is in contradiction with the general views of interviewees, as shown by the study results. According to Stüttgen et al. (2017) suppliers need to know the root causes of stock-outs in order to align production with the organisation. The interviewees had different opinions of the main causes of stock-outs, but collectively their responses point to the following three main causes, in order of criticality: firstly, policy related causes (procedures); secondly, management related causes (service delivery); thirdly, supplier related causes (suppliers) and planning related causes (stock-outs); and fourthly, HR related issues and systems related issues. The themes are arranged in descending order according to the number of findings in Table 4.5.and Table 4.6 (Section 4.6).

5.7 Theme 5: Human resources

Human resources are the most valuable resources in any organisation. This theme focuses on matters regarding staff conduct and training. There are five findings in

total linked to theme 5. The theme addresses research sub-questions 1.1, 1.2, and 2.1. Vasconcellos and Sampaio (2009) conducted a study on the importance of the extent of stock-outs to managers themselves. The results of the study reveal that by taking preventative actions, managers have significant opportunities to reduce stock-outs.

RSQ 1.1: How are the stock-outs recognised at CCT?

In attempting to answer how the stock-outs are recognised at CCT, it is important to highlight the importance of a holistic view when approaching SCM problems as addressing an individual problem does not necessarily solve the supply chain problem. The human resource problem contradicts the key fundamental role played by the organisation to provide residents with good service delivery. In that, it has been highlighted earlier that the staff members are unable to determine the holistic impact on how a solution to their individual problem will affect other BPs (Finding 3). It is difficult for other departments to raise issues or concerns with the stores regarding stock-outs as they do not maintain good work ethics (Finding 15). This can be attributed to CCT managers not working well together; they also do not work well with staff members (Finding 2).

RSQ 2.1: How does CCT manage the causes of stock-outs?

In attempting to manage the causes of stock-outs, the organisation extended the allocation of two working days for goods receipts and this time is taken into account when creating a PO. This is to accommodate the problem that specific CCT stores do not do goods receipts on time due ignorance and a lack of training, regardless of how many times the matter has been raised with them (Finding 41). Staff members do not use the tools and training provided by ERP Support (Finding 40), making it difficult to measure, know, and manage the root causes of stock-out problems.

5.8   Theme 6: Systems

This theme focuses on issues regarding data quality and reporting at CCT. Five findings in total have been linked to theme 6. The theme addresses research sub-questions 1.1 and 2.1.

RSQ 1.1: How are the stock-outs recognised at CCT?

It is difficult to recognise the stock-outs in the organisation because reasons for stock-outs are not reported on the ERP system, and therefore the system cannot be used to report on the reasons for stock-outs (Finding 9). Some of the causes for stock-outs can be attributed to the ERP system. For example, the system allows stores to issue more stock than available in stores for the requirement date where

there is no stock in the ERP system (Finding 12), which results in a negative stock level; thus whenever materials are replenished there will be a missing number of items if this is not corrected manually, even though physically the materials available in the stores. This error normally occurs because of slow system checks during month-end when big reports are generated. Another issue that makes it difficult to recognise the causes of stock-outs at CCT is that during the system downtime, when the goods are issued manually, users forget to update the system when the system is back on (Finding 33). This results in shortages that cannot be explained.

RSQ 2.1: How does CCT manage the causes of stock-outs?

In attempting to manage the causes of stock-outs, a specialist compiles the statistics regarding the KPIs *ad hoc* once a month to present to managers in the SCM improvement meetings (Finding 31). One of the problems with *ad hoc* statistics is that managers are unable to monitor the process timeously by themselves, therefore the reaction is often too late for the stock-out challenges. The discovery of problems is done later in the month when the person in question no longer remembers the details.

RSQ 2.2: How can the causes of stock-outs be managed at CCT?

Continuous training and refresher training have been indicated to improve staff behaviour and thereby reduce stock-outs. This solution needs continuous implementation because the MRP controllers do not conduct proper material requirement planning as they do not have the mathematical understanding and background to use the MRP calculator provided as an aid (Finding 43).

5.9   Conceptual framework and guidelines

5.9.1   Amended conceptual framework

The research has shown that there is a relationship between the external causes of stock-outs and the business rules of the organisation, and the relationship indicates that that business rules fall between internal causes and external causes of stock-outs. For example, if a strike affects the main supplier, which is an external factor, and this supplier cannot deliver, and alternative supplier is given the job in accordance with the business rules. Legislation lies outside both the supplier and the organisation's control, but it controls both the internal processes and the external processes. For example, if the DTI does not issue the local content exemption/ confirmation letters to suppliers on time, the CCT cannot consider a supplier's quotation or bid. Therefore, to indicted this relationship, the framework has been updated with the a line. The red line in Figure 5.2 below indicates the relationship

between the external causes of stock-outs and the business rules of the organisation.

Framework to explore the causes of stock-outs at CCT

External causes

Internal causes

Stock-outs

Support structures
Training
ERP support
Master data

Measurements
Late deliveries
Discrepancies (ERP & Physical inventory)
Goods receipt processing time
Procurement lead time

Business rules
Processes
Policies
Legislation
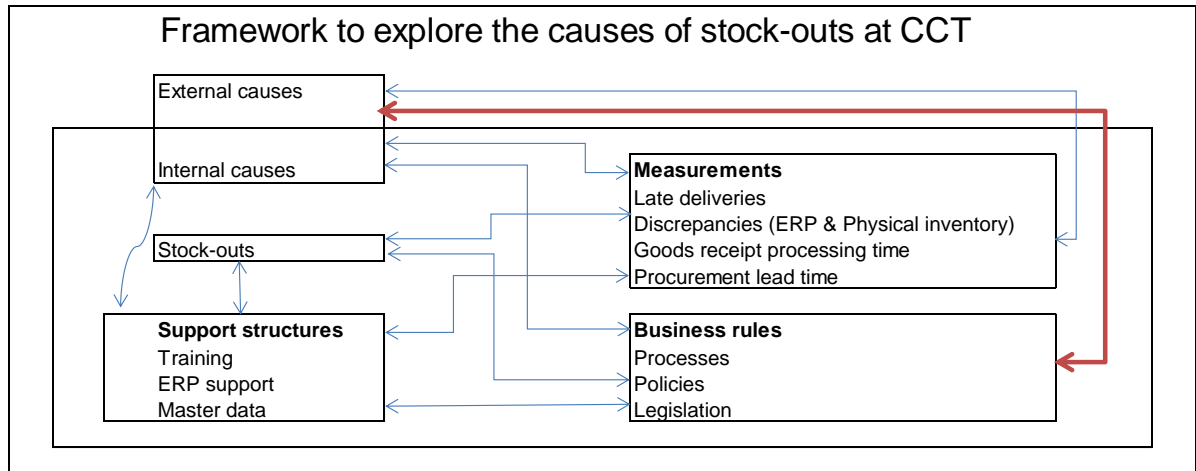
Figure 5.2: Amended conceptual framework

5.9.2 Guidelines

The biggest causes of stock-outs involve both internal and external factors. According to the TOC, resolutions to the causes of stock-outs must be done either one at a time or simultaneously where the two bottlenecks have the same ranking or the solution thereof is similar. TOC is a methodological process of resolving bottlenecks in a specific sequence according to priority (Section 2.6.1). According to the study's results, the major bottleneck lies with local content, which requires the implementation of guideline number **i** (see the complete list of numbered guidelines on the next page). This bottleneck must be addressed first, and only when it is resolved, can guideline number **ii** be addressed and resolved. However, if the local content issue cannot be resolved by implementing guideline **i**, then according to TOC, additional resources have to be employed to resolve the bottleneck.

Resolving other smaller bottlenecks would not resolve the organisational stock-out problems until the major bottleneck has been resolved. An example of employing additional resources in the case of a local content bottleneck, according to TOC, would be to log a formal complaint together with the suppliers and the suffering residents (due to poor services because of local content), to the relevant government ministry. The complaint should be centred on the implementation of a service delivery-oriented legislation revision on local content. This should capture the government's attention to resolve the local content bottleneck.

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The sequence of the guidelines below merely reflects the current study results in order to identify the most important bottleneck to resolve, which after resolving, the second round of investigation must be actioned to discover the second major bottleneck to resolve. According to the TOC, the investigation must carry on until such time when the remaining bottlenecks do not affect the throughput of the organisation. This would be the time when the remaining bottlenecks do not affect the availability of stock in the stores. It is also important to know that each set of investigative results may be different, for example, once a local content bottleneck has been resolved and the second round of investigations is done, the results may reflect the second major bottleneck as a management issue, requiring the implementation of guideline number **iii,** and not an ERP-reporting bottleneck that requires the implementation of guideline number **ii**.

Below are the guidelines to follow in resolving the stock-out problem at the CCT:

i. **Procurement does not receive responses from suppliers due to local content requirements:**

Ensure that action is taken by the DTI on the evidence that has been sent to them, so that the DTI can improve their processes and adhere to promised timelines. The evidence serves a proof that the DTI does not respond to suppliers within the timeline indicated by the SCM policy (two days).

ii. **Not all causes of stock-outs are measured by the ERP system:**

Determine the key performance indicators and build the processes around these KPIs with the help of the staff members to ensure that the major causes of stock-outs can be managed in accordance with the entire CCT SCM by using the real-time information on the ERP system.

iii. **Staff members in the same department do not conduct their work the same:**

Ensure compliance and adherence to the standard procedures and processes by educating the staff members and holding relevant staff member and managers accountable for any deviation. Most importantly, enforce entire SCM thinking culture by indicating the implication of any deviations on the entire SCM.

iv. **The ERP system is not aligned with the SCM policy:**

Customise the ERP system to ensure that it accommodates the amended procedures and processes. In addition, ensue that the system is interactive and error free. Furthermore, ensure that the ERP system is fully functional

and operational around the clock to eliminate the problems of manual processes.

v. **Material specification is not in place:**

Ensure that the product specifications and quality specifications are done by the relevant people to ensure procurement of the correct materials and the correct quality check at each store when the materials are received.

vi. **Staff members only know their area of work and cannot relate to other parts within the SCM division:**

Enable free communication within the organisation by taking staff members for site-seeing visits to meet their internal customers. The communication should include procedures so that people know exactly what to do under specific circumstances.

vii. **Proper supplier screening is not in place:**

The experts must investigate and estimate costs to determine the range of acceptable quotations to benchmark against during adjudication in order to eliminate suppliers with unrealistic material prices. In addition, assess the awarded supplier's capability to supply by sending the subject experts to conduct a full analysis at the supplier's premises as part of the screening process.

viii. **Suppliers do not manage their POs and master data:**

To avoid e-mailing problems, implement an e-procurement solution that will ensure that suppliers are able to access the purchasing document upon creation. In addition, suppliers should own be able to amend their company information online. CCT need to collaborate with suppliers via information technology to manage the procurement process.

5.10 Summary

The discussion on themes is based on the research sub-questions, literature, and interviewee responses. It is easier to recognise stock-outs when they have been defined. In this study, stock-outs are defined because it is the major variable of the study. The results of the study reveal that stock-outs cannot simply be defined in general terms as unavailable stock; there is a deeper meaning to it, which is conditional. It is clear that it is difficult to recognise stock-outs in the organisation because, firstly, not all the causes of stock-outs are measured, and secondly, there is misalignment between the SCM policy and the ERP system. The ERP system cannot be used to identify all the reasons for stock-outs.

When stock-outs occur, the impact on service delivery cannot be determined. Despite many initiatives by departments to reduce stock-outs, it is still at a high level

at CCT. Stock-outs can be recognised by the reoccurring causes, although there is no immediate solution to the problem. The results also reveal that the entire SCM must work together to address the stock-out problems.

It is clear that materials cannot be classified from one perspective only. In classifying the stock-outs, there are many common causes for frequent material stock-outs, including materials that are manufactured with long lead-times; imported materials or materials with a component that is imported; materials that are affected by the intensity of labour; materials that are affected by transport; and materials specified to be of local content.

In addition, there are different opinions regarding the main causes of stock-outs. In general, the interviewees mostly mentioned issues that directly affect them. Furthermore, local content materials seem to stock-out more than non-local content materials. Materials without specifications also stock-out more because of wrong deliveries from suppliers. Another related issue is that there are no quality specifications for materials held as stock, therefore poor quality materials are received and this is only realised at a later stage.

It is difficult to manage the causes of stock-outs. Supplier lead-time monitoring is one of a number of reasons making it difficult to manage the causes of stock-outs, because there are simply too many POs created and sent to too many suppliers on a daily basis. Processes are still a challenge because it is not clear what process to follow when the system is down. Employees only respond to their direct line manager's instructions, therefore the work is only done under management supervision. The staff members do not use the tools provided by the ERP Support Department. The suppliers are allowed to bid outside their specialisation areas, and these suppliers are the ones that struggle to meet the delivery dates and quality requirements of the organisation. Statistics regarding the KPIs are drawn once a month, therefore managers are always late to react.

Attempting to manage the causes of stock-outs is a challenge because suppliers' ability to supply is judged by their ability to follow instructions at CCT, which, according to the results, is an insufficient method to apply. Individual reports are generated to monitor specific parts of the BPs. According to the interviewees, the BI report can be useful in measuring all the causes of stock-outs, but this will depend on the staff members capturing the correct information every time they transact. This is inclusive also of the system being online all the time to avoid employees transacting offline.

The amended conceptual framework is discussed to map the link between the stock-out causes. The guidelines are discussed to propose possible solutions that can be implemented to resolve the stock-out problem at CCT.

6. CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

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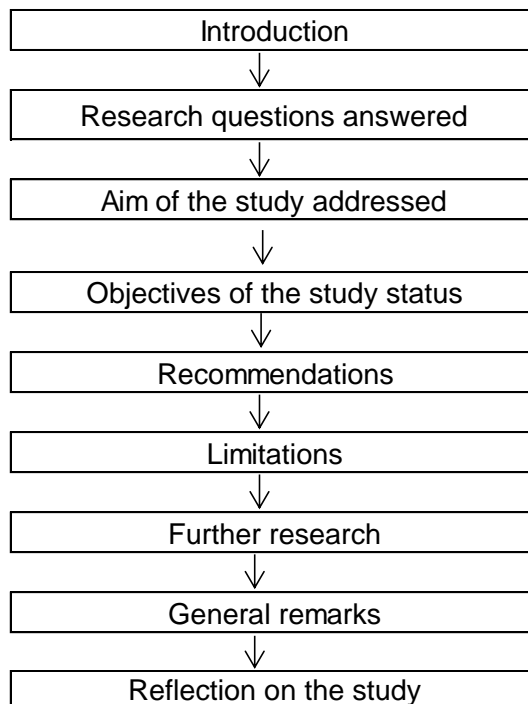
Figure 6.1: The flow for Chapter Six

6.1 Introduction

In this chapter, the research questions, aim, and objectives of the study are answered and reported on.

6.2 Research questions answered

6.2.1 Research Question 1

RQ1: What are the factors resulting in stock-outs at CCT?

The factors resulting in stock-outs at CCT are both internal and external. Factors and results are listed as follows:

i) It is a challenge for suppliers to meet the local content requirements.

ii) The causes of stock-outs are not measured at CCT, therefore it is difficult to know the major causes of stock-outs to resolve.

iii) managers do not work well together; they also do not work well with staff members, resulting in the same department's staff members conducting their work differently.

iv) The ERP system is not aligned with the SCM policy, thereby causing delays due to manual updates.

v)   Material specifications are not updated on the system, resulting in incorrect deliveries from suppliers.

vi)   Proper supplier screening is not in place, resulting in incapable suppliers.

vii)   Suppliers do not manage their purchase orders, resulting in late deliveries.

viii)   Stores do not capture goods receipts on time, resulting in reservation creators not knowing the availability of the materials in the stores, which leads to buyers following up with vendors.

ix)   Managers do not approve workflows on time resulting, in delayed procurement processes.

6.2.2   Research Question 2

RQ2:   How can the causes of stock-outs be reduced at CCT?

i)   A SCM improvement meeting is held on a monthly basis to look at ways to improve supply chain problems.

ii)   Buyers are introduced face-to-face to the MRP controllers to enhance their relationship.

iii)   MRP controllers are trained on how to use the custom MRP calculator to ensure that MRP is done correctly.

iv)   ERP e-procurement is being implemented for suppliers to manage their POs online; this among other benefits will prevent the problem of suppliers not receiving POs.

v)   Collected evidence (Finding 38) has been sent to the DTI.

6.3   Aim of the study addressed

The research aim is to explore the possible reduction of the causes of stock-outs at CCT stores. The possible reduction of stock-outs are listed in section 5.9.2 by firstly indicating the problem, followed by the possible solutions.

The interview questions only served as a guideline during the interview process; the researcher probed the interviewees where necessary to uncover the needed detailed information. This was guided by open-ended questions involving "what" and "how" questions. The interview questions followed the structure of, finding out:

i)   What is being done?

ii)   What the challenges are with what is being done?

iii)   How the challenges can be resolved?

6.4 Objectives of the study

6.4.1 Objective 1

- ➢ To determine the *status quo* of the major causes of stock-outs at the CCT stores

1. Procedures

Process problems

- i) It takes DTI longer than promised to exempt suppliers from supplying local content.
- ii) There is a miss-alignment between the ERP system and the SCM policy.
- iii) Stores employees do not capture the goods receipt in time on the ERP system, therefore other employees do not know that the materials are physically in the store but not on the ERP system.

2. Service delivery

Service levels

- i) Residents sometimes do not have water and electricity when there are stock-out problems, for example when the meters are faulty.
- ii) When the meters are bypassed for the residents to have electricity and water, the residents do not alert the CCT that the meters are still bypassed, and therefore CCT suffers financial losses.

3. Suppliers

Late deliveries by suppliers

- i) Suppliers ignore the delivery dates on the POs.
- ii) Suppliers claim not to have received the POs.
- iii) Incapable suppliers are selected to deliver the goods.

Stock-outs

Not planning

- i) MRP controllers do not know how to plan and use the tools provided as an aid.
- ii) Project managers plan outside the system and create reservations too late in the system.

4. HR

Control

- i) Stores employees take extended breaks without substitutes and do not listen when talked to.

ii) Reservation creators reserve stock at far away stores, not at the local stores, for them to create enough time to run personal errands.

iii) Managers do not approve the workflow on time, thereby delaying other business processes.

iv) Reservation creators do not use the CCT stores as intended; they store the materials in their cabinets (squirrel stores).

Systems

System problems

i) The system goes down a times and employees are forced to use manual processes.

ii) The ERP system has the inherent problem of allowing the issuing of more stock than is available in the stores when it is overloaded during month-end when managers run large reports.

6.4.2 Objective 2

➢ To prioritise the causes of stock-outs at the CCT stores

In order to prioritise the causes of stock-outs, the researcher considered the number of the times a specific word was mentioned, the number of findings, and the criticality of each finding. Prioritising the causes of stock-outs has been done according to the themes, and each theme has been assigned categories and findings as a further breakdown.

Referring to Tables 4.5 and 4.6 in section 4.6, prioritisation follows the following sequence:

i) Procedures
ii) Service delivery
iii) Suppliers and stock-outs
iv) HR and systems

6.4.3 Objective 3

➢ To determine the *status quo* of the challenges in the SCM processes

i) The suppliers do not want to supply CCT; employees have to either buy their own protective clothing or go to work with their normal clothes, which the managers do not want.

ii) The stores are becoming increasingly empty as the local content specification is rolled out to other materials.

iii) Suppliers deliver wrong products.

iv) Established suppliers choose not to supply the City when CCT demands suppliers to change to the way they conduct their business in order to align with CCT requirements.

6.4.4 Objective 4

➤ To propose guidelines to manage and reduce the causes of stock-outs at the CCT stores

The proposition of the guidelines has been done in section 5.9.2.

6.5 Recommendations

The following recommendations are made after considering all the findings and discussing the themes:

i) Implement the proposed guidelines as prescribed in section 5.9.2.

ii) Master data must be updated on a regular and *ad hoc* basis with the input of all SCM employees upon identifying the issues, rather than simply attempting to solve problems on hand.

iii) The organisation must sent an inspector to physically visit the sites of the suppliers and to verify their processes and records to determine the capability of the suppliers, instead of simply assessing the documents supplied to the CCT by suppliers.

iv) Provide weekly classroom training to the MRP planners on how to plan MRP using the MRP calculator. Use real data examples in the ERP system for the MRP planners to realise their mistakes.

v) Managers must eliminate non-work related staff activities by only approving reservations of stock within their designated stores areas. Where materials are not stored locally, insist that a stock transfer is made to the local store. Stores staff must also not issue stock to reservations created outside the local area.

6.6 Limitations

The study explores the possible reduction of the causes of stock-outs at the CCT stores. It does not measure the cost of stocks-outs to the organisation. The study furthermore does not determine the impact of stock-outs on service delivery.

The study used purposive sampling to collect the data, and therefore lacks some of the important demographics such as age and gender associated with other sampling methods.

The study is a case study and is therefore limited to CCT, but results of the study can be generalised to include the rest of South Africa (but not other countries) because of the same legislation and political history.

6.7   Further research

Perform a study to quantify the total monetary value that stock-outs cost the organisation. This, among other uses, can contribute a method to quantify stock-out percentage cost on total inventory to the body of knowledge, which can then be used to convince government to revise the policies that hamper service delivery in organisations.

Perform a study to explore supplier performance after the e-procurement project is implemented using the ERP system in order to explore supplier-related causes of stock-outs in a supplier self-service environment.

6.8   General remarks

Stock-outs are still a major problem at CCT despite the efforts to resolve them. The data were collected using interviews as a data collection method, and analysed using thematic analysis to produce six themes. The six themes, i.e. procedures, service, delivery, suppliers, stock-outs, HR, and systems, were used to discuss the results of the study. The major challenge with the study is that it is qualitative, and therefore both the number and the criticality of the findings as well as the number of words mentioned are considered in the discussion. The objectives of the study were achieved, thereby addressing the research problem. The guidelines are in accordance with the results of the study; therefore, in order to resolve the causes of the stock-outs, TOC process must be applied based on the guidelines.

6.9   Reflection on the study

Information on the criticality of decision-making and information sharing determines the success of the organisation. My background is in industrial engineering, and I am now pursuing a career in information systems. The motivation to conduct this study stems from the desire to make a meaningful contribution to the CCT in my field of expertise in line with the organisational goals, and to further my education, thus contribution to the body of knowledge. A few of my major goals are to increase the service level quality for citizens, to create new employment opportunities, and to increase employee satisfaction.

The literature was compiled using books, government documents, journals, research papers, conference papers, published theses, and internet sources. Data were collected using semi-structured interviews as a data collection method. The

interviews were set up three weeks in advance and were subject to adjustment due to operational reasons. In my request for meetings, the respondents were briefed of what the interview was about, which improved the quality of the data I collected. The data were analysed using thematic analysis.

A discussion was done using the themes, and recommendations were made to align with the theory. Further research is available for other researchers who are interested in the subject to expand on what has already been done in the field.

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APPENDIX A: CONSENT TO COLLECT DATA AT CCT

CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

IS&T: SAP-ERP SUPPORT CENTRE

Rudy Abrahams
Manager: SAP-ERP Support Centre

T: +27 21 400 5013
E: Rudy.Abrahams@capetown.gov.za

ATTENTION: Higher Degrees Committee (HDC) of the Cape Peninsula University of Technology

CONSENT TO COLLECT DATA FROM THE CITY OF CAPE TOWN

I, Rudy Abrahams, in my capacity as Manager of ERP Support Centre at The City of Cape Town give consent in principle to allow Moletsane Tarcisius Moleli, a student at the Cape Peninsula University of Technology, to collect data in this company as part of his M Tech (IT) research. The student has explained to me the nature of his research and the nature of the data to be collected.

This consent in no way commits any individual staff member to participate in the research, and it is expected that the student will get explicit consent from any participants. I reserve the right to withdraw this permission at some future time.

In addition, the company's name may or may not be used as indicated below. (Tick as appropriate)

	Thesis	Conference paper	Journal article	Research poster
Yes	X			
No		X	X	X

Mr Rudy Abrahams
Manager: SAP-ERP Support Centre

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APPENDIX B: INTERVIEW QUESTIONS PER DEPARTMENT

DEPARTMENT ASKED **ERP = ERP Support consultants** **ISM = Inventory and Stores Management Department staff** **MD = Master Data staff** **PR = Procurement staff** **RC = Reservation creators**					IQ NO.	INTERVIEW QUESTION (IQ)
ERP	ISM	MD	PR	RC	IQ 1.1.1	How are stock-outs experienced at CCT?
ERP	ISM		PR	RC	IQ 1.1.2	How do you identify the materials that stock-out?
ERP	ISM	MD	PR	RC	IQ 1.1.3	How does consistency in your area work with regard to stock-outs?
ERP	ISM	MD	PR	RC	IQ 1.1.4	How is the information regarding stock-outs communicated to staff members?
ERP	ISM		PR	RC	IQ 1.2.1	What are the common features or characteristics of materials that are commonly out of stock?
ERP	ISM	MD	PR	RC	IQ 1.2.2	What are the significant causes of stock-outs?
	ISM	MD	PR		IQ 2.1.1	What are the challenges with regard to master data?
			PR		IQ 2.1.2	What are the influential platforms in deciding on the supplier?
ERP	ISM		PR	RC	IQ 2.1.3	What are the challenges with regard to supplier performance?
			PR		IQ 2.1.4	What are the challenges with regard to managing suppliers' information?
ERP	ISM		PR		IQ 2.1.5	What are the challenges experienced with regard to following the supply chain processes?
ERP		MD			IQ 2.1.6	What are the challenges with regard to ERP availability?
ERP	ISM	MD	PR	RC	IQ 2.1.7	What are the challenges with regard to policies and regulation in SCM?
ERP	ISM		PR	RC	IQ 2.1.8	What are the challenges with ERP with regard to resolving the reported calls by the staff members?
ERP	ISM		PR	RC	IQ 2.1.9	What are the challenges to the process of goods receiving?
	ISM		PR		IQ 2.2.1	How are the suppliers assessed for capability to adhere to the contract requirements?
	ISM				IQ 2.2.2	How do you know what materials to stock, when, and in what quantities?

DEPARTMENT ASKED					IQ NO.	INTERVIEW QUESTION (IQ)
ERP = ERP Support consultants **ISM = Inventory and Stores Management Department staff** **MD = Master Data staff** **PR = Procurement staff** **RC = Reservation creators**						
ERP	ISM			RC	IQ 2.2.3	What processes should be followed to ensure that the normal reservation creators are not affected by planned or unplanned material withdrawals?
ERP	ISM	MD	PR	RC	IQ 2.2.4	What should be monitored in order to manage the causes of stock-outs?

APPENDIX C: INFORMED CONSENT BY THE INTERVIEWEES

Letter of Informed Consent

My name is <u>Moletsane Tarcisius Moleli</u>, thank you for taking time to meet with me. The following consent letter is for the participants who will take part to explore the causes of stock-outs in an ERP-based supply chain management at the CCT. This will assist in resolving the problem that the information provided by the ERP systems is insufficient to link the stock-outs of a material or group of materials to the causes within the supply chain processes at the CCT.

The interview should take 1 hour at most, but 1.5 hours is scheduled as a preventative measure, should the interview exceed the planned duration time. The interviewees are selected based on experience and knowledge of the subject, therefore no questions will be used to test or belittle interviewees. The interview will be done for the study purposes; as a result, the outcome will be published and presented in professional meetings. The signature required at the bottom only signifies that the interviewee voluntarily took part in the study and that they also understand that they can stop the interview at any time without reason.

Supporting information will be accepted and the interview will be voice recorded to ensure that no valuable information will be missed if only notes were taken. All the transcription sheets and the voice recordings will be kept by the interviewer only until completion of the study (locked folders for soft copies and no name will be put on the hard copies); thereafter it will be destroyed.

Participant: ……………..…… Signature: …………………...Contact…………..…….

Researcher…………………... Signature: ……………..……Contact…….…….………

Date: ……………..

APPENDIX D1: INTERVIEW TRANSCRIPTIONS I1

Me: I am going to interview I1 from the ERP at the City of Cape Town. He is responsible for inventory management form the ERP side. Amm!

I1: Amm!

Me: Here is the informed consent form that you are supposed to fill.

I1: Yes!

Me: It basically states that you voluntarily took part in this interview to contribute, to assist me to get the results that I am hoping to achieve.

IQ 1.1.1	How are stock-outs experienced at CCT?

Me: The first question that I have is" "What does out of stock mean from the ERP perspective?"

I1: The stock-out from the ERP perspective, if I can give and overview is, from the ERP side is, if there is insufficient stock in the bin, and the user required more than what is available. So, although there is stock in the system, but there is insufficient stock for the requirement. And that would constitute from the user's perspective a stock-out and not from the view point of inventory management or from the stock perspective, because even if there is one in stock, it doesn't mean that they are out of stock. But I think that you concern is more related to the fact that service delivery will not happen; therefore, I would formulate a stock-out as a bin where there is zero available or where there is insufficient quantity to serve the end user.

Me: Thank you very much.

Me: Amm! In your experience, how does your line of work impact on stock-outs, let's say if work is not done properly from your side would result into a stock-out? For example, say the queries logged with SAP help desk take long to be resolved? What is the impact of that towards stock-outs?

I1: Stock-out from the ERP perspective is related to the users who experience these situations, and they do not have a full understanding of the system functionality and how the system operates. This can be attributed to two things: Number one, a lack of planning from inventory management's side, when the reorder levels are insufficient for day-to-day usage. Number 2, from the end user where the planning cycle is not planned properly, in other words, they wait until number 99 and they expect stores to be fully compliant with the all the quantities which they want to reserve. The impact that this has from us, the ERP side, is again two folded, once a call is logged by the MRP controller who requires information and training on the module, and on the other side from the end user not trained properly. Both these parties log calls with SAP helpdesk to deal with their business processes.

Me: What is done on the normal basis to overcome these challenges?

I1: The training facility form the ERP floor is limited; we have got very little number of employees that can deal with training the end user and day-to-day resolution of calls that is being logged. The challenge is more in getting business skilled up in their own business processes, for them to support their own function and to understand the business process, and how that impacts on the ERP solution in getting their things sorted out. Call on our side is not to resolve the out-of-stock issue but rather how to prevent is by means of proper training.

IQ 1.1.2	How do you identify the materials that stock-out?

Me: Can you determine the history of the material being out of stock? Is it possible to achieve this and then record of the materials being out of stock?	

I1: Yes, it is possible to determine the number of times a material was out of stock, amm! Whether that has an influence on service delivery outside there, that we cannot determine, because many users do not make the reservation on the system if they find that there is zero quantity in stock, or insufficient stock in the system. They would then just not do the reservation, but monitor stock levels externally, and only when there is stock in stores create a reservation for consumption. So, to answer the question, we are not fully able to report on how many times the stock-outs occurred and what the reason therefore was. As long as the role players and the users do not use the system properly, there will always be a lack in reporting.

Me: How do you identify when a material is out of stock at present, let's say form the end users perspective?

I1: We only look at zero balances in the system, in other words, when the bin constitutes zero that will currently constitute an out of stock situation.

Me: What do you do when you have identified that the material is out of stock, or what should the end users do when they realise that the material is out of stock?

I1: If it is an urgent application, they can source the materials from alternative stores. 2. Ask the MRP controller to adapt and change the MRP perimeters, because the consumption rate or the daily average consumption rate is higher than what was anticipated. The MRP controller would then change the figures and expedite the replenishment process or the purchase orders in the system in order to service the customer.

IQ 1.1.3	**How does consistency in your area work with regard to stock-outs?**

Me: Have you experienced any inconsistencies with the system? Say for example reports giving incorrect information or the ……PO differing from a requisition kind of scenario?

I1: No, we have not found any anomalies on it. The biggest issue is the vendors delivering late, Amm!, but there is not; SAP is always right, if it is not, then fix it. Amm! When the report is done based on the data that is in the system seem to be correct; if there are purchase orders not delivered or reservations not being collected or reserved incorrectly, that needs to be corrected, then the reporting there after will report the correct information.

Me: What about the physical inventory, the materials in stores? Does it happen that the end user makes a reservation knowing that there are 10 items now, when the person gets to the stores, suddenly there is only 8 items?

I1: Yes, that happens, mainly due to pilferage, breakages happening, incorrect materials being picked and issued; therefore, there are some inconsistencies when it comes to physical stock levels versus SAP stock levels. This is being rectified by physical inventory procedures, which happen at least once per year. They also have daily checks on stock levels on materials that moved, and therefore they should be able to pick it up earlier. Unfortunately SAP will not be able to give you detail on these types of problems where the system reflected a higher stock value than what was physically in the bin.

IQ 1.1.4	**How is the information regarding stock-outs communicated to staff members?**

Me: Is the information regarding stock-outs communicated to staff members?

I1: We have an early warning system, as for when the materials reaches a certain percentage below the re-order point, we indicated that by means of a red traffic light. The MRP controllers are in the position to identify those materials in order to take a remedial action in either by expediting stock transfers from other plants or try and ask the end users to move their requirements date into the future or to try and plan a bit differently.

Me: Are there challenges with regard to this communication, let's say for instance…. when the system is unavailable sometimes, or the end users do not inform stores in time regarding any change. are there any challenges regarding communications say the MRP controller does MRP run and expedites for the stock the be done, I want to find out if there are any challenges with regard to expediting?

I1: Yes, the major challenge, in the communication not only between the user department but also between the stores department as well as feeding back to the

supplier, as for when anomalies have been picked, the process that is followed to deal with those possible stock-outs causes, is not adhered to by a proper business process, SAP and from the ERP perspective the information is readily available is more of the user adherence or the business process that they need to adhere to ensure that the relevant parties are informed, of the situation.

Me: How are the relevant stake holders informed? Is it with an email or…..?

I1: First of all, the MRP controller will pick it up, by the red traffic light within the system, there after the purchase orders that were supposed to be delivered but were not delivered, the vendors are sent expediting letters from the Procurement Department. End users before collecting the materials from stores needs to go into SAP prior to collecting the stock, and redo the availability check on the reservation, when there are anomalies and suddenly the materials are not found, due to purchase orders that did not deliver, they need to take a remedial action by sourcing from other stores, or plan different within the planning horizon, in other words extending the end dates or extending the project to the date when the material will be available.

Me: Are the MRP controllers aware of the supplier capability, so that they would know that the supplier can only deliver this much goods within these specific period of time? Such that they will not raise their reorder points more than what the supplier is capable of delivering in the given time.

I1: Unfortunately that kind of communication needs to be between the Procurement Department and the vendor, when there are concerns about the quantities required, or bought on the purchase order, should the vendor have difficulty in supplying the required quantity the required planned delivery period, that is purely between the Procurement Department and the vendor but subsequently it has the impact on inventory management side, and they should be informed accordingly to extend the planned delivery time according to the agreement with the vendor.

Me: Has the above lines of communication improved service delivery?

I1: Ooh yes! There was considerable improvement. We started with the Procurement Department through the dunning process, the dunning process is about monitoring the purchase orders that are supposed to be delivered the following day, we would sent the reminder letter to the vendor if the vendor did not deliver on the specific day, the day and time as per purchase order requirement. The vendor will be contacted either by an email or a phone call, amm! Giving him a chance to either supply us with the goods in time or to at least specify the new delivery date that he will be able to adhere to. Should the vendor not adhere to that we will the further then cancel the purchase order and buy from someone else. If there is a need a vendor will be put on to the so called not stringent practice, therefore the future requirements may be assigned to a different vendor, if they do not have a good track record. Ever since the communication lines have improved, delivery dates or proper delivery dates, are put on the purchase order the level of service delivery increased dramatically stock-out improved by almost…. I would not want to make a guess on it but outstanding purchase orders reduced from few hundreds to one entry per day. Amm! It is my believe that the stock levels are in a better situation and we have less stock-outs according to our current measuring points.

IQ 1.2.1	What are the common features or characteristics of materials that are commonly out of stock?

Me: Are there commonly out of stock materials?

I1: Yes, we experience this on electricity metres, materials that are manufactured with long lead-times, materials that are affected by labour force where there is a lot of labour involved as well as where transport is involved, for materials that come from Johannesburg or very far away. Of course where there are strikes at the post office or external factors, that are influencing us as the end users at the end of the day.

Me: Can we determine the rate at which this materials are out of stock?

I1: Unfortunately we cannot know when this external factors occur, for example if [a] tsunami is going to hit Japan, you never know when there is a ship that is going to sink, or which is going to be hijacked at the port of Somalia. Unfortunately we can try and build that into a certain percentage if possible and increase it but to all materials as there is no tendency to say only for certain materials

Me: Are there common features or characteristics on these materials that are commonly out of stock?

I1: We commonly experience this with materials that there is import or export, component on, not specifically per product but a component used to build a product, those materials are sensitive or more sensitive, to being delayed and possibly stock-outs.

Me: Are there any other features that can be noticeably say for example metals, or we know that stationery is commonly out of stock?

I1: Not that I am aware of.

Me: Is there any other noticeable, more physical characteristics, like metals or say we know that stationery is commonly or imported materials are commonly out of stock?

I1: Imported materials, imported components, as well as the electronic components that can be influenced.

IQ 1.2.2	What are the significant causes of stock-outs?

Me: What are the significant causes of stock-outs?

I1: The main cause of stock-outs is late deliveries by vendors; that is our biggest concern, where vendors cannot adhere to their own agreed terms and conditions, on contract, or the date and time that was promised. The general cause within the industry is that people do not want to carry stock any more, they only buy in as it is requested, as distributers they will only place large quantity orders only when they have received our official purchase order, which will then delay the process even further, so currently most significant causes, are the late deliveries by vendors.

Me: Are there any other causes say approvals of purchasing documents?

I1: No that's not an issue.

Me: Are there any instances say where by the vendor did not get the purchase order or something else happened?

I1: The previous line of communication or the preferred method of communication was fax, we always ran a risk of [the] fax being lost at the receiving end or incorrect, or incorrect master data, referring to the telephone and fax numbers thereof. We changed or preferred form of communication to be email, unfortunately there is never a 100% success rate, in determining if the fax, email, or even the letter that is posted cannot arrive, at the desired destination, due to various reasons, I also want to add that in some instances where suppliers complained that they did not receive the purchase order they actually received the expediting letter, or the delivery notification that they are out, my question is that why do they receive such kind of communication but when it comes to the purchase order then they do not receive the same communication lines like the reset. Were currently trying to liaise with the Procurement Department to start the expediting communication a bit earlier, and not to wait up until two days before delivery, sometime during planned delivery time, make contact with the supplier as the reminder of the purchase order, to bridge those gaps where they claim not to have received the purchase order, on the first communication or the first message that was sent out.

Me: what about the inventory side are there any causes of stock-out, that can be discussed?

I1: If the vendors do not deliver we will run out of stock, I am not sure if I answered the question now correctly.

Me: From the inventory side you mentioned earlier about the pilferage, etc., so from the inventory side are there no major causes, that can be noted? Let's say breakages, or anything else?

I1: No, we don't. We have percentage wise maybe in Rand value, might sound a lot, like [a] few million Rand, if we break that down to percentages of the overall consumption or based on the specific material we are talking about 0.0% which is really insignificant, unfortunately, is the time when we have a stock-out and the user requires this materials, then that is not right, maybe there is a need to manage those and try to adhere to it, but based on statistics we are doing very well. Service delivery not happening might have a big effect, on the overall picture or the service delivery that the city of Cape Town is adhering to.

Me: Can these causes of stock-outs be linked to the features or characteristics above? Like you mentioned late deliveries that come from imported materials?

I1: Unfortunately is not a one size fits all scenario, I believe that every stock-out that occurs in the CCT requires some form of investigation, and the remedial action to

be taken based on that. Failing that analysis which we don't have readily on hand as to why the stock-out occurred is very difficult to take remedial action if you don't know, what caused the result what remedial action can you take on that. It is only buy gathering specific information form specific suppliers, for specific products on specific time frames that one can, determine the tendency and take remedial action, in the form of maybe [a] better specification, better planning, increase the stock levels, better service delivery, amm! Agreement with the vendors, etc., at this point in time, we are not able to say what the reason behind it is.

Me: Amm! What can be done to readily find the causes of stock-outs, say if late deliveries, approvals occurred to attribute this to stock-outs, is this achievable?

I1: It is most probably achievable by building certain parameters into the system, before we can even do that, maybe there can be a monitoring system, that extends over a specific time frame. The stock-outs at the current moment are measured where the material has a zero balance or has negative availability check, in other words that material is over committed, by that we mean that there is more reservations in the system than what is actually in stock, this is most probably attributed to users where the purchase orders are not delivered, in order to make a comparison or to determine the tendency on it, would be great if we have a tool available, that can back track the material over a period of for example 6 months, to a year, to find out how many times a material went out of stock in a year, and to determine what the cause there was for it, was it the project consumption, was it normal consumption, was there a crises that occurred somewhere, flooding somewhere or the electricity spark that caused electricity meters to breakdown, by 100s, in other words to determine a specific reason of why there is a stock-out. Those types of incidences that should be excluded from the stock-out scenarios, if it is something that cannot be measured but surely we can build in a factor for that happening again. Everything relies at the end of the day on statistics, the way we measure and the way we report, is would be great to have a report like that to see if we can determine the tendency, of stock-out on specific materials, and to have projection and say we are entering a specific time frame, where we might run out of stock lets rather increase our stock levels, or speak to the vendors and see if they can assist, in providing the required goods a bit earlier.

Me: So you are saying that in the categories, we can say this list of all this small causes of stock-outs are related to a vendor, or all this small causes are related to inventory management?

I1: We need not only look at the vendor but also the industry sector where he falls in, and also maybe the material group that if falls into, it might be that we are out of stock on 10 materials but there is common denominator, between the 10 materials, that can be addressed by one intervention, reliving us of our problems.

IQ 2.1.3	What are the challenges with regard to supplier performance?

Me: What are the challenges with regard to supplier performance? Amm! Let's say for instance late deliveries and ….eee!

I1: That falls more in the space of Procurement, but I think I can answer the question. With late deliveries when the vendor is constantly delivering late, the vendors are either placed on the list indicated that they are performing outside the requirement. Ammm! I think this also has to do much with the planned delivery time or the purchase order was never really relevant, was either short or even in to the past, vendors were ignoring that date because it was not relevant to them, then the vendors actually managed the City of Cape Town supplier department, instead of us managing them. But ever since the communication lines have been improved by means of the expediting letters and the phones calls, Vendor understand the seriousness there of, and are coming to the party and providing better service to the city of Cape Town.

Me: What does the City of Cape Town do to motivate the suppliers to perform? For example, the ones that you just mentioned now, the lines of communications, being improved, what is do they do? Do they pay vendors on time?

I1: Yes, definitely pay vendors on time. I think we are one of the best, we strictly pay vendor within 30 after delivery, it is a national requirement if we do not pay a vendor within the 30 days there are numerous implications towards the City of Cape Town. So that is one of the KPIs that we need to or we must adhere to and we are not defaulters when it comes to the payments of accounts, the chances of the vendor not receiving a payment is down to zero at present except of course if there is legal intervention for bad products inferior quality, and not adherence to the contract and agreements etc., but that would never with hold the payment if the quality was supplied correctly.

IQ 2.1.5	What are the challenges experienced with regard to following the supply chain processes?

Me: Ammm! What are the steps involved in procuring stock materials? Let's say in terms of creation and approval of this purchasing documents.

I1: Once the material falls below the reorder point the system will produce a planned order. The planned order will be converted into a purchase requisition and there is approval thereof, the items above R200 000.00. It will go to the inventory manager for approval, once approved the requisition goes to the buying department, they will either source it form an agreement or an RFQ, depending on the value and get the required quotations, the purchase order is then produced and emailed to the vendor with the specific delivery date.

Me: Thank you. Is there…are there any anomalies in terms of this process? Say purchase requisition takes longer to be approved or something like, that can lead to delays?

I1: Yes, sometimes we, sometimes we allow 3 days for the conversion of the planned order up until the stage of amm! a purchase order, Amm! Normally is sufficient except when the buyer or the assistant buyer, is on leave, the workload increases dramatically, which might extend or overrun into the conversion times but with the communication, the intervention that we have had with the Procurement Department, the number of requisitions that is not being converted within the approval KPI has reduced to almost insignificant quantities.

Me: But is there a sort of a mechanism used to monitor this?

I1: It is monitored from the Procurement Department, the procurement manager, and the team leads are in a position to run reports, to determine any requisitions that are converted in excess of the 3 days or alternatively where a material has to be advertised using a bulletin board or an RFQ process, that is monitored and measured by the procurement manager and his senior staff.

IQ 2.2.3	What processes should be followed to ensure that the normal reservation creators are not affected by planned or unplanned material withdrawals?

Me: Ammm! What are the rules around creation of stock reservations and stock transfers?, in terms of…. Yes! What are the rules there because sometimes people would create reservation from plants that I would assume not even close to them?

I1: Unfortunately there is not rules that is being managed by the cost centre manager, should the end user require, to reserve stock materials not closest to him. Unfortunately that is something that the City of Cape Town is not managing by means of authorisation. Amm! The cost centre manager and the immediate supervisor must be mindful of where the stock is available and to utilise the closest plants.

Me: So the cost centre managers are responsible for redirecting, by managing the process actually, in terms of the requisition creators looking at the relevant stores?

I1: They should be knowledgeable enough, so that when someone reserves, they should have an idea of which plants they will get the materials from, as it is their juniors: the staff members creating those input documents, if they are then in the position to release them and it is the plant that is on the other side of the boundaries of the city of Cape Town, that cannot be policed by the Inventory Management department or the Procurement Department but it is up to the user department themselves.

Me: Ooh! What processes should be followed to ensure that the normal reservation creators are not affected by planned changes, which would be amm! like the normal reservation creators, what processes are in place to ensure that they are not affected because if someone takes stock from any other plant anyhow…..?

I1: Amm! unfortunately there is no check or it cannot be prevented, if people reserve stock from plants not closest to them, therefore this would affect the service delivery of that plant that specific plant where the stock was drawn from, unfortunately every user is equal in the system, and we are not preventing any body to reserve stock from any other plant. Although is an expectation that people will adhere to the unwritten rule, of reserving stock at your local plant. This causes a major upset in the system as for people are, I would not say that people are not planning but is a vicious problem that we are just passing the out of stock situation from one

plant to the other plant.	

IQ 2.1.9	**What are the challenges to the process of goods receiving?**

Me: What are the reasons for goods to be returned supplier by stores and to stores by the staff members?

I1: First I would say when there is inferior quality, or is a different product from what was originally requested thirdly we can return stock to vendors when they deliver too early, say the goods are supposed to be delivered by the end of the month and they come three weeks before the time, or say just because they had stock on their shelves means does not mean that we should accept it, because this will increase our working capital, and the money will not be utilised effectively, if we pay for it and we haven't used it. And also we can return materials if it was found that amm! Is not up to specification, the specification might have been correct but say we need a better quality or something a bit different, then we would talk with the vendor, and if the vendor says they have that materials off set somewhere they will accept the return and give us the other material.

Me: Amm! So normally the vendor will not give problems if they know that the fault is on their side?

I1: Amm! Because of the City being a good vendor they are willing to accept the goods back because of the relationship, and they will sent us staff as requested.

Me: How is returning materials to supplier or stores handled let's say when the goods are returned is there a message sent to the buyer to expedite? Or what is the process is it up to stores?

I1: Is currently up to stores when we return materials to the vendor, there is printer mechanism used, one printed copy is handed over to the person that is collecting the materials or the urgent, and the other copy we get it signed by them in other to keep as prove in case there are concerns. The goods that are returned if they were based on a purchase order, the purchase order will be open again, but unfortunately it will be subjected to expediting the following day. We are in the process of building the workflow notification the relevant buyer and or assistant buyer, to notify them of any returns that are done, in other for them to be familiar with the case the following day when they do the expediting of the purchase order. So that when they communicate to the vendor they will know.

IQ 2.1.8	**What are the challenges with ERP with regard to resolving the reported calls by the staff members?**

Me: How long does the SAP MM at COCT take to resolve the queries reported by the staff members?

I1: It is from [a] few hours up to a certain number of days, if it is a normal day-to-day query, it can be or it is resolved within the first few hours, one hour or two, this is normally dealt with by SAP help desk, within the ITSM environment using CHARM, to log a physical call which is monitored by our support team, to provide the proper solution towards the end user, if it is something like the second line support it might take something like a week if there is some sort of an investigation. If it is a system error it can take anything from a week to up to few months depending on the urgency there of, normally if it is as we refer to a show stopper, we amm! place the critical status on the item, get all hands on deck and try and resolve the issue as soon as possible.

Me: What are the challenges with regard to resolving the reported calls, like emm! Inactive remote access, you want to help the user but now something else happens? What are the other challenges?

I1: Other challenges are the network that is not rolled out properly and the slow connection that we have with remote users, amm! I can add that, it is only in few cases that we struggle to get the relevant connection if we want to connect remotely to those computers, I believe that the city of Cape Town is in a very stable environment when it comes to reliability and to rely on technology to help the end user.

Me: What happens in terms of reliability on other teams?

I1: Definitely there is a challenge because of SAP being such an integrated service, every transaction is only linked to the end user but fits right through the integrated system, the challenge lies in getting the resource to understand your team's priority, which might be high, and due to the integration with them from their side it might not be seen as urgent, and they do not want to spent resources on that, the challenge is communication between the relevant teams on the ERP floor,

when it is required that they give appropriate attention, to the call and assist us in resolving it.

Me: Does it ever happen that here we cannot resolve a call, and if so what happens in that instance?

I1: It shouldn't be that something we cannot resolve a call, calls will always be resolved, especially when it is system driven or falls within the design of the system, we also have a functionality to log a call with SAP Germany, amm! We refer to it as an OSS call, we will give remote access to any user anywhere in the word, especially a lot of our calls get answered by Indians in India because they have got many resources that work there. We also get call answered by America, England and Germany its self, the challenge there is giving them access to our system which is strictly, controlled, and we normally provide access within our quality assurance system, for them to have a look, depending on the required solution, what it requires us to do or them to do, we might give them a display function within our production system, but any update of table etc. will normally be done by us, after receiving appropriate, notes, rectification, method, to rectify the issue from them.

Me: Thank you very much.

IQ 2.1.6	What are the challenges with regards to ERP availability?

Me: Is the SAP ERP always available for users to transact in your opinion?

I1: Yes, our down time is restricted if we require down time, for weekend or long weekends. We do not take the system down during day time, we are on 24/7 operation on a normal basis, we require an extended time once or twice a year but as I have said, we will run that over a weekend or long weekend to update the system, so the when the users are back it can be business as usual.

Me: So basically in team of system availability is fair percentage of up time?

I1: Not a fair percentage we are very high in the lot, 99+%

Me: Are there any other challenges in terms of system crashing or the system behaving this way when is it expected to behave the other way?

I1: In our 12 to 13 years SAP experience we found, that the system is stable, we have occurred at some point some runtime errors, when there were large jobs running or scheduled over the weekend which was not completed in time, the challenge here is that the system takes some time to react and users take long to create the Purchase requisitions, but however bearing in mind that this occurs very seldom, and the system response time is still within the perceived perimeters, that we want the system to perform at.

IQ 2.1.7	What are the challenges with regard to policies and regulation in SCM?

Me: Do you feel that there are any internal policies and regulations at COCT that contribute towards stock-outs?

I1: Internal policies maybe in the time and signatures required, also when there is a change in specification, or a lack of a proper contract, that is renewed in time due to the policies and the times that we must adhere to according to the national movement, it might occur that for example that the tender for cable is only approved months after the previous tender has expired, as well as the extensive lead-times of some of the materials, definitely have an effect onto the stock-outs. And also let us bear in mind that this is an operational issue, not the constraint towards the system itself.

Me: What can you recommend with regard to internal policies and regulation improvement?

I1: Firstly, when it comes to contracts there is an early warning system, to renew a contract can take anything form 3 months up to 6 months, the early warning system reminds the end user or the responsible person for that contract to, renew or to start a new process, in order for the agreement to be assigned or validated before the previous contract expires.

Me: Do you feel that there are any externally policies and regulation that contribute towards stock-outs at COCT, industry or sector specific policies?

I1: Unfortunately our protective clothing is a typical example of that, there is a governmental policy where, protective clothing have to be manufactured 100%

according to local content, we all know what the current situation is in South Africa pertaining to clothing sector, and it is very difficult to adhere to those policies, and it is really putting the brakes on service delivery, as for we are unable to source our materials from our venders and the process, is that vendors needs to adhere to local regulations. It is almost not impossible but delaying our procurement processes, therefore service delivery is affected.

Me: What can you recommend with regard to external policies and regulation improvement, in order to avoid this impact?

I1: From the procurement perspective or form inventory perspective, we could say let's up the stock levels significantly, in order to fit our staff members with proper protective clothing, unfortunately this will only last as long as there is stock available, counter efficiency to that is materials logged in working capital for the big expense associated with protective clothing, and also the possibility at the end of the day people not using it, and we have to write it off. What we need to do from the City's perspective or form the council's perspective, is to take it up with the relevant governmental institution, and either have a waver on this requirements or alternatively to re visit the policy. Unfortunately this is within the political structures, and will not turn that quickly. This is a challenge but is not only the city of Cape Town but all the local municipalities and can potentially also affect the private sector.

Me: Are there any other external policies that you feel that they contribute towards stock-outs.

I1: I think the biggest challenge is that the employees needs to know the policies because due to the lack of knowledge the process it put on hold, which delays the process and as a result increase the possibility of sock outs, which is what this is all about. Therefore due to lack of understanding and knowledge we are affected but stock-outs.

IQ 2.2.4	What should be monitored in order to manage the causes of stock-outs?

Me: How do you identify multiple causes of stock-outs that result into a single stock-out? Let's say the document took long to be approved and everything else that follows is delayed. How is this managed at the City of Cape Town?

I1: Unfortunately it is managed per incident, is managed per material and again it might occur that you might expedite today on a certain type of material, and then again within the next two or three days you expedite the same material with a the different vendor, but with the same root cause occurs because there was a ship that sunk or a strike in a certain industry etc., from the reporting perspective it would be create to first determine the different materials that are affected by that, group the materials together either based on a material group, or per industry sector, try and determine if there is a common denominator in those materials, of course once that have been identified we can extent this to all other materials, within that same commodity group, and to use as a pre or early warning system and start planning on those materials right now, further expanding on that it might be linked to a specific vendor, on a specific materials, it might be that we will experience the same issue on the same vendor on a different material, that does not fall I that category, so any early warning system or any common denominator on a material should further investigated or to look at any other materials that fall in the same category type, vendor/agreement/industry sector.

Me: I think we have covered everything because you already answered the question of how can the stock-outs be reduced unless if there is any other thing that you would like to add. Thank you very much Mr I1.

I1: Thank you, feel free to contact me again, thank you.

APPENDIX D2: INTERVIEW TRANSCRIPTIONS I2

Me: Hi Today I will be interviewing Mr I2. I2 I am supposed to talk you through the informed consent, which mainly focuses on the fact that you voluntarily took part in the study, to assist me to achieve the results I hope to achieve.

I2: Just to go through the interview questions.

IQ 1.1.1	How are stock-outs experienced at CCT?

Me: What does out of stock mean?

I2: ….. Ok, cough! Excuse me.

Me: According to the SAP ERP system.

I2: According to the City of Cape Town is the material that should be in stock, but there is no stock.

Me: In your experience, how does your line of work contribute towards stock-outs hence service delivery? What is it that if you did not do the materials will be out of stock?

I2: My function is just to ensure that the SAP system works, so that the users can manage it correctly in order to prevent stock-outs.

Me: Training?

I2: Ensuring that the system works, training of the end users training of the super users, so that they can train their own users. I1 and I have put a methodology that they can follow, so we have provided a methodology that the business is using to manage their stock-outs. But we should not really be doing the methodology for the business.

Me: What is this methodology?

I2: It is the whole process of how to manage stock-outs, when do you re order, how do you calculate the reorder points, how much to order, not just how to use SAP to achieve that but also what you want to achieve.

IQ 1.1.2	How do you identify the materials that stock-out?

Me: Can you determine the history of the material being out of stock? If yes, how?

I2: You can mostly, but the trend in the City of Cape Town is that users create reservations too late, they know they have a project and they create their reservations just not early enough, and they just draw all the stock so that has been the trend, but one has to go into the latest goods issues and stock reservation and try and figure out what is the reason. It is not always the case but here that seems to be the main reason. The other reason is that the MRP controller just did not understand the methodology and did not plan correctly.

Me: How do you identify when a material is out of stock at present? Let's say now, how would you identify that?

I2: Emm! We calculate the safety stock level, so whenever the stock quantity is below safety stock, so we measure how much stock is below safety stock. That we regard as almost out of stock or going to be out of stock soon will be out of stock soon, so for materials that are below safety stock we, have a sub-category that says they are physically totally out of stock, and it is the MRP reporting that is being used ZMD07.

Me: What do you do when you have identified that the material is out of stock?

I2: The MRP controller should be following up on it, did he create a requisition, is there a purchase order in place, when is the delivery going to come in, the buyer should be looking at the same things is there a requisition that should become a purchase order and try and get the vendors to deliver early, so that we can make the stock-out period as short as possible.

Me: So the buyers also do know about this?

I2: Yes or they are supposed to, I think many of them know how to, start and follow the process.

IQ 1.1.3	How does consistency in your area work with regard to stock-outs?

Me: Have you experienced any inconsistencies with the system? If yes please describe the inconsistency as follows: what was inconsistent, when and the frequency?

I2: Inconsistency, in terms of system?

Me: Yes, say the report does not show correct data, any inconsistency basically regarding supply chain that could lead to stock-outs. If they do stock movements without recoding it on SAP so they forget, so they give the user some but they forget to do the goods issue, and SAP still shows the stock quantities, are supposed to be on the shelf but there is not that quantity, and they will order too late.

I2: But they do have a process to pick those up. they do continuous stock takes, for the materials that moved, they also have a process where they should not to any stock movement on stock without doing a movement on SAP. So the user come to pick the material, you do the transaction of SAP and pick the materials you should not do it the other way around. You should never pick the material and do the transaction, always do the transaction first, because you most probably not going to forget to give the user the stock but give the user the stock you can forget to update the system.

Me: Are the any other instances of discrepancies?

I2: In terms of stock levels and that kind of reporting I cannot recall any instances where the system was incorrect. It is usually data that is not updated by the user.

Me: Emm! Is it allowed for a purchase order to differ from a requisition, it is still user related but is it allowed? What is the implication of that, let us say the buyer changes the quantity or something like that on the purchase order?

I2: It is allowed but the buyers are informed as to why it is not a good practice. For instance, they get a requisition to replenish stock and the vendor cant supply, so now they go out on another FRQ and they and on the same requisition now they create another purchase order, they will not change anything apart from the delivery date, because they have not run over the lead-time of that material, so the vendor has to give them a new delivery date, but having a new delivery date and or the later delivery date my require a different quantity as well, so we ask them that if they can't supply the quantity on the delivery date stated on the requisition. Rather ask the stores to create a requisition for them with the updated quantities and updated requirements, but if it is a small change they would most probably just change the purchase order, and will slightly be different to the requisition.

IQ 1.1.4	How is the information regarding stock-outs communicated to staff members?

Me: Is the information regarding stock-outs communicated to staff members? If yes, How and to whom is this in formation communicated? Any information regarding stock-outs, are the high stock-out materials communicated somehow?

I2: The Supply Chain department has got a monthly meeting where, we discus stock-outs and the reasons for stock-outs but that is just between the MRP controllers and the Procurement, but that information is not communicated to the end users. But what is happening with the end users, is that Procurement is now identifying the end users or group of end users that do not plan their reservations well, and they do target training for those groups of end users, because the end users not planning is the biggest causes of stock-outs, but if out of stock is not communicated to the end users the end users can see that on the system, but the trends are communicated with the end users.

Me: What are the challenges related to communication?
I2: We do it once a month so it is very late, very after the effect, but is still adds value because we can learn from what has happened, but the ideal would be for the end users to be more proactive, and when there is a stock-out investigate why and try and fix the problem, the problem is that there are too many end users to deals with and it is not always practical.
Me: How have the above lines of communication improved service delivery? Has it shown any significance, monthly meeting and targeting certain end users?
I2: Yes, stock-out are being reduced every month, at the moment we are experiencing an increase in stock-outs but we know why, it due to local content on certain materials, so safety clothing must be locally manufactured and the vendors just can supply locally manufactured safety clothing so we are running out of stock on those, but must we exclude that then our stock-out are getting lower and lower.

IQ 1.2.1	What are the common features or characteristics of materials that are commonly out of stock?

Me: Are there commonly out of stock materials?
I2: Are there commonly out of stock materials?
Me: If, yes, how is the rate of out of stock known?
I2: Some of the high value electrical items are commonly out of stock simply because the department that must renew those tenders are over worked and simply cannot get the work done in time. And then the local contend of clothing is another one, apart from that I don't know, Does this answer your question?
Me: Yes, because we want to establish patterns, like you said bout the electrical items.
I2: Seasonality can be a problem, rainwear, which is now seasonal and local content, so there is a double worm here.
Me: Ok I2.

IQ 1.2.2	What are the significant causes of stock-outs?

Me: What are the significant causes of stock-outs here at the City of Cape Town?
I2: Number one is end users not planning, they don't plan for project and suddenly they need a lot of materials, number 2 is bulky stock, again, it is end users not planning, they keep stock in there vans or their offices that they use, and occasionally they replenish those squirrel stores, if they do it frequently it will not be a problem, but now they do it irregularly. Do you want and example?
Me: Yes I2.
I2: The insulation tape, the stores keep insulation tape and they keep on average 10 a month, so they keep enough stock to issue 10 a month, so one day a user rocks up and wants 40 rolls of insulation tape, because it is his one year supply which he keeps in his cupboard, and now the stores do not have enough for him.
Me: Can these causes of stock-outs be linked to the features or characteristics above? If yes, how can this are achieved? Like you mentioned local content.
I2: End users not planning can be not really, it can be anything. I5 will be able to give you good answers there.
Me: What are the challenges and what do you recommend with regard to linking the causes to the characteristics of this materials that are high stock-out materials? "Silence"… this is to ensure that for this kind of materials I will be able to plan them better or anything that I need to make note of.
I2: I5 is doing that analysis and is doing very well with that regard in trying to understand what kind of materials are out of stock and why, so that analysis is being done but you will have to speak to him.

IQ 2.1.1	What are the challenges with regard to master data?

Me: What is the process for creating and updating master data, or is there any process related to updating and creating master data?

I2: There are two kinds of master data, are we talking materials master?

Me: Because we are the support centre, we can have overview of the processes.

I2: We don't do any maintenance of mater data. Master data is managed by business, for materials master data specifically there is static materials master data and the dynamic materials master data. Static data is like the unit of measure, material description, those things that do not change often, they go through a strict process, through the Codification department, if anybody requires a new material or changes to material there is a form that they fill, which must be approved by the stores where the material is kept, it must be approved by the technical person involved in those materials, and then the material can be created or changed. And the dynamic master data like the reorder point and the vendor lead-time those thing are maintained by the MRP controllers in the different stores and they manage it themselves. Vendor master data are managed centrally.

Me: Can the master data update becomes the cause of stock-out? If so, how? Let's say something happened and the wrong material is deleted?

I2: Yes, for example, the wrong material can be deleted or the description can be wrong, and the users draw the wrong material, or amm! The users use the material with the wrong description rather than using the one with the correct description. Those things do happen.

Me: What is done to prevent this from happening? What process is followed to ensure that end user are assured that they do not end up running into the same problem?

I2: Codification department does the continuous update of the static data on the materials masters, and monitoring to make sure that they are correct, and the correct information is maintained. The stores MRP controllers are also daily managing those materials, so those kind of errors are getting less and less as the master data becomes more accurate.

IQ 2.1.3	What are the challenges with regard to supplier performance?

Me: What are the challenges with regard to supplier performance?

I2: That is a big question. About 30% of our deliveries are on time so it is a big challenge, the first thing is that in the past our lead-times were in correct, so we placed purchase orders with vendors with unreasonable lead-time, and the vendors just ignored the lead-times, now the lead-times on the materials master are getting more accurate, and we are not stating to push the vendors to deliver on the required delivery date, purchasing department is starting to take group of vendors and targeting them 10 at a time or so, targeting them to educate them to please follow the delivery dates. And now they are monitoring those groups of vendors to see if there is improvement on the delivery dates.

Me: Can it happen that the stores or Procurement can require more than the vendor initially agree that he can deliver?

I2: Yes, things that happen is that tenders do not get renewed, contract for materials do not get renewed, suddenly the stores want to order but there is no contract, and then we have to wait for the contract to be extended or for the contract to be in place mean while the large quantities are required and the vendors cannot deliver those quantities. So large quantities do cause problems.

Me: How do you overcome these challenges?

I2: One by one.

Me: Ordering from different suppliers or?

I2: Every purchase order that gives challenges is evaluated ad hoc, "the devil is in the detail", they have to look at each one and try and figure out what is the reason, and in the monthly, feet back meeting, procurement should give reason for those things so that we can try and determine, the trends and try and prevent them in future.

Me: How do you motivate the suppliers to perform? what does Procurement do to motivate suppliers to perform or the city?	
I2: I do not know, you will have to ask Procurement.	
Me: But what about the payments?	
I2: The City pays vendors on time, the payment terms are very strict, so the vendors are never paid late unless if the was a problem with the invoice or something happened, if the invoice was submitted correctly the vendors are paid on time.	
Me: So except the purchase order there is no other thing sent to the vendor?	
I2: I think in the past, the city use to send the vendor the letter to say you have not been performing and they would put the vendor on the blacklist, but there is a lot of legislation around that of what you can do and can't do, especially in local government? There is a tendency more towards dealing with the vendor talking to the vendor, negotiating with the vendor, negotiating with the vendor, explaining to the vendor what the problems and the reasons are, and that helps a lot. That is improving the process.	
IQ 2.1.5	**What are the challenges experienced with regard to following the supply chain processes?**

Me: What are the steps involved in procuring stock materials, more around time allocations and approvals?
I2: The process of ordering stock?
Me: yes the process of ordering stock materials.
I2: What level of detail do you want to know?
Me: High level, from one document to the other until the purchaser order gets to the supplier?
I2: The MRP controller will set the reorder point, that he calculates based on the methodology and the formula, whenever stock goes below that re order point the system will prompt him to order, he will review that prompt to check if it is accurate of not, maybe do a recalculation of the reorder point, based on new history and check whether there is a change, and check if it is accurate and if it is accurate proceed to create purchase requisition for that, material, if it is not accurate he will have to do a recalculation of the reorder point and re run the MRP, for that material, if he still comes up with the planned order then he will convert it into a purchase requisition. If that order is more than R100 000 I will go to the inventory manager, if it is less than R100 000 it will go straight to procurement, the Procurement Department if it is on contract they have 3 days to create a purchase order, if it is not on contact they have 14 days to go out on RFQ, and then convert it into a purchase order.
Me: Is there time allocated from a planned order to a requisition or it is just from the requisition to a purchase order?
I2: Basically it is from requisition to purchase order, and that we measure but if is less than R2000.00 it should be three days, if it is more than that and not on contract it should be 14 days, but if it is on contract, it should be 3 days, but if it is more, R200 000.00 it should be on contract but if it is not, there is another process that needs to be followed, then it needs special approval by the supply chain director, if there is no contract and it is more than R200.000.00
Me: What are the challenges experienced with regard to following the process? Let's say the suppliers not receiving the purchase orders could be one of the reasons, I suppose.
I2: Sometimes the suppliers say they did not receive the purchase orders, but we do not always believe that, but it could be that they did not receive the purchase orders. But we are now implementing supplier self-service, where the suppliers can online see their own purchase orders, then we will not rely on fax or email to get the purchase orders to them, and we hope that that will improve the process.
Me: With regard to the approvals, do people always follow the allocated days?
I2: sometimes they go out on quote and they do not receive any quotes, so they do exceed the 3 days or the 14 days or whatever it is, sometimes there is a contract

in place but the price on the contract may not be updated or something like that, or the buyer knows that there should be a contract but there is no contract in the system, then the buyer will go the tender department and enquire why is there no contract in the system, etc., so there is quite a bit of challenges when converting purchase requisition to a purchase order.

Me: Is there a mechanism in place to monitor the anomalies, say for managers to motor and know when the documents take longer than the allocated time?

I2: Not really, we only see that in our monthly meetings. The stats are drawn monthly at the moment but we want to make the stats available online but at the moment it is not, it is at hoc on a monthly basis, we want to put it in BI so that it is available in real time for managers.

IQ 2.2.3	What processes should be followed to ensure that the normal reservation creators are not affected by planned or unplanned material withdrawals?

Me: What are the rules around creation of stock reservations and stock transfers?

I2: The rules?

Me: And what are the challenges, say are there rules around creating reservations locally? Or how is that process managed?

I2: There are quite a few challenges there because at the moment any user can create a reservation in any store at the moment in the city, so usually the users will create a reservation their own store but if there is not enough stock they would go window shopping in other stores, until he finds the stock but then he decreases the other stores, stock because they may have not planned sufficiently, far enough in their own stores. So we are not limiting that any user can draw stock form any other store, we don't want to limit it. So at the moment is creating a challenge, for manual reservation if there is not enough stock for the date that the user put on the reservation we do not allow the reservation to be saved, so then the user is forced to change the requirement date to the date when the stock will be available, but for PM reservation that is not yet the case but we want to change the PM reservations to do that as well.

Me: What processes should be followed to ensure that the normal reservation creators are not affected by planned changes or unplanned changes, because someone can take stock anywhere anyhow?

I2: We do not have a mechanism to distinguish between planned and unplanned maintenance, so we cannot prevent users from creating reservations, we have one pull of stock so all reservations come from there, so if we have planned maintenance, we can prevent the user form making unplanned withdrawals of stock on a very short term reservation. If we had a mechanism to say this kind of work is planned and should be planned more than the lead-time of the material, and should be planned in advance we could do that but at the moment we cannot do that. So any user cannot plan, and then draw stock from the stores, and there will be no stock for emergencies for instance. It is up to the store keeper to say I am not going to give you stock, the remaining stock if for emergency.

Me: So at the moment stores are the only check point where that can ensure that the reservation creators reserves stock locally?

I2: Yes, if the store man knows, that the user rocking up at the stores is not from his area he could say that he will not give the user the stock. Plan better in your own area. Do not make your bad planning my problem.

IQ 2.1.9	What are the challenges to the process of goods receiving?

Me: May you describe the process of goods receiving stock materials in terms of time allocated, inspections and what are the challenges with regard to this problem?

I2: The goods receipt process is that when the stock arrive at you plant you should first do the transaction on SAP, sign the delivery note and receive the goods, in that way you check few things, you check if the quantities, are or whether is delivered at the right store those kind of things. If you do not do that you may sit with the goods that you do not have the purchase order for, or the is not purchase order indicated onto the delivery note and you do not know what to do with the stock. Stores fist do the goods receipt of the stock just based on quantity, then after they have done the goods receipts then they can do the quality inspection. What happens in stores is that the store man receives the goods and checks for quality if the quality is not ok, he sends it back. And we have no record in SAP that that

happened. They must always do the goods receipt first and do the return to vendor if they are not happy with the quality, sometimes it happens that the deliveries are made late in the afternoon and some materials have serial numbers and the goods receipts must be done per serial number, and that can take long and in those instances they can't do the goods receipt immediately, therefore the ruling is that it must be done before 9:00am the following day. Because 9:00 the following day the buyers are going to send expediting letters to the vendors, as goods receipt has not been done.

Me: What is done to prevent these challenges from happening, for instance are there any breakages during goods receipt or if they happen what is done?

I2: Training and education to follow the right processes.

Me: What are the reasons for goods to be returned supplier by stores and to stores by the staff members?

I2: That you will have to ask business, there are few reason codes configured in SAP one is poor quality… But how many of those are used and the reason why I don't know.

Me: What are challenges in relation to returning goods to suppliers or to stores are any time lines let's say you can only return good after 7 days after delivery?

I2: I don't know, those are business rules.

IQ 2.1.8	What are the challenges with ERP with regard to resolving the reported calls by the staff members?

Me: How long does the SAP MM at COCT take to resolve the queries reported by the staff members?

I2: You know better than I, we have [a] service level agreement but exactly how we do it I don't know, but my feeling is that we do it well. We do it as soon as we can and we do not have a bad clock of open calls, but there are two guys on the help desk that are really performing well.

Me: Are there and time lines allocated to, let's say first line and second line support calls?

I2: Are there? I don't know. I am sure there are but I don't know.

Me: What are the challenges with regard to resolving the reported calls? Anything could be in active remote access, for example?

I2: The users not returning the call, or not returning an email to give more information.

Me: What about the dependency on other team and SAP OSS? I am not sure.

I2: You know the answers to that.

IQ 2.1.6	What are the challenges with regards to ERP availability?

Me: Is the SAP ERP always available for users to transact?

I2: Is available a large percentage of the time, the down time is so little that there are not really the manual processes. So if the system is down you just wait for the system to come up again so that you can transact. Some organisations may have manual processes, the stores might have manual processes, but in general, when the system is down nobody works, because the system is usually up.

Me: What about the speed because sometimes the system can be up but very slow?

I2: It is [a] mixed thing – sometimes the speed is due to the network, the users that are far out do experience the speed problems [more] than the users that are close to the servers, but the recommendation to the users is that if you encounter a speed problem log a call. And I don't see many calls for that, but I don't think it really is an issue. It does happen, but it does not happen often enough to warrant manual processes to be in place.

Me: What do you do to overcome the system availability problem? The users are supposed to log a call when they experience any changes with the system.

I2: That is technical, there is a technical team, that deals with that, I do not know.

| IQ 2.1.7 | **What are the challenges with regard to policies and regulation in SCM?** |

Me: Do you feel that there are any internal policies and regulation at COCT that contribute towards stock-outs?

I2: Internal policies. Well at the moment we have local content on clothes, it is being expanded now. Most of our safety clothes like boots must have a 100% local content, and the challenge is that if the vendor cannot supply 100% local content, the vendor must apply at the Department of Trade and Industry to be exempted from the local content for that purchase order, and it takes 2 weeks for them to reply. So we place orders with vendors and they don't have local content they must apply per purchase order for safety boots to the Department of Trade and Industry and ask, say for example, can I supply 60% local content? And if the Department of Trade and Industry says yes, then the vendor can supply that purchase order, the same for the next purchase order is the same problem. So local content is being expanded to plumbing items, and is being expanded to electrical cables, and that is beginning to show the stock-outs. Legislation.

Me: So where ever is be rolled out to, it is actually hampering with those materials?

I2: My question is how can this be more important than service delivery? But it seems to be.

Me: What can you recommend with regard to internal policies and regulation improvement? What do you think should be done?

I2: Well, I asked the question to the supply chain, how can this be more important than service delivery, so they are having a meeting with the director to decide on what should be done.

Me: Do you feel that there are any externally policies and regulation that contribute towards stock-outs at COCT?

I2: Being in a local government there is a lot of them, it governs a lot of things and sometimes they do cause the delays in processes. They are too many, too much legislation and [it] is hampering staff so it is a big issue in local government.

Me: This external regulations?

I2: Yes.

Me: So your take on this one is that you still prioritise service delivery over legislation?

I2: Or the supply chain director must make a call. I can only ask questions.

| IQ 2.2.4 | **What should be monitored in order to manage the causes of stock-outs?** |

Me: How do you identify multiple causes of stock-outs that result into a single stock-out? If say the PO was not approved on time, and the delivery is also done late by the vendor, is like a multiply but resulted into a single stock-out. How can that be identified independent of the others.

I2 You will have to analyse everyone on its own, and go and look at the latest goods issues, and see why they were created and why they we issued, and look at the latest purchase orders and see if they were delivered late. And look at the reorder point and see if it was high enough based on history, so is the analysis of the individual ones until you can determine a trend.

Me: Maybe say if emm! If we say late deliveries we are missing into the other issues that may have happened, for the stock-out that occurred.

I2: Yes, we honestly don't know all the reasons, but we have a good idea of what the trends are.

Me: But is there a way to group them, to get some kind of a telly, I suppose, so that if say a PO ran passed the 3 days, it will get marked, so that if a stock-out occur we will know that it is due to this 3 causes, is that achievable?

I2: It is achievable but I do not think it is done at the moment, not on a balk analysis level, we will probably have to put that data into BI then we will be able to analyse it, at the moment we just don't have quick analysis for that.

Me: What should be monitored in order to manage the causes of stock-outs? What do you think we should look at in order to manage this causes?

I2: I think if every separate process is managed correctly then the whole stock-out problem will disappear, so, number 1, reorder levels being accurate, number 2, purchase orders created on time, number 3, lead-times being accurate, vendor lead-time being accurate, contracts being updated, or source list on time, user planning their reservations in advance. So, some of these things we can measure, some of them we measure, but we do not measure all of them. Emm! What else is there? Monitoring when we go below safety stock, because then we are not stocked out yet. By preventing stock-out by monitoring the materials that are almost stock-out but not yet stocked out. Looking at red traffic lights, because the traffic light can mean one of two thing either we are below safety stock, or we are over reserved, so looking at those materials we have too much reservations already, mange those things and ensure that each process that managed those things is managed correctly. Then we will reduce the stock-outs. Then thing comes around like local contend or the legislation which is just a curve ball, which we must now find a different way to handle it, because even if all our processes work will stop at legislation.

Me: Thanks very much, I think I found the contend that I was looking for.

I2: Oh ok, great.

Me: Please sign there as the prove that we did and interview.

APPENDIX D3: INTERVIEW TRANSCRIPTIONS I3

Hi Today I will be interviewing I3, "laugh", he is the head of Inventory Management at the city of Cape Town. I3 I am supposed to take you through the informed consent.

I3: I have read it already. It is fine I have read it. Carry on please.

IQ 1.1.1	How are stock-outs experienced at CCT?

Me: What does out of stock mean?

I3: That if there is not stock in the bin.

Me: In your experience, how does your line or from the inventory management perspective would you work towards stock-outs, hence service delivery?

I3: Is a lot of different things.

Me: Can you please say one or two?

I3: You should be able to tell me, what do you think it is? Give me the answers. I will tell you if it is right or wrong.

Me: If the reorder point are not correct, and can be other many factors.

I3: Ok give me the list. You want me to give you the list, give me the list I will tell you it is right or wrong. Because you spoke to other people you should know by now. Or have you now be listening to what they are saying, so tell me what you think.

Me: Me, they told me.

I3: No, no, there is a number of things. Obviously your material planning parameters are quite critical, so you need to plan. Do you know what is involved in that, about the calculator and the lead-times, and things like that? Variances in lead-time and demand and looking at historic consumption and forecast and all of that. So that is all involved in material planning an also users need to plan their requirements and if they are going to have big demands or projects they must plan outside the lead-time, for the delivery of that material, because we, we plan based on historic usage and cater mainly for maintenance requirements but not for projects requirements. And that is one of the big challenges, a big blunder, they have a project and expect the materials to be available in stores. And we do not have the crystal ball to know what projects they are going to be doing. The whole procurement process is cumbersome and lengthy. And tenders as well. It is easier for the procurement people to process the order if there is a tender in place. But to put the tender in place is quite challenging, because of the legislation requirements, or the legislation that governs that. So when the tender is in place is should be relatively easy. And the longer it takes to process the purchase order can influence stock availability. Vendor performance in terms of delivery and quality can affect stock availability. Light deliveries because of transport can affect stock availability. The vendor delivering the wrong quality and then it has to be returned, maybe our specifications are wrong or they just delivered the wrong quality. Spikes in demand, if say suddenly there is high usage of a specific item. There are a lot of different things that influence stock availability. So that is just a brief summery. And expediting is also important. Following up with the vendors, but the planners also have to follow up with the buyers to check if the orders are in place. And we have the key performance indicators that we measure at the supply chain improvement meeting. If you come to that meeting you will get a very good idea of what all the different factors are. Or what do we manage to make sure that there is stock. and for your project you can look into the presentation to see what are the KPIs that we measure. Because all that drives stock availability.

IQ 1.1.2	How do you identify the materials that stock-out?

Me: Have you experienced any inconsistencies with the system? If yes please describe the inconsistency as follows: what was inconsistent, when and the frequency.

I3: Inconsistencies what do you mean by that?

Me: Let's say you run a report and you do not get the correct information from that.

I3: The information you get out of SAP is as accurate as the data that you put in. So in general I would say the information we get out is very good. In terms of information is rather the in accuracies than the inconsistencies, it is to do with the master data, and specifically with regard to product specifications, because most of the time the specification does not specify clearly what is it that is required. And then the vendor can interpret it incorrectly and deliver the wrong material. So you have to get your specification and you master data correct. Obviously there are something like pricing people make errors when capturing contract prices, or they might use a different unit of measure, and that is to a certain extent master data. Yesterday we had an instance where the moving average price of a specific commodity was incorrect because there were price adjustments as the tender has been running for a couple of years. So, the prices that should have been captured in 2013 were only captured now. But then we say 500 of these materials were used over a couple of years, and there is only 40 in stock, so the price of the 500 is now divided by 40. So, if it should be costing R5 000.00 for a specific item, now it is costing R15 000.00. so that is an inaccuracy or an inconsistency in the system. Because it is overpriced now, the project was budgeted for a specific amount now there is insufficient budget in the project. So now the project manager does not want to draw stock now because he has insufficient budget. With means now the people in Bonteheuwel are now going to sit without electricity because now there is a problem in the system, in the SAP system. from the accounting, perspective.

Me: What is done currently about that issue?

I3: Nothing. The quick answer to that is that we had to write off stock and take it back in at the correct value and I was not happy to do that. Because then I have to explain it. But what we decided is that the more stock comes in, the moving average price will go down again. So we just have to bring more stock in so that the price adjustment will be allocated over a larger number of items. But it is not correct, the correct way is to do the price adjustments timeously, every month and you will not have that effect of the incorrect moving average price. But is it also the way the contract is structured. With display so that influences that as well.

Me: What, with respect writing off stock in the inventory, when there are discrepancies between what is on the system and what is physical on stock?

I3: If there is a discrepancy it must be written off within 24 hours of being discovered.

Me: How is the frequency with respect to that because there could be outstanding reservations, when the materials are written off for any reason?

I3: Stock inaccuracies or shortages is minimum, but as soon as we discover it we write it off, and obviously reorder but our stock accuracy is pretty goods I would say, if you take it in terms or the number of bins we have 23000, or more than 20 000 bins, and 10 000 different stock items, we write off very little but also we do an annual stock take as well. But the biggest losses is in terms of obsolescence rather, we write off a lot due a to obsolesce and the second one would be theft. Shortages and damages are very little. We are talking about the fractions of a percent.

IQ 1.1.4	How is the information regarding stock-outs communicated to staff members?

Me: Is the information regarding stock-outs communicated to staff members? If yes, How and to whom is this in formation communicated?

I3: Which people are you talking about and what information?

Me: It could be the high stock-out material, the causes of stock-out or the outcomes of the initiative to reduce stock-outs.

I3: Obviously your stock availability for any material can be seen from SAP, there are KPIs that we measure and we get the important role players to come to the meeting. Also we have a business improvement plan where we measure, for example, stock-outs, and that is communicated back to the employees and the KPIs that we measure are communicated back to the employees. There is good communication around it, plus we have a SharePoint web site where the information is

available.

Me: Let's say if someone is underperforming or his area is not [a] performing area, they are made aware that?

I3: What we do is, we call them into the meeting, so if we know that Mr X the MRP controller has got too many stock-out we call him into the meeting, and ask him why have you got this many stock-outs? Or MRP areas or those type of thing, so we measure those things by MRP controller, my material group by Vendor, etc. so we measure performance by all the people that contribute to it.

Me: Has this form of communication improved performance?

I3: Yes when we started, our stock-outs improved from 8% to probably from a year and a half ago or about a year many years ago to 2.7% of about 20000 bins.

IQ 1.2.1	**What are the common features or characteristics of materials that are commonly out of stock?**

Me: Are there commonly out of stock materials? If yes, how is the rate of out of stock known (counted in days out of stock, count of one per stock-out)?

I3: Currently it is around clothing and it is mainly because of local content, making it so difficult to award tenders and the request of quotations for clothing and footwear and all that type of thing. And at the moment, we have a major issuer in clothing.

Me: Any other materials that are generally out of stock?

I3: Let me think, printer cartridges we have a problem with from time to time, it varies as well, but at the moment the main one is local content. Like I said, come to the meeting and you will see the graphs and the graphs will tell you which ones are the main problems. I can go to SharePoint quickly to tell you, as prepared from the last meeting. Because at the moment the only one that comes to mind is clothing. Have you seen the SharePoint side?

Me: I have not seen it; only presentation slides when being prepared by I2.

I3: See we measure delivery reliability, expediting, sorry this is just procurement staff, I5 has not updated the inventory management staff. Let me check the last meeting, MRP perimeters for example, MRP errors, Red traffic lights, this MRP controller has a lot of red traffic lights for example and does clothing. Here we have clothing and footwear and clothing components, this is per material group, red traffic lights, footwear and electrical components, but the electrical components are always there. This buyer does clothing as well, so stock-outs will always follow the same trend, see this was February 2014 when we started and we were at 6.1%, but even before that we were at 8% we went down to 2.7, but now we gone up to 3.7% because of clothing. We measure it by MRP controller, buyer and the area as well.

Me: It seems like everything is there.

I3: Got our fingers on the poles.

Me: Are the any common features or characteristics on materials that are commonly out of stock?

I3: At the moment [it] is mainly legislation, mainly legislative requirements. Obviously from time to time there are different things, for example with the street light steel pole there was an explosion in a factory in Vanderbijlpark, which then caused shortage of steel, which resulted into shortages for suppliers and stock-out for the city. Fuel, for example, we had shortage of fuel for example because of Eskom's high rate of usage of fuel. But like I say the main issue as the moment is legislative requirements, local content, requirements for clothing, but the external factures change from time to time.

IQ 1.2.2	**What are the significant causes of stock-outs?**

Me: What are the significant causes of stock-outs?

I3: For me the one that stands out is legislative requirements. Second one would be poor planning by users or poor planning by user departments, for the larger demand or for project usage, and the third one would be vendor delivery performance. But we are managing vendors and we are getting better at managing vendor

delivery as well. The other 2 are a little difficult to manage, as legislation is not internal, and we have to be strategic how we apply the legislation but that is not the mind set in the Organisation. So the mind-set is to say we cannot do this because of this and this and this, not to say how can we work around this to make a plan, so that we can do something.

Me: Can these causes of stock-outs be linked to the features or characteristics above? If yes, how can this are achieved? But as you have mentioned that the causes change from time to time it means the causes cannot be linked to the characteristics.

I3: No, the ones that I mentioned are constant but the external ones like steel and fuel, you can manage it but cannot control it. You have to react to it, maybe put contingencies, but sometimes for steel if there is a shortage of steel there is a shortage of steel for example, or fuel or steel, will affect the whole country.

IQ 2.1.1	**What are the challenges with regard to master data?**

Me: What is the process for creating and updating master data (e.g. ABC analysis, obsolete, deleted)? What process is there to ensure that master data update does not affect, service delivery?

I3: It depends what master data specifically you are referring to.

Me: The materials master.

I3: Just rephrase your question.

Me: With respect to master data update, what is the process to ensure that master data creation and update does not affect the entire process, say for example the deletion of a materials master, while some people still want to use it?

I3: We would actually consult a user, before we make the material obsolete. Ideally we want the users to give us specifications but in a lot of cases they don't, so in a lot of cases we have to do our own research and write the specifications. But when it comes to very technical equipment, for example, electrical distribution equipment, mini subs transformers or whatever is too technical, so there is an equipment standard specialist that writes the specification so if you want to create a new material there is a materials master form that must be filled, and all the fields that must be filled are on the materials master form and it goes to the Codification section. They do certain quality checks but if you want more detail you have to contact I6 in codification. And their process is all documented so you can always look for the detail of the processes. And also when we put out a new tender then we go through all the specs again to make sure that if the is any missing detail we update the specifications before we put out a new tender. But also as we put the errors or problems as we go along those get fixed as well. Obviously there is always an issue with the master data. But that was due to previous amalgamation of the municipalities, as there were a lot of duplicate codes. So you find the same material having different description and different codes in different stores. So we have managed to radiate a lot of those, and in fact you can run a program that pick up the duplicates I think I2 developed that. The is a lot of data clean up, I know I1 put a lot of focus on that as well as the I6 and they will be able to give you a lot of, detail around that. I6 comes to the supply chain improvement meeting as well so if you there is any mater data issues then she is there but if is more on a higher level, and is not that detailed. So I think it will be a good idea if you come to those meeting and you will be able to learn a bit there.

IQ 2.2.3	**What processes should be followed to ensure that the normal reservation creators are not affected by planned or unplanned material withdrawals?**

Me: What are the rules around creation of stock reservations and stock transfers?

I3: Yho! I think you need a two or three day workshop to understand all that.

Me: I am told that any user in the system can create a stock reservations to any other plant and the stores can do stock transfers, and that in its self we want users to perform in a specific way but we are not helping.

I3: I am not aware of that but in general in SAP you have to be trained to be profiled for a specific role. Say you have to be profiled as a reservation creator, the

quality of the training and what happens thereafter I would not express an opinion about that but I am doubt full about it, but at the same time you would be profiled to create the reservations for a specific cost centre. So I cannot go an create the reservations on somebody else s cost centre. The manager releases the reservations that were created against his cost centre, so that is how it get managed, so I am not sure what problem you are referring to.

Me: I am referring to people creating reservation for example 6710, and 60 something, basically people that do not plan.

I3: If there is crises we can't come to you and tell you that you can't have the stock, because you are not profiled to make reservations against that plant. If the mountain is burning and you need fuel for petrol engines if Ndabeni is empty we tell them to go and fetch it in Bellville, but then they can create a reservation in Bellville because they are not profiled for that. You can't be dogmatic about things either there are practical things as service delivery comes first. Obviously we want the users to create reservations to the plant that is closest to them, but there are situations where we need to allow them to draw stock form other plants.

Me: Is there no classification, on emergency materials to be managed differently?

I3: We have got 10000 materials, you are welcome to classify them for us if you want. The magnitude of the problem does not justify the effort to fix it. So you do not need to be too rigid you need to be flexible in real life. If you want to deliver service. If like if you want to buy something from a Pick an Pay next to your house, if they are out of stock then you go to pick and pay hyper market. So pick and pay cannot tell you that no you can't buy form this store because you are form that side some people say that we are pick and pays, but I understand where the issues are because of planning, but we try and encourage the users, to reserve from their local stores because some times, guys just like to drive around just to waste time you know, say from Wynberg to Brackenfell just to go and fetch screws, or something, so that when they come back, it is almost home time. It is a nice outing, maybe they want to go and drink coffee at Cape Gate or something, or there is a drinking place on the way, I don't know.

IQ 2.1.7	What are the challenges with regard to policies and regulation in SCM?

Me: Do you feel that there are any internal policies and regulation, department or general, internal rules, SOPs at COCT that contribute towards stock-outs?

I3: They are a lot.

Me: Can you please say few, or main ones?

I3: A lot of it is around regulatory issues, compliance issues, and then also you need the whole day, or to be in business to understand all those issues. The procurement process has to be transparent and compliance is emphasised, at the detriment (disadvantage) of service delivery. So the mind-set is to look for reasons not to place the order rather that to look for ways to place an order. Or ways why you cannot award a contract other that ways why the contract must be awarded. For exam the average time for the contracts that I work on is 9months. But because of legislation requirements like local content it is becoming more difficult to award a contract. And there are appeals that people can do and if the appeal is successful the permission is granted. But in the tender process there is a lot of checks and balances, and steps that you need to go through the same as the request for quotations. So you have to jump through a lot of hoops before you can eventually place an order. And that is the big frustration.

Me: With regard to the external regulation, is it still the same issue?

I3: Yes, mainly legislative regulations, supply chain regulations, PMFA, MFA, you name it, and preferential procurement act, there is so many laws that govern what we do in supply chain.

IQ 2.2.4	What should be monitored in order to manage the causes of stock-outs?

Me: How do you identify multiple causes of stock-outs that result into a single stock-out?

I3: We trace it back based on date, the delivery versus planned delivery, you can also look for the spikes in the graph as well, in demand as well, if the spike was planned it will do up and will stay for few days and will go down again. But if it was not planned the spike will go down, which means they emptied the bins. What I

am getting at is if they wanted a 100 and the normal usage per day is 1, the 100 will come in and stay there for 1 day or 2 and then the 100 will be drawn and the normal usage will continue. But if you see 1 a day and 1 a day and all of a sudden you see a 100 being drawn then you will knew that they did not plan.

Me: What do you do if you need to analyse at a higher level and not go through a 1000 line items?

I3: This is what we do at the supply chain improvement meeting. So we measure is say for example by vendor, and the buyers would know more or less what the vendor issues are. If they don't they must fund out. And then they must manage those vendors, say your delivery performance, is poor, delivery or we will not do business with you. But then again sometimes there can be false measures I agree say fuel where the is fuel shortage for the entire country and the explosion at the supplier factory can be seen as a false measure.

Me: It terms of late deliveries, it could be multiple things that lead to this specific stock-out, are they measured separately say per buyer?

I3: Correct. Yes we do. That is exactly of what we measure, say for example how long it took to convert a purchase requisition to a purchase order, the Red traffic light is labelled as the performance of the MRP controller for example, but includes the stock-out as well so it is an overall measure, but we also measure the MRP controller, that is why the in the meeting we have the indicator and this are the people. They must have the reasons why. Then we can decide what we can do about it. Go get it back on track, so come to the meeting you will see how it works.

Me: So you can know due to your measurement that 20% of the late deliveries is due to some reasons other than the vendor?

I3: Like I say, we measure most of the things that can cause late deliveries. The time is takes to create a PO when it is on RFQ and when on tender is set so if it takes longer then we know there is a problem. Or something like MRP errors that is something that we managed to bring it down. Say in correct MRP perimeters, we get those fixed. All this things that influence is we measure is and find out what is the problem. and what can we do to fix it and that's what we do to manage to bring the stock-outs down. If it is poor delivery from the vendor we know and measure say vendor number A, then we start managing that vendor but if they do not come right then we put them in default. And cancel the contract but then you have to start from scratch again to get the new resource. Sometimes is easier said than done, especially if it is a tender item. But also what we do with the tenders I work on is that we award to three companies, and they are ranked, if the first supplier cannot deliver, we get to the second on. So those are the kind of things that you do as contingencies. So if the vendor does not perform you go to the next one.

Me: Thank you very much I3.

I3: I hope that I was able to assist.

APPENDIX D4: INTERVIEW TRANSCRIPTIONS I4

Hi, Today I will be interviewing Mr I4, he is the MRP controller.

I4: No, I am the area head.

Me: Sorry.

I4: Is fine, I am the area head for inventory and stores for area East.

Me: I normally check on the system for you has the role to do certain tasks and that it why it thought so, sorry for that.

I4: Yes, it is fine. MRP controller would not have a big office like this.

Me: I actually got shocked when I came in and I was like ok. Thanks and sorry for that. I will start with the questions now. The first question is that…

IQ 1.1.1	How are stock-outs experienced at CCT?

Me: What does out of stock mean?

I4: A stock-out is the in ability for stores to meet the user's stock requirement, to ensure continued operations.

Me: So basically a stock-out [is] when there is not sufficient materials?

I4: Either insufficient or completely out of stock. By insufficient I mean the user requires 30 metres of cable and we only have 10. In that case we are not out of stock, we are just unable to meet the specific users demand. Also out of stock as I explained is the in ability for stores to meet the user's stock requirement, to ensure continued operations.

Me: In your experience, how does your line of work contribute towards stock-outs hence service delivery, from the stores perspective?

I4: One, we cannot ring fence it to stores because we are very interdependent. We are not like years ago when the stores did their own ordering. Now all we can do is when we get a planned order we can convert it to a purchase requisition, then is out of our hands because the purchase requisition flows through to Procurement. Depending on how long Procurement takes to convert that purchase requisition onto a purchase order, that can have an effect. I may answer your question Moletsane, your question is specific to stores, our risk factor is that MRP runs every morning at about 2 o'clock. Then the MRP controller gets a list of planned orders the following morning, and then he will have to convert that planned order into a purchase requisition. For some reason if the MRP controller is not at work or get busy for the day that adds to the delay, of what could result into a potential stock-out, because, and I speak for my area now. Years ago, I or everybody that worked in the stores could convert planned orders, but our director supply chain director of supply chain I will do the MRP. So in this area there is a very small chance for the MRP not to be done for 2,3 or 4 days. In other areas the other area heads do not like to do the MRP; for me is important because service delivery is important. And also because we have the supply chain improvement meeting every month. And there are statistics of each area of where the causes of stock-out are, and I don't like my area to reflect negatively, because I mean we would be living in a perfect world if you 100% never run out of stock. In maintenance Organisation like our self is almost impossible to achieve that.

Me: Because anything can go wrong any time?

I4: Correct.

Me: Which you did not really canter for when you do your planned maintenance or unplanned maintenance.

I4: Electricity does a lot of planned maintenance and also a lot of unplanned maintenance, say a drunk driver runs over the streets lights and the wires and earths are

affected, that is unplanned you do not plan for that. But the mini-subs that you see regularly, they have a 5-year maintenance plan so that they plan for. But let's say the mini-sub blow up, that is then again unplanned, so in a maintenance organisation like we are, I believe that it is almost impossible to maintain 100% availability at all times.

Me: What do you do to overcome this problem as the area head? You said is impossible to 100%, but what to you do to balance or ensure that availability is high?

I4:You see, theoretically there are a lot of things you can do, but we are restricted in that we work with rate paid money so we need but we must not keep too much stock on the shelf because that is investment laying there in the shelf. We try and apply Just-in-time principles or what we call JIT principles. We only try and get in stock when it is needed, but our challenge is unplanned maintenance. That is why there must always be stock on the shelve and we can't just work on just in time principle. You can say that we can overstock a bit if we have washers and pip reverts because it cost one cent each, even if it is a 100 or 500 because the cost is negligible even though, 500 might take you 3 years to utilise but the cost is negligible, but with drums of cable and mini-subs, you have got to go to the history and say we seem to us 12 a year let's build in a buffer of say 3 and have 15 but you can go on and put 20 because you are looking at 10 million rand, you see. So to answer your question, one have to use a bit of judgement, if it is pop rivets, nails, strapping and nuts.

Me: So whose responsibility is that? Is that for the MRP controller?

I4: It goes higher than that. It is the MRP controller, is the head, and the inventory and stores manager and he looks at it very, very, very carefully because it is one of our key performance areas and ISM is stock turn, if you have little stock that turns over regularly, that is good. But if you keep too much stock that does not move or turns over less, it is a fine balancing because we need to see high stock turns, which means we are efficient rather than, low stock turns which mean that we are less efficient but more effective because we are never going to run out of stock. But which means we are sitting with money on the shelf that does not turn over often. Sorry we are also restricted in, you know our MRP calculator, sorry we are not restricted but we work on statistics, so we say that once a material code has been in the system for 6 month then we have acceptable amount of usage use the calculator and say right our turn over in six months is X so we put all that information we put into the calculator and it calculates what our ROP should be, what our minimum lot size should be and then we work on that, if a new code is created today, say I want a new pen, say I tell Codification that create a code. We thump suck because there is no data in the system we order say 12 in a box and the and a pen sis not that expensive so we buy12 boxes 144 and over six months we see the usages.

IQ 1.1.2	**How do you identify the materials that stock-out?**

Me: Can you determine the history of the material being out of stock? If yes, How?

I4: On SAP, yes easily.

Me: How do you identify when a material is out of stock at present?

I4: Yes, if they know how to use SAP because we have a massive challenge of user that does not know how to utilise the system. because SAP will saw that there is 50 in store, but there are reservations to the 50 that have not been collected. But the user that does not know will see aaah! There is 50, put in a reservation, and they come to stores and we tell them that we can't give you the stock, yes SAP showed you 50 but there is are reservations in the system. Before users did not plan but could put in the reservation, though there are already existing reservations, so we could issue even if the users reservation came way after the existing reservations but Willem and them have developed the system such that is it is almost like first come first serve. Users plan and if they do the availability check and they stock they will get but if the is no stock the system will not allow your reservation to be saved if there is not stock for your requirement date. It will require you to put the requirement date to at least at the PO due date, or after that date.

IQ 1.1.3	**How does consistency in your area work with regard to stock-outs?**

Me: Have you experienced any inconsistencies with the system? If yes please describe the inconsistency as follows: what was inconsistent, when and the frequency,

I4: Consistency or inconsistency.

Me: Inconsistency.

I4: In what regard?

Me: Let's say, your planned order comes with different values of not as you would expect.

I4: With SAP, if you have set the perimeters the planed order will come based on those so I do not understand the question.

Me: Amm! I am not sure if this involves your area but at the moment the system allowed two goods receipt to be processed against the same PO. While the PO was already goods receipted in full with the first goods receipt.

I4: So you mean the PO was 100 and it was goods receipted, and another 100 was goods receipted again from the same PO? Well if you goods receipt the 100 and do a return to vendor then it opens up the PO and the second GR can be done of a 100 but I have never experienced where a GR has been done and the second GR is done, that I have never experienced. But I mean you can GR more than a 100 time as long as you keep doing a return to vendor.

Me: No, the case I am referring to is processing the second GR when the first on was GR in full. I was just trying to find how often people experience the inconsistency within the system.

I4: I don't have a GR role but if it did happen my staff would have come to notify me. I have a GR role for non-stock, the role is for things that we buy like fridges, staff like that but do not have GR role for stock items.

Me: What about actual goods versus the system are there any inconsistencies, for example the system says there is 10 items and in actual fact there is physically 8 because of some reason?

I4: Yes it does happen, every day we have a report that does not print everything in stores but only the items that moved on the day, say for example we have 600 item in store in shelf and only 200 moved it will only print the 200 that moved. It gives the bin, the commodity code, the description, material status units of measure, stock count according to SAP. But generally will pick up the discrepancies, for example there we picked up the discrepancy which is cable of copper conductor, but this is when vendors deliver say1000 metres of bare copper cable, I mean when the cable is here we can't measure the entire 1000 metres I mean is a kilometre of cable. So what we do, we put a card on it we say, the drum is 1000 or the PO is a 1000, so for every issue, that they do they write it on a card, they do it in SAP as well but I only for cable that they write it on a card. And when that drum comes to an end and there is no more cable, but the card still says 13 metres is available, it means that there were 13 metres short to the vendor delivery of the drum. Or the opposite is true, that when we issue we take of the card take off the card and at the end there is still about 3 metres, then that means, that the vendor instead of rolling the 1000 metres they rolled 1003 metres in the drum, and this is how we control cable. We do get in some instances that they would go and draw from the wrong bin, we often have this with lux and feral, where they take from the wrong bin, one will be up and the other down by so we find that very often when the bins are very close to one another. We find that often when they are maybe in a hurry, say the issue document says 2 of 8 mill feral and they go and take 6 mill feral instead. So when they go and count in the afternoon one will be up 2 and the other will be down with 2. But regarding the deliveries to vendors when the order says is for a 100, they don't just take the face values, they don't just look into the box they actually count. If is box of 100 pens thy will actually count the 100.

Me: What about the situation whereby they issue more than reserved, say every time the reservation says 1 metre and all the time they issue 1.1 metres?

I4: We have a proper measuring wheel which we have calibrated every year, so with 1000 of issues that happen every day. I can go and play policeman.

Me: No I didn't mean that.

I4: No it's a valid question because somebody could come and say, look I have 100 meters for the job, give me 120 metres and then I will take the 20 metres to the scrap yard and if I get R50.00 for it I will keep R30 and give you R20 for it. But then you know you hope that you have honest staff. Do you want sweets? They are very nice.

Me: Thanks.

IQ 1.1.4	**How is the information regarding stock-outs communicated to staff members?**

Me: Is the information regarding stock-outs communicated to staff members? If yes, How and to whom is this in formation communicated? Say for example the cable that you just spoke about to say when you issue be careful of this and that.

I4: Regularly in my staff meetings, especially when I get think like this discrepancies then I get upset. I am not sure where that paper is but there were 2 discrepancies in one sheet, the guy was either in the hurry or careless, there was nothing shot as such but there was a shortage on one and surplus on the other, then you can see that is a genuine error, because if you go and look is too bins right next to each other, so obviously he took out the one when he should have issued the other one.

IQ 1.2.1	**What are the common features or characteristics of materials that are commonly out of stock?**

Me: Are there commonly out of stock materials? If yes, how is the rate of out of stock known, length of time or number of times?

I4: [It} is difficult to answer because sometimes we are out of stock, we are so desperate that we transfer stock from any other store if they have got, sometimes we are out of stock and we can wait, but you see, if we are out of stock and a user wants it, we would rather transfer it here so that our use can then do his reservation here. If we are out of stock and Wynberg has it but we cannot transfer if for example, so what does our user do he then goes out and put a reservation in Wynberg? You see? The rate of stock-out we don't draw it out but I5 you know I5 draws it, for the supply chain improvement meeting. Have you never seen the stats that [name deleted] shows in PowerPoint?

Me: I saw part of it.

I4: We look at vendors delivering late, we look at stock-outs we look [at] a whole lot of things, if about 40 slides PowerPoint presentation. To answer your question Moletsane, you can determine the number of times a material has been out of stock. You cannot determine why is the batteries always out of stock, why are the HRC fuses always out of stock, it is possible to see that.

Me: Are they commonly out of stock?

I4: Yes, they are, but there are also a host of reasons we had a vendor that tendered for MCB magnetic/ manager circuit breakers and they were delivering but then they stopped because the realised that their quoted price was little and they realised that they cannot supply. So they just stopped supplying and we ran out stock because it takes ages, you cannot just terminate a contract; there are letters, you have to call them in, you have to give them a warning. If it has to go to legal, from there it must go to the city manager, from the city manager, you know it can take 6 to 7 months to terminate a contract.

Me: So ultimately those guys just said we don't want to supply? Were there any penalties?

I4: That I do not know. We do not deal with that.

Me: I always thought the city has the upper hand and did not know that vendors can walk away from the contract.

I4: You see, if it is not on a formal tender then say on RFQ it is easier because normally when the awards are done for PLA they have number 1 supplier, number 2 supplier. Say supplier 1 quoted R10.50 and supplier 2 quoted R10.10 they will award to both, but supplier 1 because if cheaper will get the job, but if for some reason he does not deliver or pulls out, we go to supplier number 2. But when it comes to a contract, it is far more difficult, because it is a formal contract. The is a contractor liability from the contractor's side and from the city's side. So for the CCT's side, the vendor said I will supply the following for the next two years, at 9.50 a tin; whereas if it is a 2 or 3 year contract there are escalations allowed, which are agreed with the vendor up front. But if they want to pull out, it is not just the case of saying now I want to go to somebody else, he also has a contractual liability to say in the next 2 years he will be the source of supply for fuses or prattle or something else.

Me: Are there any common features or characteristics on materials that are commonly out of stock, say seasonal materials?

I4: Yes we have a massive problem because people do not plan. And they wake up late, say May or June, as soon as the first rain fall people start running to stores, and rainwear is very expensive, you do not want to be sitting with, 600K to 800K worth of stock, for the first 6 months of the year. Rather wait for users put reservations, so that we can plan, we need so many larges, we need so many mediums, we need so many smalls, put in the reservations because there is a long lead-time, the logo has to be printed, the material, "ventex" the material, the BW material is also imported, which is part of the specification because the City as part of the specification must use Ventex, it is a type of material. Get the reservation in, get the MRP controller to create orders and requisition. Get procurement to send the POs out because those things have about 6 to 8 weeks lead-time. But it never happen you what people never learn, now come May or June you get reservations. Can't supply, everyone blames the stores, the stores the stores. We sent out communication to find out how many calendars people want. Because previously calendars used to be a thumb suck. We didn't know how many diaries to order so we just thumb sucked and one year we wrote off 400K worth of diaries that were not issued. So in March, April we sent out a consent to say put in your reservations, so that we can say we have diaries for 10000 A4 diaries and we have reservation for 5000 A5 diaries, so that we can order. But people just do not plan, a lot do we put the deadline for 30th of September and when that came, we put the order and come January people went to stores looking for diaries, when are we going to get the diaries, and they went to go and do their own buy outs, but at least in that we did not have to write off.

Me: I think that is much better, any other reasons, or once-off material in the sense that you buy and must use by a specific date? Any other examples? You spoke about imported materials.

I4: There as some materials that have long lead-time and are only available from oversees, "surgerester" have 6 months lead-time and are only available at overseas, Siemens in Germany, and we are waiting on that, and that again is something that DSD distribution, services development, want "surgerester" but I told them we don't store something like that, but they said [it] is on tender and I said but we get it when we need it. Think is about 330K, so we don't keep it in store, is set to PD, Planned on Demand, where is your reservation, he said but it has to come from Germany because when it is in PD it only triggers a planned order when there is a reservation in the system. But anyway we sat an order now about 4 months so it must be close, hopefully.

Me: What is the order problem that you experience now with the materials that are high stock-out materials, that are local? It is local content which has to do with importing and exporting.

I4: There are a lot of challenges even if they are local, raw materials, for example industrial poles. [The] procurement manager actually called me this morning, "industrial musk", they manufacture steel transmission poles and street light poles. You remember some time ago with the big strike at "Athlon Metal"? It's a couple of years back, there was a strike and they could not get steel, it was a whole domino effect because the steel needs to be bought, cut and then it needs to be rolled, galvanised, it was the whole lot of effects down the chain.

Me: Which manifest later on.

I4: Not only that, the lead-time, the manufacture says the lead-time for poles is 84 days, 12 weeks, but because he is the manufacturer he has to work on steel being cut, being rolled and being galvanised, he has got to work in his lead-time, in order words he must not tell us, I supply the steel in 84 days but it takes me 12 days to get the steel, another 7 days for this and that. So if he says 84 days we expect that in 12 weeks the truck will be here to deliver so that we can off load the poles. But that will be living in a perfect world; it doesn't always work like that. That is a problem, the is another problem local vendors, the tender is out and the eyes get big and say here are some dollars, the quotes or underquotes because they think they will get business and like I said with the MCBs, they supply, everything goes well for a month and then they realise they are not making money but are actually losing money, so just like that, they are like we are not making money here we are pulling out. And they withdraw and say we cannot supply anymore and it happens, that is also a big challenge. Also what is a big challenge in terms of the supply chain policy is that we cannot be brand specific, in order to procure stock materials, we can't say sunlight liquid, life boy, we may not specify brand names, we get a lot of crap supplied, serious. Back in the days we used to specify sunlight liquid now we get, I mean you know sunlight liquid is thick and a good quality product.

Me: You can use it longer.

I4: Yes. And now the stuff that we get, even if it is the same colour green, it runs out like water. I mean, you have to use half a bottle to get to use the soap, no honestly. It is the same with other materials as well, for example a pen. At Brackenfell about a couple of months ago, the guy that just called me right now, he called me to go to Brackenfell store. The pens were manufactured in China, you could put it like this and it would bend, and we are not allowed, the ink does not dry properly, it smudges. We have orders in the system and what happens is that we get the stuff that is not according to specification, and we do a return to vendor and the stuff get taken away, then what happens you are out of stock again, because you do your planning and your MRP perimeters are set up perfectly, based on historical usage so you order your stock when you have 5 in shelf and the stock comes just in time, so if is not according to specification we have to GR it according to our system, do a return to vendor then you sit with 5, and the process must start again.

Me: On that regard, can I?

I4: Yes.

Me: What happens when the vendor delivered on time but poor quality? Ooh ok no I get it.

I4: No the vendor is there, when they check it, this is my store and you are the vendor, I check what our specification are.

Me: I was saying that when the vendor has delivered late, he does not come on the list of late deliveries by vendors.

I4: No.

Me: He comes on the list of poor quality.

I4: No the delivery reliability is not affected if he delivers on time of up to 7 days before or whatever, this is independent of quality. Let's say a vendor delivers a product not to specification, we will do a return to vendor with a specific reason code, so the return to vendor is the overall code but in it you have specific codes, not to specification, poor quality or whatever. We use this codes, we can draw statistics on SAP, say, say deliveries, were they on time, a week early or a week late, of whatever. It was returned due to poor quality, breakage, or whatever, the vendor get here with 25 fluorescent tubes, and 3 are broken, we have a choice we take out the 3 that are broken and we GR the full 25, and we immediately do a return to vendor with the reason damaged, brock or whatever suitable. And the vendor will only get paid for the 22.

Me: I see now that you can still catch him on the poor quality side, because I thought that the can just show up with poor quality just for having been there. In some instances, poor quality can be a more critical measure than late deliveries because a vendor can deliver a day later good goods, while on the other hand if the supplier delivers good poor quality on time the process starts from scratch.

I4: If I understand you well Moletsane, you are saying that, say if we order sunlight liquid and the PO delivery date was two weeks ago, they will not be taken to task for poor quality, but they will be caught on late delivery?

Me: Between delivery and poor quality, which one is taken more serious, out of interest?

Me: It depends at that moment in time. If we desperately need stock, when we are totally out of stock then I suppose not delivering on time, is serious. But if we still have stock and they deliver [the] wrong stuff, that still gives us a bit of a buffer, to return that an get the proper stuff in, until the couple that is on shelf if totally out of stock. So there is no hard and forced rule, it deepens on the situation. For example, you brought the wrong stuff, but do not worry, I still have a couple, go back and bring me the correct stuff. So basically it depends if we still have sufficient stock even without accepting the delivery. In other words, the MRP perimeters are set and the order was placed but it comes with the incorrect materials, say I still have 10 in stock so take back your stock and bring me the right stuff. Or hang on a minute, I do not have stock, even if it is poor quality I will still use it, as I wait for the rest.

Me: Ok, no, I understand fully now, the last point was clear, that sometimes you can compromise because of the situation.

IQ 1.2.2	What are the significant causes of stock-outs?

Me: What are the significant causes of stock-outs? Top 5.

I4: I will certainly say personnel shortage in Procurement is one. That is not part of ISM as such but is relative. Poor planning is critical, that is most probably the biggest factor that contributes towards stock-outs.

Me: Planning from the end user of planning from the stores?

I4: No from the end user, from the end user's side. The users push, it is not us that pull from them, so they place reservations and we order on their behalf. They push us to convert the planned orders into purchase requisitions. That will be no.1. I would also say there is no proper screening of the suppliers, ideally when a supplier gets a big contract someone form the City must go and inspect the premises, if the supplier tenders, say yes I can supply million pritt and million pens. Someone from the City should actually go and see do this people have the capacity to produce as they promise, so because of shortage of manpower that does not happen. It is not just screening of vendors, [it] is also the government legislation, Triple B EEE, (BBBEEE), that also has a lot to contribute because a lot of companies are fronted, that show you as a director but behind the scenes there are 20 white people, so that should be looked into more closely. I just want to think because stock-outs is one of our biggest concerns, biggest concern, because the mayors keep driving service delivery, service delivery.

Me: What does the mayor say about this local content issue?

I4: The mayor is the optical head and does not really deal with operational issues, I don't know, does the mayor really have power to make changes? Those are more operational things that must be dealt with by Procurement and tenders in line with the national legislation. I think a lot of people wish it was but the City of Cape Town is not an island you know, we are a municipality just like the others subject to national legislation.

Me: Can these causes of stock-outs [be] linked to the features or characteristics above? If yes, how can this be achieved, for example seasonal materials, suppliers not delivering? Can we find those patterns?

I4: I think, probably not, just trying to think, it is very difficult and vague. If there as one supplier, let's use clothing is a good for example, this year, art work and safety might get the contract. Next year or two years down the line Pioneer brothers may get the contract, using the best state of the art machine you know, making sure that is well serviced, all that type of thing. Whereas art work and safety maybe cutting down on maintenance work. Say they are using a sowing machine, there might be a fault on that machine where by the stiches just do no come correctly, say they end up doing triple stitching or double while the specification said single stitching. So it gets to stores, it gets rejected because it is not to specification.

Me: Ok I understand your response.

I4: It could be a factor because then again, it has triple or double sticking while it have to be a single sticking, not it goes back due to poor quality, but because the lead-time is long, 6 to 8 weeks for safety clothing, they might say they will re-stick the garment and then the garment will be back in like 2 weeks or say they will have to re-manufacture the garment right from scratch again because it had been stitched.

Me: So basically, in other words, to get patterns you will have to have huge amounts of date, so if I understand you correctly you mean we cannot generalise?

I4: No, one cannot generalise and have to look into the individual data.

Me: Say what about data taken over a period of 5 years?

I4: Yes, most probably 5 years is the minimum acceptable amount of time where the data can reveal patterns.

IQ 2.2.3	**What processes should be followed to ensure that the normal reservation creators are not affected by planned or unplanned material withdrawals?**

Me: What are the rules around creation of stock reservations and stock transfers? Because every use is equal in the system and that they can create reservations from one plant to the next.

I4: I have a big problem with that, especially from South. They don't plan and look in to the system and see that Brackenfell is the store down the road and have 20 in store, which is also my store. and then they put in the reservation in Brackenfell to go clean out the store at Brackenfell. We had a case the other day where [name deleted] at Brackenfell phoned me and told me, [name deleted] the people from Muizenberg are here, they want to take all my sone iron. Then I looked into the system and said what Muizenberg people wanted, internal ignite sodium lamps, so they had taken or reserved all grand stock. And I looked at Wynberg which is their area head office, Wynberg had 336 in stock with no reservation, 336 in stock. so I told [name deleted], send those guys back we are not interested, so I don't know if those guys think we have something to do, on that side of the world, so let's save our own petrol and so you know, rather reserve from that side. It has been addressed many, many times. We have asked [name deleted] if they can put a block onto the system so that if someone is from Wynberg, [they] can be blocked from creating [a] reservation in Brackenfell. But [it] is going to create a lot of movements and he said no. But yes, its big issue and it really is a big issue for me. People don't plan, users don't plan properly and do not plan for what they need. They plan for what is in the stores so in other words, if they need 50 for the job and the job only starts in august they don't put a reservation now so that if the stores does not have that mount of stock they can make arrangement to bring the sock in. but what the majority of the users do is that we need the stock now, so where can we get it. And so they will go around draw form Langa, draw from Gugulethu, musing, etc.

Me: So can that be the driving factor because they know they have a variety of places to choose form? Say if they knew that I can only draw form this 3, or 3 stores under my area head.

I4: Yes, they could plan better and make sure that draw their requirement from the stores in that area. That is a big pain because is affect our users, because our users come to stores and we check onto the system and we see that Helderberg has drawn stock, Atlantis has drawn stock.

Me: I think this can be one of the driving motors for people not to place reservations as they need stock but create reservations for the year and put in the cupboard somewhere.

I4: Yes that is one of [name deleted]'s headaches, as a result there is this squirrel stores. And he showed us graphs, where the item is more or less gradual and all of a sudden there is a massive spike going upwards. And goes gradually and all of a sudden there is a massive spike. And when you and look is people that are filling the backies with stock, for example, insulation tape, who books out 40 rolls of insulation tape, he showed us, is was quite an eye opener.

Me: What processes should be followed to ensure that the normal reservation creators are not affected by planned changes? How are the people that you know come every month to reserve say 10 protected?

I4: They are not they are moving targets, lets as we have stock today, so any of the other users will Bloemhof has got stock and they will reserve it. But then again it might happen say tomorrow an expensive thin like a joint, that we keep 2 or 3 and we do not have reservations into the system. Atlantis will put a reservation and go to stores the following day we could have a blow up or a cable theft here and we have not got stock for our users. So the fact that people from south north can draw form anywhere is problematic.

IQ 2.1.7	**What are the challenges with regard to policies and regulation in SCM?**

Me: Do you feel that there are any internal policies and regulation, people from different area creating reservations?

I4: Local content.

Me: Is local contend internally or external?

I4: Look, internal means internal to the City. We are governed we now have massive shortages in clothing, protective wear, and boots and those type of things, because the Department of Trade and Industry has brought such strict regulation on local content, you can't use imported leather for the shoes you can't use imported materials for whatever and that is creating a massive problem, and vendors that manufacture materials, and bid for the city import their materials sometimes not because it is not available in south Africa but because it is check to import it. And that creates a very big problem.

Me: I thought [it] is about the finished product only?

I4: No even the materials, I think is about to encourage local businesses. But they have put their foot down now and it is really causing problems for clothing, even sometimes with cable sheaving some of the cable used when it is expose to the sun there is only one company in the whole world in France that has the patent to make this magical sheave that does not deteriorate. I sent an email yesterday and here is [name deleted] in Procurement, cable is now under local content and the lead-times have increased due to the delays with the interaction with DTI by vendors, to obtain the exemption letters. We did request for the quotations 5 times and so we still waiting. Some of the material the must get the exemption letters, one of our users sent emails here is one of them. What is the latest process to get this cable? we are eager to spend our budget, but not getting this cable reflects negative usage because we are approaching the end of the financial year. Now the people want to spend their money and we sit with this type of thing. That is why I say it started with clothing now it is with cable. So it is a big problem.

Me: Are there any materials affected by this?

I4: Shoes, leather is obviously there in south Africa but some of the high quality boots like caterpillar source their materials from oversees, and this is what the DTI and government are saying no, there is perfectly good leather produced in south Africa, or there is perfectly goods boots produced in south Africa, you know, we are not allowing you to bring that stuff into the country. We are an electricity store but you do get cooperate stores that deal with stationery, milk, coffee and sugar. But we mainly 95% of our staff is electricity, like switch gear Siemens, ABB who are based in Sweden and the RTUs and the RMUs are imported or the components are imported. They have to have the local subsidiary but the headquarters is in Sweden, so they import the component so even if they are the subsidiaries of the international company, but they battle to bring the components to build because eventually the money goes out of the country. So it really is difficult, it is.

Me: Do you feel that there are any externally policies and regulation that contribute towards stock-outs at COCT?

I4: MFMA is more on how to handle municipal money, or the rules of how to deal with the municipality s money and regular expenditure. What has more to do with this is the preferred procurement policy and that is national legislation and that is from the central government. Preferential procurement policy.

Me: I will read more about it.

IQ 2.2.4	What should be monitored in order to manage the causes of stock-outs?

Me: How do you identify multiple causes of stock-outs that result into a single stock-out? The requisition took long to be converted into a PO, the supplier delivers late, how is this identified. Say the vendor delivered within his lead-time, is just that he got the PO late.

I4: You, we don't really sent POs, POs are sent by Procurement, via email, fax or anyhow, the vendor is set up to receive them. Like I said, in the beginning once the planned order is converted it is out of our hands, they must see to it. But it does happen that, call [name deleted] or the assistance buyer to say the PO was in the system, and the delivery date was the 10th of March, when is the stuff, and then they will go into the system. The system does show them if the PO was delivered successfully or not, and then they go aahhh! And it shows that the fax transmission or the email transmission did not go successfully. And we call the vendor and the vendor is like, no, what other number what? No I never got anything like that. But that is for procurement to follow up, we do not follow up such detail.

Me: But it ends up affecting your area.

I4: It does but [name deleted] gave a direct order to say that stores should never ever call vendors, and that is a procurement function and my staff does not do so because they are too scared of [name deleted], but sometimes I will just pick up a phone and call the vendor and say where the hell is the stuff. And the vendors would say but we never received a PO, then we have to refer it to Procurement. Because we do not have the facility to forward POs; in fact, we can't even print the PO that look like what the vendor gets it. We can only print the pdf or display it but we can see what the vendor actually gets.

Me: What should be monitored in order to manage the causes of stock-outs?

I4: What is important is that the MRP perimeters are maintained correctly for different materials, that is essentially important. The MRP calculation must be done regularly, because a new product might come in and for the first 3 to 5 months the update might be slow because nobody knows about it. So obviously the more your users know about it, the more your usage goes up, so the MRP calculation is important and must be done regularly. It must also be monitored that the MRP controller

is in fact converting his planned orders every day. And must convert them as soon as he gets in in the morning because, because if the waits until 3 o'clock in the afternoon the buyer could have converted it buy not should he have don't it at 8 o'clock in the morning. If he only does it at 3 o'clock in the afternoon then I shit him out because, but they would say hang on I did it today. But the risk of him doing it at 3 is the same as doing it the following day, worse on a Friday. When he converts it, it goes to the buyer's inbox but do you think that the buyer on a Friday afternoon is worried about what is in his inbox. When it was the Monday to Thursday is ok because that planned order is converted the following day. But when it is the Friday, that planned order can only be processed on Monday. So you are actually adding two days to your lead-time. So that has to be monitored that the MRP controller converts his planned orders on time. So that has to be monitored that the MRP controller converts his planned orders on time. So that has to be monitored that the MRP controller converts his planned orders on time.

Me: One thing that we did not touch on is the goods receipts, is there any challenges on that?

I4: Is the vendor delivers what is required in right quantities and quality then we GR it immediately. But if the vendor arrives at 15:55 the will inspect the stock, maybe the GR will only be done tomorrow. Or the following morning but generally there are no challenges with GRs. Then only thing is if we have a complete system down time or a complete system failure, because then you cannot GR, there is nothing like a manual GR, because it workflows to Accounts Payable to effect the payment.

Me: How often is the system down time?

I4: Very seldom, I won't say is system is Eskom, but is it very seldom that the system is down but it sometimes get very slow. We do get emails sometime to say the system is very slow and they apologise they are working on it. But we never go down completely, and when did the City go on SAP, 2003, and in my 12 years of SAP experience, ma be once or twice years ago. But I can't remember the system crashing in total.

Me: Thank you very much I4.

I4: Not a problem but we have to sign your thing.

APPENDIX D5: INTERVIEW TRANSCRIPTIONS I5

Me: Ammm! Hi I am Moletsane, and will be interviewing Mr I5. He is the head MRP controller at the City of Cape Town. Morning Mr I5 Morning ..... Before we start I am supposed to go through the informed consent.

I5: Ok.

Me: It basically talks more about the ethical issues that you voluntarily took part in the study.

I5: No, I read through it, and I am quite happy to sign, it is not a problem.

Me: Thank you very much I5. I work or the stores I must have a pen.

IQ 1.1.1	How are stock-outs experienced at CCT?

Me: What does out of stock mean?

I5: It essentially means that since we are supposed to keep stock we have zero at hand. So for example, there is stuff that we keep in stock and the stuff that we don't. For the stuff that is needed for maintenance or projects we are expected to keep certain levels of stock, so for the items that are for maintenance, or for emergencies if we have zero on hand that is classified as out of stock.

Me: In your experience, how does your line of work contribute towards stock-outs, hence service delivery?

I5: My line of work, I don't contribute towards stock-outs but we try to prevent it to a certain extend.

Me: So actually what is it that if you haven't done will result into a stock-out?

I5: Ooh ok, if we haven't done, ok, so we use [the] SAP system to convert planned orders into the purchase requisition, so if that is not done on a regular basis or on a daily basis it can result into stock-out. Say for example I look after electricity meters and I forget to look at the planning perimeters for a month, that would mean will go out of stock for most of the items. So if we do not action what we are supposed to do on a daily basis we will run out of stock.

Me: What do you do to overcome this problem?

I5: Our business process requires us to look at planned orders on a daily basis and so that is one of the key activities that needs to happen every morning when we get to work. There is also reporting, which is a mechanism to check if we are doing what we are supposed to do. So this report is run every week or 2 weeks, it is used to check how many old planned orders which are old, which means the panning date in the system is in the past. So which means that if it is not auctioned we would then eat into the lead-time, so we give the vendor X amount to time to deliver, so if we do not action certain things at a certain time we eat into that lead-time.

IQ 1.1.2	How do you identify the materials that stock-out?

Me: Can you determine the history of the material being out of stock? If yes, how? Let's say you want to determine the history or to know which materials are generally out of stock.

 I5: You see there is reporting we use, sorry let me just have a look… "typing on a computer", the perimeter's report, it is ZMM_MRP_Perimeters report, so basically we have to run the perimeters report to get what we want.

Me: How do you identify when a material is out of stock at present?

I5: We have to run a report or throughout the day planning, I will identify what we run out of stock on.

Me: So actually get the individual items that are out of stock?

I5: Yes, I have to run a report physically to see what items are out of stock, that report is ZMM_MRP_PAR.

Me: so this is the same report that you run to identify which items are out of stock?

I5: Yes.

Me: What do you do when you have identified that the material is out of stock?

I5: So we normally check, why is it out of stock, so was there an increase in demand, was there increase in reservations, did we not action planned orders timeously. If it is one of those we put corrective action in place, then we try and get hold of the supplier to deliver earlier. If we see that there has been an increase in usage we try and an up the stock levels, to cater for the increase in demand from our end users.

IQ 1.1.3	How does consistency in your area work with regard to stock-outs?

Me: Have you experienced any inconsistencies with the system? If yes, please describe the inconsistency as follows: what was inconsistent, when and the frequency?

I5: There is a situation in SAP where the system show stock in a negative value, negative balance, I am not sure if you are aware of it but the reason for it is that, I1 explained to us that. I always thought or I was told that SAP is a live system, but after speaking to I1 he explained to us that it is not a live system, he said when someone processes a transaction it goes into a queue, and at the time when somebody, I think there were four items on hand, but the system allowed us to issue 8 of them, so the same four was issued twice though we didn't have stock. So there was a delay with the first four being issued from the system, so the next four was still available.

Me: So the system allowed you to issue?

I5: Yes, because it was not registered yet in the system so the system allowed the same four to be issued again. And it is quite risky when you think about it.

Me: Yes it is, are there any other inconsistencies that you found?

I5: No I think that is the only one that we found. Specifically with the system.

Me: Am regarding the system and the physical inventory, do you get inconsistencies there? Like the system says you have 10 items while physically you have about 8.

I5: Normally it get picked up during the daily stock checks that the store keeper performs, if there are discrepancies they need to investigate why there is such. Did we issue too much stock to somebody on the document that we had to pull, which means we have to give 10 but we physically gave 15, things like that yes.

Me: What is the cause of this inconsistencies?

I5: It is normally when the store keeper that is responsible for the store is on leave and somebody else stand for them. Because the different person will not take care of the store the same way that the person responsible would. That's only when there are shortages I believe, yes.

Me: But then what is done to prevent this from happening?

I5: I think they try and, no I don't think there is anything that can be done to prevent it, the stock check on the daily basis is there to pick it up early enough. Even if it happened during the day, somebody will pick it up the following morning because the store keeper, will do daily stock checks every morning, so he pulls a report where there was a goods issue done and will go and count it.

Me: So they look for stock that moved?

I5: Yes and they count it.

Me: With regard to that other one that you mentioned, what solution did the ERP provide?

I5: There was no solution actually and it was quite strange, I think in my experience for all the time I have worked on SAP this is the firsy time that it has happened here, on more than one occasion so we are very interested, to know what the solution is going to be. When I spoke to the ERP they told me that. Sometimes when it comes to month end everybody runs a report so all the, the transaction goes into queue for that short period of time, so is a little time a couple of seconds, so that is normally when is happens. They told me that the server is clocked up so when everyone runs their big reports.

Me: It creates jobs in the background?

I5: Yes.

IQ 1.1.4	How is the information regarding stock-outs communicated to staff members?

Me: Is the information regarding stock-outs communicated to staff members? If yes, how and to whom is this in formation communicated to?

I5: So we have a forum once a month is called supply chain improvement meeting. Where I go to present stock-outs to the supply chain improvement team. So the procurement team lead is there the tender and contracts team lead is supposed to be there but is not always there, the inventory and stores manager is there, and the lot of other different stores area heads are there so we present to them, why are the items out of stock, what is the current trend, how is the improvement is it getting better is it getting worse what are we doing about it things like that. That gets communicated at the management forum and it also gets communicated to staff I sent out emails, I think once or twice a month, for the important items that are out of stock to ask the store keeper can they investigate why it is out of stock and can they do something about it to get it back in stock. We also have a regular communication with our Procurement Department to sort of, get the items that are out of stock to stores sooner.

Me: So basically they do know about high stock-out materials?

I5: Yes, that is communicated to them we report on the number of stock-outs and the percentage of stock-outs, or we look at it as the percentage of availability or of stock-outs, and the inventory and stores manger wants a target of 99% availability all the time. I think last month we were at 97%, we are close to the target we are there.

Me: What are the challenges with regard to communication? What is it that you find always a challenge? You mentioned one I think that not all managers attend the meetings.

I5: Yes, We don't always get the right people who have the information to go to the meeting, for example, tenders and contracts, they have got a huge impact on stock-out but do not always attend the meetings. That is one of the major challenges with this issue. But additional meetings have been set up so that we try and manage it, with them.

Me: To [the] end users, what kind of communication is done to try and educate them? Maybe to plan in advance.

I5: We done an assessment a couple of months ago we basically did an assessment to find the root cause for all the stock-outs, and the result of it was that over 60% of our stock-outs was the result of the end users not planning. I think just about 30% of it was the suppliers delivering late. There are other reasons but we looked into the bigger ones, but the ERP I2, have been having sessions with electricity, to try and educate them to use the system better. It is the on-going training that the ERP provides.

Me: How has the above lines of communication improved service delivery?

I5: They have a lot especially in electricity we used to have a lot of complains on electricity metres but not they almost none existent. From the electricity side, they were the ones that complained the most, and they do not complain anymore. It is an open clear communication, they understand the capabilities of the system, they know what to check for when there is out of stock, and I think they plan a lot better than they used to. Their problem was that they did not get proper training initially

when they started using the system and the ERP has been training them to improve this actually.

IQ 1.2.1	What are the common features or characteristics of materials that are commonly out of stock?

Me: Are there commonly out of stock materials?

I5: Clothing is currently the problem, but overall we have seen a huge improvement. I think if the clothing has not been an issue for so long we would have hid the target of 99% availability. A lot of issues that we had in the past are now resolved because, the end users are now planning properly in all of these.

Me: Are the any common features or characteristics on materials that are commonly out of stock, like you mentioned now clothing generally?

I5: No I don't think so, there are not patterns but some of the things that have been out of stock for a long time has been transformers and the mini-subs because there is not contract in place, and the legislation requirements is that any item with purchase price of over R200K needs to have a contract in place.

Me: Ooh ok I5. So there is no contract so we can't buy?

Me: But I think that is a very nice link because we can attribute very expensive items to contracts not been in place, so this is the kind of detail we are looking for.

I5: Yes, so they do not advertise it for anybody to supply because it is a highly specialised item so it needs to have a formal contract in place. And we have been out of stock close to a year now, putting a contract in place has taken now a long time, we are not sure what the challenges are but we have always been told that they are working on it.

Me: So they are still working on it.

IQ 1.2.2	What are the significant causes of stock-outs?

Me: What are the significant causes of stock-outs?

I5: 60% of it is due to unplanned requirements, users not planning their project, or work on SAP so they plan on a book of paper, but not on SAP therefore not utilising the full capability of the system. For example, for a project they would require 3000 metres of a certain cable, and they know [a] long time. more than 6 months in advance but only when it is close to the time when they need stock they create a reservation on the system. So now they go and empty the stores and we are out of stock. And 60% of stock-outs are caused due to that, and 30% of it is due to suppliers delivering late, the minimum lot size and the ROP is set say the delivery is the 2nd of June. Come the second of June, the supplier says I don't have now I can only deliver in August. And we only planned stock as far as the second and therefore will run into stock-outs, and that is 90% or close to 90% of stock-outs, because of not planning and the suppliers, but this are things that we can't counter but as for the end users we can educate them, say listen you need to help us help you.

Me: What happens then with the suppliers, if they do not want to come to the party?

I5: No, they get blocked then they will not get any future business with the City. There needs to be a continuous trend, and history it is difficult.

Me: So basically you can change and still get the same problem again?

I5: Yes.

Me: What are the other challenges? We are still going down with the list.

I5: I think the others are, I think the others are the ROP is too low for example, the MRP controller does not update the MRP calculation when he is supposed to, so the ultimate thing is that the ROP is too low and we run out of stock quicker. What are the others? Let me think.

Me: The approvals maybe?

I5: Yes, but those are all small thing that will appear there and there, but is not something that always pops up.

Me: Can these causes of stock-outs be linked to the features or characteristics above? If yes, how can this are achieved you said something about transformers being linked to contract creation. What about vendors?

Me: You see, sometimes vendors quote on something they don't fully understand. For example a motor, they do not know that a motor is made to order, they assume is off-shelf; we require motors that are specially made up. We would go with the supplier, and he says 21day lead-time, while it takes 4 months to be made up and delivered. So these are some of the challenges because we do not deal with the original equipment manufacturers. And they do not have the knowledge of it. The other challenges are that when the vendors quote for something they have it available in the store, or premises, so when they no longer have it, they need to buy it from their suppliers, and the lead-time form their suppliers is much longer, because of manufacturing lead-time, the supplier lead-time so the 21 days turns out to 60 days. Overpromise and under deliver.

Me: So you cannot attribute these characteristics to a specific material?

I5: We have send a whole lot of orders in December to a specific supplier, the others were created in October, November, December; we have been waiting all this time but come January for the stuff to get delivered, the supplier said, we never got the orders, so they made and assessment, the email communication was sent to them but there is no communication sent back. So for us we stand back and say we sent the PO. But because you sent it does not mean that I got it. It just means you sent it, and does not mean we received it. But to overcome this problem there is not the new project that has been implemented; supplier self-service if am not sure if it is working fine but my understanding is that suppliers will be able to see their orders and to confirm orders. I am not sure if it interfaces with SAP or how is works

Me: it does interface with SAP.

I5: So this will resolve some of this issues, it is often with things that have got very long lead-time and the vendor comes and say that, and it is often the same vendors. Sometimes you can actually think that it is not a system problem is actually a vendor.

Me: So you are saying the items with long lead-times can actually be linked to the causes?

I5: Yes.

Me: So you mean you have a better chance of getting a stock-out from the item with longer lead-time.

I5: yes, because of a long reaction time because if we are out of stock we will be out of stock for a very long time. And also if the vendor does not get the order.

Me: What are the challenges and what do you recommend you mentioned now that.

I5: I think this supplier self-service yes, when I started here I was quite suppressed that the City does not have the order confirmation system. I think most of the big organisations have it where the vendor actually confirms the order. Say for example when make an order it gets sent to a different system via that, you get an email or you get the email copy and the email copy get sent to the system. The system will be sent to the supplier a notification to say that order so and so has been loaded onto the system. The supplier will go onto the system to check the price the quantity and the delivery lead-time. And goes and confirms and that system interfaces back with SAP so now we got the confirmation. But the city says maybe they got it, maybe they did not. Maybe with the fax services they got it. And they refer to the 97% chance.

IQ 2.1.1	What are the challenges with regard to master data?

Me: What is the process for creating and updating master data?

I5: For us say specifically materials master say you want to create a new materials master there is a form that needs to be completed, it is authorised and sent to Codification, they are at the back here at the auction centre, and they would create it on the system. The MRP controller is responsible for all the MRP data on the system, so he has got access to change the MRP information, and then procurement does all the procurement related information, and Supplier Management will

also deal with vendor master data but we only look at materials master, and my function is only on MRP related data. We have access to change that.

Me: What are the challenges with regard to updating and changing of master data?

I5: I think, one of the things is that we have a number of codes say for example 50 codes, and say we have to do the same change, to all, it is time consuming. I have asked to have access to a mass transaction but unfortunately they do not want to allow us access, even for Codification department because that will help them, so that is one of the challenges. So the ERP have a policy that says they will help if it is 100 or more, so if I have 50 materials where I have to change the same field I have to take an hour of half an hour updating the same field. But if we had access to mass transaction we could make a change quicker and more productive and spend the rest of the time, doing things that would, improve other areas.

Me: What about the operations side, say now master data updated, do MRP controllers make correct changes to the master data all the time?

I5: No not always, we have MRP controllers that are very good and do what they are supposed to do, and we also have the MRP controllers that are very low and do the bare minimum which is not always create often we have, situations where there is conflict with the MRP data, say for example there is a miss match between the material status and the MRP type then it gets excluded from the MRP run. We don't always get what we want but I do run reports every second week, to check up on things like that. The problem is that if we don't check things like that, somebody can place a reservation, and we will not plan for it because it gets excluded from the MRP run.

Me: So can you say that master data update can become the cause of stock-outs?

I5: Yes, it can, we have seen it happen, but it is very small percentage wise, in relation to other bigger ones, but that is something we focus on and we report on to ensure that it does not happen.

Me: What is done to prevent this from happening? Is weekly meeting and then what?

I5: So we have or I try to have quarterly sessions with all the MRP controllers in different areas to discuss things that I feel we are lacking on, where there is room for improvement, is one of the things we discuss. Conflicting MRP data, stock-outs, reporting that we can use to check up on certain things in stores, so there is continuous training to ensure, and try and improve on these things.

Me: Are there tools that actually help them to input correct data?

I5: No, there is no tool, there an MRP guide that is step-by-step guide that help them about what to do, how to do it, but there are no tools, it is up to them to input the data on the system correctly.

Me: So there is no guide, that shows the re order points and…

I5: We have a guide, in the MRP user manual.

Me: So the user guide has all the information, about the reorder points how to plan for this type of materials.

I5: You see when setting the reorder points it depends on the trends that are found form the MRP data, say for example, materials that moved, one of the challenges that we found are that some of the MRP controllers do not know how to read the graph. You might find that sometimes the re order point is way much higher than it should be, but we try and explain in training, what to look for and how to look for it.

IQ 2.1.3	What are the challenges with regard to supplier performance?

Me: What are the challenges with regard to supplier performance to you?

I5: Late deliveries and supplier delivers a products of inferior quality. Nearly 30% of the orders are delivered early or on time so less than 50% are delivered on time. It also depends on the supplier for service delivery, suppliers often quote for stuff and they do not understand what it is. Sometimes we require a certain specialised item and when they deliver we realise that the delivery specification is not what we wanted and this causes delays and that.

Me: Before suppliers bit, what kind of communication is there to ensure that they can deliver or understand what they are quoting for?

I5: They engage with Procurement, or with [name deleted] if they are not sure, or with the stores even, especially with [name deleted] where there is a certain standard, like in clothing, they would call her for advice or sent a sample to check if what they are quoting is actually the item that we want. That is some of the challenges we have, yes.

Me: You just answered the question of how you overcome this problem, but do you normally involve them or they would come by themselves if they do not understand?

I5: No, they come by themselves if they do not understand. And with late deliveries, Procurement has a way of managing that with the supplier performance. There is currently a list of suppliers, which are constantly delivering late, they try and bring them in, and tell them that if this continues they will stop doing business with them in future.

Me: How do you motivate the suppliers to perform? I think you just mentioned one now.

I5: You see with the City it is difficult, we are a public entity and we cannot prevent doing business or say we do not want to do business with certain suppliers. We are very dependent on how they perform, so even if they constantly deliver late they still get business, the Procurement Department has to build up the case against them in order to block them from the system and this is a lengthy process, it is a legal process with procurement law in it, and all of that. It is difficult to get them to deliver of time because the City deals with thousands and thousands of suppliers, almost any supplier, and anybody can create a company and say they want so supply milk, if there tax certificate is clear, and their documentation is in order, registered business and they are BBEEE compliant they can do business with the CCT. Even if there is no history of doing business with anybody, "laugh", so that's is the risk, but it is not something that we can get away from it will always be there. It is very different from the private sector where we can say that we do not want any fly by nights, reputable suppliers, the original equipment manufacturers. Whereas with the City you deal with somebody that buys it from somebody, the original equipment manufacturer. And there is a chain of things that can happen, and there is a plenty of things that can go wrong with that chain.

IQ 2.1.5	What are the challenges experienced with regard to following the supply chain processes?

Me: What are the steps involved in procuring stock materials particularly around creation and approval of the purchasing documents?

I5: So for every item that we stock there is a reorder point that is set in the system at a certain time when it was created, so we set the reorder point from the estimated usage from the end user. So as soon as the stock drops below that reorder point the system will generate the planned orders, so one of the duties of the MRP controller is to re-calculate the perimeters to ensure that it is up to date and in line with the current usage and an the price and the delivery lead-times are up to date, so the ERP have developed a ROP calculator that we use to recalculate the perimeters, so for every planned order the MRP controller goes and update all the information. Average daily consumption, prices, contract lead-times, supplier s delivery times over a period of 12 months, so once that is set then the MRP controller then updates the system, and converts it into a purchase requisition if it is, under 200K it goes straight to the buyer but if it is over it goes to the inventory and stores manager who checks it and if he is happy he approves it.

Me: And after that?

I5: The receive the workflow, each buyer runs reports on their purchasing groups, or the purchasing groups they report to, if it is on contract they can place an order immediately. If it is not of contract it needs to be advertised on the web, for that we allow them 14 days for that process to be complete, to advertise, adjudicate and to award. So once that is done, they sent the order to the vendor.

Me: Is there a mechanism in place to monitor the anomalies let's say with regard to approvals, say the inventory manager does not approve on time?

I5: You see I run a report or open purchase requisitions, normally that are open for more than 14 days then I would sent the requisitions to the buyer or the team lead to investigate why is there open requisition for more than 14 days, are there issues, and what can we do to speed up the process. So that is the only

mechanism that we use to find out that. But we have also found out that if the inventory and stores manager is on leave and has not assigned his role to anyone else to release, the process is on hold.

Me: So how do you pick up that one if he did not release?

I5: Only by the open requisition.

Me: So those requisitions will also be include in the list to the buyer of open requisition?

I5: Yes, even if it is not released I run the report on all statuses. On released, approved and all other, as long as it is open I will report on it.

Me: What are the challenges experienced with regard to following the process, let's say is not approved and it is 14 day and now on the other side end user have already created reservations?

I5: In situations like that, then we would get someone to approve it, if it's not, it is a different situation when it is sitting in the buyer s inbox line now for example clothing items the department of trade and industry requires the CCT comply to certain local content requirements, which means that all the clothing that we buy needs to be, I am not sure if it is 100% or 60% so there is legislations requirements in that, so there is delays in that. so for every clothing that we buy the supply must have a Certificate that says it is locally manufactured and that needs to come to Michele or Allen to evaluate if the garment is really locally manufactured according to the certificate. And the whole process it time consuming.

Me: How are these challenges overcome?

I5: Currently it is a big problem within the CCT, we are actually forced legislatively to comply to the requirements of the Department of Trade and industry. There is currently the discussion between the inventory and stores manager and the procurement manager and the supply chain director to look at how we can overcome the current challenges, because we have seen that especially on clothing we used to have stock-out between 50 and 60 and over the past month is has gone over 230. So we escalated that to the inventory and stores manager and he has been discussing that with the supply chain director. We are going to go to a situation where we have a clothing stock with no stock the inventory manager asked if is the service delivery more important than compliance or is compliance more important than service delivery. If we enforce compliance there will not be stock to supply, to enable service deliver but if we try and get away from compliance we would be able to serve, or the end user will be able to deliver service. So what is more important.

Me: The internal policies or the externally policies.

I5: Yes!

IQ 2.2.2	**How do you know what materials to stock, when, and in what quantities?**

Me: How do you know what materials to stock, when and in what quantities?

I5: You see initially for new materials if the end user wants to stock a new stock materials, he would come to the store keeper or the area head and discuss what he wants to stock, and what we require from the end user to create a new code or to set the planning parameters is to get the estimated usage, the estimated price and the estimated delivery lead-time, if we have these three variables we can set the reorder point the lot size and everything that we need to buy the stock. From then is gets monitored to actual consumption. When we start of we have estimated user consumption but when the stock starts to move, we have consumption to work with. If his estimated usage is way higher that consumption then we drop down the stock in line with what he is currently using.

Me: And to raise it?

I5: To raise it we will pick it because we will be out of stock, we will adjust the ROP with the current usage.

Me: Ok, can you explain further on that one?

I5: For example, if the user wants to stock a certain item we start of he estimates 20, we start of we buy 20 and the same month he draws 20. For the 20 that he is

used we will double the stock level to accommodate the increase in demand even though, that was the estimated usage, so now we have the actual consumption to estimate the stock level. So that should happen on a continuous basis, so as soon as it starts moving we pick up the trend that is moves at.

Me: So if you get stock of say 20 and it get consumed in the first 10 days then you know you must double the stock level?

I5: Yes.

Me: So, it is the time versus consumption?

I5: Yes, we increase the stock level based on that, yes. So we look at the graph and we will see how it moved then we will increase the stock level based on consumption over a period of time.

Me: When and why do you change the calculations or the planning parameters?

I5: Every time the stock goes below the ROP we are required to change the planning parameters. We don't change it but update the calculation all the time. So every morning or any time when you do it or the planned order is generated you are required to updated the average daily consumption. To check if the contract has changed, and if the supplier still delivers within the required lead-time.

Me: So the ROP is the heard of everything?

I5: Yes.

Me: So basically if you check the graph and everything and you see that nothing has changed then you leave it like that.

I5: No, we are still required to update the information, it will always change slightly even though, even though the graph is constant, there will always be a change, it can be either slightly higher or slightly lower.

Me: Ooh ok, for every material?

I5: Yes, for every material. But we are a generally a busy store so an MRP controller will have about 30 or 40 materials, which can take you about 2hrs and three hours.

Me: To recalculate ?

I5: Yes, to recalculate, most of the sores have about 5,10, 20, and it is quick.

Me: What monitoring and evaluation tools are used to achieve this, and how useful are this tools? you mentioned something about the MRP calculator.

I5: I think the MRP calculator is quite useful, and also it is unique to the City. Also I haven't come across it anywhere or any other organisation that I have worked for. No. 1, it is time consuming but the information that you, have is up to date and accurate. And it is based on what is currently happening, whereas if you had the forecasting tool, it would be based on the estimated numbers and complicated mathematical sums that nobody really understands it is usefully the only challenge we face is that the MRP controller does not always understand the graph. That is basically due to the lack of mathematical understanding, because most of them are 50+ already, so the time they went to school, those were like the 1970s so, yes, that is challenging.

Me: So about the ROP does it always apply to all materials?

I5: Yes to all stock.

Me: Let's say seasonal materials.

I5: We have but, say clothing but we manage is the same way, so at a certain time the ROP will be reduced based on the information from SAP, actual usage and again when we reach new season, we pick up the trend and up the ROP.

Me: But now does it mean that you have to encounter stock-outs before you can increase the ROP.

I5: Yes, it does mean that, quite often we go out of stock or close to out of stock, it's the reality.

IQ 2.2.3	**What processes should be followed to ensure that the normal reservation creators are not affected by planned or unplanned material withdrawals?**

Me: What are the rules around creation of stock reservations and stock transfers?

I5: Stock reservations are managed by the end users so the end users will create a stock reservation when they require stock. The general rule is that they create a stock reservation and it gets approved by their cost centre manager, and for the quantities they require, but form our side we normally ask them to plan outside the lead-time if they require larger quantities. We normally have stock for smaller jobs but do not keep stock for large quantities for example big projects we would ask them to plan outside the delivery lead-time.

Me: Any reason for that?

I5: So that we can plan for that requirement, because if they plan within the lead-time we will run out of stock for everybody else.

Me: You never mentioned anything about stock transfers what are their reasons.

I5: Ooh stock transfers, there is only about three reasons that the stock transfers are made, one if the supplier delivers late to a certain store, and then we would ask any other store if they can transfer stock requirements to that store so that they can satisfy their customer requirements. The other reason would be if it is obsolete or slow moving in a certain store, we would transfer if from one store to the other so that it can be used up. Another thing is like electricity metres is bought at one central point, because all electricity metres when they come in the go for testing, so it gets brought at Ndabeni electricity store and from there, it transferred to various electricity stores.

Me: What are the challenges around stock reservations and stock transfers?

I5: You see, with reservations the end users normally checks what we have available and reserve all the stock that is one of the biggest challenges we have, so the end user does not plan well for his requirements, so they know that there is a project going on but do not inform the stores and just check what is available, like pick and pay

Me: What about the stock transfers, my understanding is that if you can plan properly for the end users that you serve when someone else form another store comes, that will be a problem.

I5: Yes, it will have to be an agreement between the two stores in most cases they would say yes, and they are very accommodative to help one another, because it is one customer we are trying to serve, so whether you, serve so when you say no, the customer will check so you don't have stock lets go to him maybe he can help us.

Me: What are the other challenges because if the end user can go from one store to the next then?

I5: You see they do not want to restrict the users from to one store, so these is one of the challenges, instead of planning properly the end users, checks what is available and goes to clean all the stores. So we had those situations in the past that for certain items there is not stock in all the stores, and this is something we cannot prevent we cannot stop the end user from collecting the stock where he wants to.

Me: What processes should be followed to ensure that the normal reservation creators are not affected by planned changes would be preventative maintenance or unplanned changes would be corrective maintenance.

I5: They need to plan on the system most of the users plan their stock requirement on a black book, or on a piece of paper but not on the system, and only puts it onto the system when the time is close. So we always tell them to take out that plan, put it onto the system so that we can plan their requirements, if it means planning, then we can plan for them because there is more than enough time to get those things, but for corrective maintenance we cannot plan for, because we do

not know how much, stock they are going to need for emergency, or if there is going to be an accident today and somebody drove into 10 traffic poles, that is something that cannot be planned for.

Me: But then what about, training is there any training that encourages the end users to take ownership of their requirements?

I5: That is one of the things that the ERP has done with electricity and they are trying to roll it out to the, rest of the departments like the water works, road work, so it is an on-going training to get the rest of the departments to plan better.

Me: Under what circumstances are materials written off?

I5: It is obsolete and cannot be used anymore or if it has not moved, I think for 3years, 3 or 2 years, but I think is 3 so if there is not movement for 3years then they write it off.

Me: How do you extract value from written off materials?

I5: There is insurance claims, or when it gets written of it get sent to the auction yard. If think there is an auction twice a year so any material that, is written off has to be sent to the auction. Is either they auction it as scrap or they auction to the highest bidder. It is a public auction that takes place so old, vehicles, equipment, and computers, get sold.

Me: So what about a situation where an item is a bigger piece and get broken, say for example a car, and the tires are still fresh do you ever disassemble it to build stock for something else?

I5: No, unless if the end user says he would do it, because we do not have the capacity or the facilities to do that. The end users are very specialised in that field, so they would discus with the stores, and there is normally a very good relationship between stores and the end user. So would ask them say I broke a certain item can you draw it and fix it, and the guy would say yes, then they would do it.

Me: That's what we wanted to find out.

I5: Yes there is normally a very good relationship.

Me: Because we might lose by sending of items to scrap.

I5: True, we won't get the same money back from scrap as imported, yes.

Me: How do you preventing writing-off of materials by storing condition say for example wood should not be exposed to certain weather?

I5: Yes normally store it bases on the storing requirements, there is a process of preservation of stock, for certain items.

Me: What about the way stock is stored and issued, a good example would be food but I know you don't store food, let's say wood, do you use LIFO or what do you use because some time some items may be damaged because it has been is stores for a long time, and new staff get in and get issued first

I5: One of the things do is to use FIFO and try to rotate stock, so that the old staff is brought forwards and the new ones if put to the back.

IQ 2.1.9	What are the challenges to the process of goods receiving?

Me: May you describe the process of goods issuing stock materials and the challenges in the process?

I5: The end user comes to the stores with the reservation number or the PM work order number. We require the staff member it or for contractors the letter form the project manager that gives them authorisation to come and collect stock from the stores. We will first issue it to them on SAP and issue the materials to them. I don't think there are any challenges, except the issue that we have today the staff member must just have the staff card and the goods will be issued to them. You can't just come and say you want that without the reservation and the reservation must be released by the cost centre manager otherwise the system does not allow the store to issue to that reservation. So it is your responsibility to ensure that you have a reservation number, ensure that it is released by the cost centre

manager, and that you have the city of cape town staff card or the letter from the project manager.

Me: Are there any other challenges, let's say system errors?

I5: We do have, there is an error that recently come out, I thing we have a meeting on Monday. We have a situation where by the system allowed issuing of the materials more than what was reserved. Let's say for example someone created a reservation for 3 and there was 6 issued on that reservation, I don't know what the issue was there but it was a finding but the internal audit. With I1 and I2 to discuss that.

Me: Normally what is done when this errors or irregularities occurs?

I5: Then we would sent it to the ERP. You see, from our side if somebody has a reservation and the staff ID we have an order, we will give it to you. But tomorrow they come back to say that they reserved 10 but the system allowed us to issue 20, then we don't know because if you put in the reservation it will give you the list of materials and quantities, that are available for issuing.

Me: But do you sometimes get to issue wrong materials?

I5: Sorry.

Me: Let's say stores, do they sometimes issue the wrong materials to the end users?

I5: Yes, there have been situations like that but that is a quick problem to solve, because they would just go to stores and the stores will give them the correct materials. But the incorrect one should have not been used otherwise they must keep it, why did they use it.

IQ 2.1.8	What are the challenges with ERP with regard to resolving the reported calls by the staff members?

Me: How long does the SAP MM at COCT take to resolve the queries reported by the staff members?

I5: It depends of the nature of the problem. If it is quick we try to resolve it in our domain, normally they would take not even a day to resolve it but if it's major change let me put it this way SAP MM is always reluctant to change from SAP standard. And if it is not SAP standard then it goes into the list, not sure if you have seen the list.

Me: The prioritisation list?

I5: Yes they would get prioritised high medium, low or never, but they are quite helpful but if it is not SAP standard then it goes into that list.

Me: What are the challenges with regard to resolving the reported calls, are there any other challenges? Let's say you log a call and you are told that so and so is not in and we can only resolve the issue when the person is here.

I5: No, I have not experience that normally when it is a serious issue we escalate it to the inventory and stores manager, and he would run down to the fourth floor and find out what is going on but generally calls get resolved there is normally a good understanding between us and SAP MM. We are your biggest customer it should be like that.

IQ 2.1.7	What are the challenges with regard to policies and regulation in SCM?

Me: Do you feel that there are any internal policies and regulation at COCT that contribute towards stock-outs?

I5: As explained earlier, there local content, is quite a big issue at the moment, so that hampers service delivery, so if will not be resolved we will have bigger problems, and it is being rolled out to other commodities as well. Like cable and all the other staff that everybody uses, so we could have a store with no stock and if there is an emergency breakdown, we could have very angry customers that wants electricity installed but the is no materials because we need to comply with certain legislative requirements, but at the risk of service delivery. So policies especially within the city, is big issue, but you can also understand why they are so much into compliance for all the checks and balances that are in place, we have to comply but compliance risks service delivery.

Me: What can you recommend with regard to internal policies and regulation improvement another example would be how the MRP controller should conduct themselves when planning, actually anything that is an internal policy that can contribute towards stock-outs.

I5: You see, it is difficult, because I am responsible for the MRP controller, but I am not responsible for the stores that work with them, even though there are instances where I have reported that the guys are not doing what they are supposed to be doing and this is the result of it, there was no improvement, so those are some of the major risks but not the challenges for me, so what can I do? You sent and in mail or lync but nothing gets done.

Me: Because you don't report to you?

I5: Yes, there are like agg! get out of here man, what does he know.

Me: Do you feel that there are any externally policies and regulation that contribute towards stock-outs at COCT?

I5: Like local content I think is the only one except for tenders and contracts but, I think it is the major one.

Me: You mentioned something about people been given an opportunity to supply, even though they do not have the track record of supplying, to anybody.

I5: Yes, that is not something that we cannot overcome, we will never be able to overcome man. We would never say we will not be able to do business with XYX because there is politics also involved in it. You can tell somebody that because then they go to the mayor and the mayor will ask what it your reason for it. You can just do something because you like it.

Me: But there should be something that can be done, in terms of changing rules, what can you recommend?

I5: I don't know. I don't think we can put anything in place, we must just comply

IQ 2.2.4	What should be monitored in order to manage the causes of stock-outs?

Me: How do you identify multiple causes of stock-outs that result into a single stock-out? Let's say the manager did not approve on time, the vendor did not get the order or the order was delivered late, and the vendor himself takes longer than the lead-time but all this delays results into a single stock-out, how do you identify the causes?

I5: If only I see the vendor delivered late I am not going to go further and check. If the statistical delivery date says the 13 March and they deliver on the 30 March the result of that is that the vendor delivered late I am not going to investigate further and check.

Me: So of the 30%, because I am correct you said 30% of the vendors delivered late, so I could be that of the 30% majority is that the city is actually at fault, or rather the procurement sent the order late?

I5: Could be yes.

Me: Which mean the problem could not be sitting with the vendor.

I5: In most cases it will be sitting with the vendor. It will be minimal where it will be sitting with the City.

Me: How do you know because you are not checking?

I5: We don't know, but….

Me: We just know that the lead-time is 60 days, so the reservation is created, the requisition is created but due to delays in approvals and people being on leave, the vendor gets the PO late, and in stores when it gets here let's say it takes longer to be captured into the system on the arrival date.

I5: No, have found that. With stores taking long to goods receipt the staff because it is a problem. So our process to them is that if there is something wrong receipt and do the return to vendor immediately so that we have the record of the movement. Was, is delivered yes, but not to specification or an incorrect item was delivered, supplier delivered to much or something like that.

Me: Do you have a problem capturing late in the system?

I5: Yes we have had that in the past but have not heard on of recent. The manager of inventory and stores is quite strict on that, so that if the delivery is made it must be captured into the system by so and so date if there is a problem do it and reverse it. The problem that comes of it is that the buyer would run the reports of the overdue orders, at 9 am and now the buyer would sent the vendor, a dunning letter to say the order was not delivered yesterday and the vendor will come back and say but we delivered yesterday. The supplier will go to stores and complain so that type of thing so we would get the complaint from the buyer saying that.

Me: When the stock is returned to the supplier, is the buyer notified?

Me: Yes the message would be sent to the supplier, and copy in the buyer saying that the goods were delivered but there was something wrong, so there is a requirement now to say that when the good are returned to the supplier the an automated message must be send to the buyer, and the person that created an order.

Me: So stores actually sent an email to the vendor?

I5: Yes.

Me: How do they get the email of the vendor? On the system, I think is on the system. actually the vendor has a master date, there is email address, and telephone and fax number. So the stores do know where to get the email?

I5: Yes.

Me: But then you have to copy in the buyer?

I5: Yes, you have to copy in the buyer and the person at Accounts Payable as well. To ensure that they give a credit note for the items that are being returned to the supplier, because the we get a complains form them also that we got and invoice but the goods were returned to supplier, and they are not aware of it, so that is another problem.

Me: What should be monitored in order to manage the causes of stock-outs, so that we would know where the problem is?

I5: You see, we don't actually monitor planning of the end user we monitor vendor performance. So at the supply chain improvement meeting, one of the procurement team leads will present on late deliveries of vendors for instance, so they should be a way of monitoring the PM orders, to see if it should have been planned but is processed as unplanned or unplanned but planned.

Me: What about the approvals of documents?

I5: No, we do not measure. That is maybe also a good idea to measure. When was it created and when was it approved, what was the time delay and what was the reason for the time delay? No we don't have that. Maybe is a good idea to do so. For the PM orders and approvals and … yes.

Me: Let's say for example when sometimes when someone is say creating a requisition, they can get an error, and would not be able to proceed even though they are unpressured, log a call with SAP help desk and you could find out that a day passes because of the workload. It is unfair to say that the problem was with the requisition while the call was logged with SAP helpdesk.

I5: Yes, but we, anything that is a system issue we do not mange, that is something that the ERP needs to manage.

Me: What I mean is that if the entire chain is managed entirely you will get different areas managing their bid?

I5: Yes, that is correct yes. We also found out that when there is an incorrect purchasing group on the materials master into the system it goes to the wrong buyer and they often ignore it. And I have asked previously to say if you ignore it, who is going to pick it up?. Buy they say they have changes it onto the requisition, but you have changed it on the requisition but we not on the materials master. So what happens when it comes to you are you going to change it again or ignore it again. So those are some of the challenges.

Me: And can only be picked up if it has been monitored somehow?

I5: Yes. We try and help and advice but then yes.

Me: "Sigh" The last one is that how can the stock-out be reduced? This is a very broad one.

I5: That is a continuous training of end users, and continuous us or me doing training with our users to ensure that the information they put on SAP is accurate and correct. To be strict with the suppliers to say that when we say deliver at this date the supplier must deliver on that date, otherwise we cancel the order. It is easier said than done because currently there are a lot of thing that are being done.

Me: Ok, Mr I5 thank you very much.

I5: Thank you, Moletsane.

APPENDIX D6: INTERVIEW TRANSCRIPTIONS I6

Hi, Today I am going to interview Mrs I6. She is the administrative officer for Codification. She is the contact person if there are any issues regarding the materials master. Mrs I6, before I can interview you, I have to go through the informed consent. Basically it just says that you voluntarily took part in the study, and that the data will be handled with confidentiality and that your name will not be included in the analysis. You have to be free to say anything. The data is just going to be used for academic purposes not for any other motives basically.

I6: Did you go through I3 and he knows about the form that I must complete and he was in agreement.

Me: Yes.

G: Because we are not allowed to complete anything without him being informed.

Me: He is totally in agreement with the research and even invited me to the supply chain improvement meeting. But I don't think I will go the meeting because I only attend the interviews based on people's availability so I have another interview in the afternoon. But I already informed I2 that I will not be going to the meeting because their scheduling clashed with one of my interviews.

IQ 1.1.1	How are stock-outs experienced at CCT?

Me: What does out of stock mean?

I6: In my understanding, stock-out, me not being really involved in that, means if there is no stock available or there is insufficient stock in the various plants.

Me: So it is basically about the availability of the materials.

I6: Yes.

Me: In your experience, how does your line of work contribute towards stock-outs hence service delivery, or what is it that if you do not do will contribute towards stock-outs? For example, changing the statuses of the materials.

I6: On our side we receive the information from the user or form the plant, and we can only act upon that. So we check and ensure that whenever we flag or change those fields must be done correctly, because it does have an influence on the MRP. So we have to ensure that those fields are correctly completed in the SAP materials master data, because it does have an impact. Because if you put something that should be pending that must be regular, it does come up with I5 who is responsible for MRP settings. As such if we put our new codes on regular that should be pending it means that it should be stock which means replenishing. Which means that they have to set up the MPR perimeters, so it is vital for us to have field properly.

Me: Does it ever happen that a material is flagged for deletion during the procurement process, say a purchase requisition is created, purchase order is created. The material get flagged for deletion and therefore no goods receipt is possible?

I6:No because when we get a request to flag the material for deletion, we check if there is an existing contract, if there are outstanding reservations, and if there is any stock in there before we can do that. We go through the whole check before we can do that. we can't just flag because of the request that they sent us we have to check first, if there are any requisitions, reservations, or contract before we can do that. before we do the blocking we go back to the plant.

Me: What happens if there is stock but no one uses that stock?

I6: Then it is up to the area head to mark it as obsolete, and he will sent us the form with the reason why the material should be marked as obsolete. Could be that no user is interested or they no longer require the product. Then we will block it with reason code obsolete with stock. we do not flag anything with stock, we just block it.

So no ordering will happen in that they will just now have it for in case there is a need.

Me: Does it happen that the material is blocked and now they still need it, say a spare part that is used once in 6 months, do you ever get a request to unblock the material?

I6: Yes but those requests we get form the area head, he will give us a materials master form to unblock or de-flag the material. We can't just do it out of our own.

Me: So the entire process is controlled by the area head?

I6: Yes, or the project manager if it is a tender item.

Me: So basically you are saying that if the stock-out occurs due to the update of the master data it will be due to the area head not processing document on time?

I6: Yes because we get an instruction from them. And that is via a materials master form.

Me: I think I do understand. What happens if the user needs something from stores and the area head has not approved or given the instruction, can this become a problem?

I6: No, but the user would normally go to the area head, they do not normally come straight to us.

Me: Or I see area head or stores before.

I6: The project manager if it is a tender, and it is a stock item, they will still need to go through the area head. Because he is responsible for that stock he will have to allocate where it must be held.

Me: So all of them they known that you they have to go through the area head and cannot come straight to you.

I6: Yes they can't come straight to us, because they authorise that materials master form before we can action it.

IQ 1.1.3	How does consistency in your area work with regard to stock-outs?

Me: Have you experienced any inconsistencies with the system? If yes please describe the inconsistency as follows: what was inconsistent, when and the frequency. Is there any inconsistency that comes with materials master maintenance? What is done to ensure that the materials masters are always up to standard and that there is no deviation.

I6: I think communication can be the vital role for us, because if the decision is taken that we need to follow the specific process, I always feel that all role players need to take part. That is coming to a point now where we have SCM improvement. So that is any concern arise we can deal with is immediately. So that we can also have the knowledge of the on-going and new projects to know what impact it will have, if I do this or if I do any changes, I think that is my only my concern where the inconsistency comes in and when it comes to naming conversion when it comes to class names, the perception is that all the years I have done it this way not this must change communication needs to filter through. Because we can get an instruction to do the change, and we do the change but the communication for that change needed to happen before we do the change. Say if the project manager, MRP controller or the user needs to change the description that is why we have the accountable user, we need to communicate with everybody before the change and that is a bit of a crucial point because, if it an emergency or if there is an urgency for the tender to be advertised, and we have to create those codes immediately and it is not always possible that all the people are available, because they have to full fill their duties, so basically we have to make a decision based on the majority, or we have to go to the person next in command to say do you have the information, can you do that call for me, can you authorise for me, and that can take time because remember we have various plants, say for instance if you have one item that is in all plants you have to communicate with everybody and tell them that you want to change the description, and that can take long. For me this can be a bit of an inconsistency because everybody keeping the stock needs to give consent, if the material is going to change from pink to blue, So that if the user comes, we can say that we no longer stock that, we stock this now. The process can actually take long, before we actually do the change, creation can actually hold up the process hence be a problem as well, before you get the relevant information. If there is a technical detail that you need, you need a technical person, and sometimes

that person is not available, and we have made a decision that whatever information we have, if the majority of them is happy with it we have to proceed because we can't hold up an advert that must go out for tender for instance. And that should be done before the stage of creation we can't go on tender before the materials master is created, and this is one of the things that are going to be discussed in today s meeting. We need to be ahead of the specification meeting where it initiates from. we need to be part of that meeting so that when the time comes for the bit specification, where they need the codes we have our ducks in a row. So that is not a delay to give them the specifications. you have your project manager, you have your technical people there so before it get to that stage the bit specification, is normally a problem.

Me: You mentioned something about different plants. Do you have a situation where the material is deleted in this plant, and active in another?

I6: Yes we do but is not always cross plant, where it has been flagged or blocked because one plant can say I do have users that are going to use it, then we only flag it on plant level. For you specifically if you say you do not require it, then it stays open for the next plant. If nobody wants it then we flag in on a client level which means that across. So that is available.

Me: Going back to the problem of stock-outs, specifically in planning, sometimes a plant can say I do not want this, and the people from that specific area start ordering form a different plant, because in there close by plant the material is flagged for deletion, having said this how does flagging and unflagging of the materials masters affect the planning of the MRP controllers?

I6: "Silence"

Me: What I am getting to is that how is this communicated to the end users, because the MRP controller can say my people will not be using this, but there is someone else that says is still need this and they order from a different plant. So basically that plant becomes the place where they put the reservations. How do you feel about the fact that the users are equal in the system and can create reservations from any other plant anyhow?

I6: My view is that if a user finds it convenient, it will be cost effective to have the materials, closer to where ever they are located. At that plant that is close to them because remember, there are costs involved to travel to a different location and time that has an impact. My view is that if the user realises that the specific plant close to them does not have stock he should communicate with the area head. And then take it from there, for why is there no stock. Maybe he is the only user, and maybe there are other users that are also going to the other plants, and they can be redirected to the one closest to them. That is my view point from that perspective, because it doesn't make sense that someone is driving from here to Plattekloof. When there is a store here where they can have is as a stock item. But it also depends on how many users are going to use it but, the cost implications might be a problem. but they are free to contact the area head to as if they can have it as a stock item there.

Me: What is done to prevent this from happening? You said that the users must be channelled to the store closed to them, and there are free to arrange with the area head. But on the other hand you said that processing this things takes time, which means people can just find it more convenient to drive to the other store.

I6: I think is also up to the stores, I don't know if it possible but the stores needs to check who are my users, where are they traveling from to get this item, I don't know whose responsibility that will be maybe the users themselves, or will it be our responsibility that I cannot say.

Me: What you just said now has a lot to do with this problem, because at the moment as far as flagging and un flagging is concerned only know when the reservations are created. If there is no reservations then they wouldn't know but where, but where the stock is been drawn form they should be concerned, where do you come from, and then take it up with someone.

I6: Or maybe a report can be drawn to say of the reservation that we got who are our users, how frequently are they drawing this items because if you have an item that is not moving, and which has only one user, then you can lease with the user and say you are the only person that requested this item, why are you not using it. Then they will maybe say, the technology has advanced, you are storing old staff or maybe that is not a requirement anymore, then the decision has to be made, what are we going to use or this stock, like I said the communication needs to be there at the end of the day. Maybe just a little bit more influence from everybody. As to make sure that the stock that we have in stock is actually what our users want, are we not, stocking the staff that they no longer require, I the technology more

advanced, are there better products, is it the inferior product, a little more can be dicked into, but we are busy with updating our specification, as we go along with our item and if they find out that this things are not user friendly anymore then we will update on our materials master data.

IQ 1.1.4	How is the information regarding stock-outs communicated to staff members?

Me: Is the information regarding stock-outs communicated to staff members? If yes, how and to whom is this in formation communicated?

I6: That will basically be between the plants, the area heads and our manager, I3, is really has nothing to do with us. I think ours is basically with the data, what we inset in those fields which could have an impact on that side. It doesn't really affect us.

IQ 2.1.1	What are the challenges with regard to master data?

Me: What is the process for creating and updating master data?

I6: We receive the materials master form from the area head, or the project manager and once that is completed it will be authorised by the area head, then is will come to us. I will check that all the information is filled in, not necessarily that it is correct. If it is a new creation we will check to see if it is not a duplication, we will have to check the description we will have to check the purchasing group, the material group the G/L account, there are various things which we check before we can process it.

Me: Who decides on what must be filled in this fields, because as a user I just need to have my material in stores, say a remote controller?

I6: The area head fills the form, or if he doesn't the stores will fill the form, then it will go to the area controller because he needs to authorise it. And then once it has all the information we have to verify that information. The purchasing group will obviously be the buyer but the material group will be will depend on what valuation class it will be under. We will have to check that because we cannot do the creation if we do not have all that information.

Me: So is there never duplication? Let's say clothing and rainwear, because rain wear falls under clothing, what do you do with the situations where by the material is a subset but can also be classified as a bigger or as a separate group its self? How do you prevent duplication?

I6: As I have mentioned before, we go onto the system and we check on various names, because it can be a trouser and it can also be called the pants, we can check various areas to check if the code does not appear anywhere else. You have to give enough information on your description to ensure that you do not have duplicates. If you find that you do not have enough information you have to go back to the plant, to find out who requested it and we have to find the accountable user, and phone them and ask you told me that is the trouser, what size what colour, what material, what specification, does it have to be a standard, all this things need to be there and form there. And from there, you have to go and search again and find out where can I find the duplication. If there is no duplication we go ahead and we create a request on that plant's request.

Me: So the check is on description, what about the other fields? In the master data, could be the G/L the material or purchasing group, what happens if the same thing is described in different ways and sounds like separate, what are the other checks that can be user to check if this situation exists.

I6: We have the material group for pants and that will be clothing and that is linked to the G/L account. We do not physical insert the G/L; it is linked to the valuation class (it is a four digit number and that gives us the G/L accounts). So that give the integration between the two. So if you are definitely sure that the item is clothing, then the material group for clothing and the G/L account for clothing because we do have the valuation verification screen so if you put it the valuation, It will give you the G/L account, the material group, and the purchasing group.

Me: But does it ever happen that the material belongs to two material groups?

I6: Yes.

Me: What do you do in that instance?

I6: We will call budgets, we have people in budgets, in costing, we have people in accounting, just to make sure that we are allocating to the correct G/L account, if we are not sure where we should actually fit this in because, especially for electronic items, it is a very fine line when to decide where to fit it in. We can actually consult with them to find out exactly where can we put this in. Once we have our communication and our correspondence then we can create the code.

Me: Don't they ever come back sometimes to say that no! that was not supposed to go there, it was actually supposed to be put here?

I6: Yes, remember it is about three or four people, you also sent it to Procurement and if they don't agree there is nothing we can do, we have to agree that this has to go under clothing or under plumbing. It is a bad example but I refer to the situation where there is a thin line, if there are 5 people that agree and there is one person that does not agree then he will have to agree, or we will have to make a decision because at the end of the day we need to create the code, to avoid holding up the process.

Me: Let's say a material is already created, and there is a valid reason for updating the materials master, what is done and how often does this happen? Say they want to procure something but the decision is not made yet.

I6: It happens but very seldom. And I don't think they are necessarily involved when it comes to the G/L accounts, and material groups. It is more the description, if anybody wants something done we have to check with all the plants, and everybody must agree that it is ok to change form pink to blue. Then we will check if there are still outstanding reservations and outstanding contracts; at the end of the contract we will do the change, or we will keep it on hold and what we can do is, do create a new code for the new item and delete the rest, not to hold up the process.

Me: So what you are saying is that you can create a new code and the other code can still be used.

I6: Yes the old code can still be used until it is obsolete while the new one is created to avoid holding up the process, but it all depends on the emergency of the item, if they can wait until the end of the contract, then we will only change then. But most of the time we would actually create a new code until we run dry of stock on the other code. Does it make sense?

Me: Yes, it does, this are the details that you will never get.

Me: What are the challenges with regard to master data maintenance?

I6: Challenges.

Me: Yes the challenges, we touched on them a bit. Say when there is disagreement and the code cannot be created; are there any other challenges with maintaining master data?

I6: I think for me at the moment the challenge is to have the correct data on the system, to ensure that whatever we capture on the system is actually the item that we require and also that it is actually what we have. And that everybody agrees that this item is the stock item, and this is the description that we are going to give it. That the description of on the system is enough for us to have the correct purchasing and delivery of the item. I think that is the greatest challenge for me to ensure that the information that we have on the system is relevant, and correct for us to give a good service at the end of the day. To the user, to the vendor out then and to our stores. Just remember that they are the people that store the item and must ensure that the information communicated to the user by the system is correct.

Me: So it is possible that the description sometimes can be misleading or close enough that when I say I want a sunlight, you get to the store you see bathing, washing, liquid and you don't exactly know what exactly is ordered.

I6: Exactly, to be very specific.

Me: So you mean the codes are created for very specific items and is not like they generalise, is it specific like we want sunlight of so many ML?

I6: If I use the example of the printers or the cartridges, you have to be brand specific there because you can't put a Lexmark into a HP. But let's say if you buy something like sunlight, you can mention sunlight or you can say equivalent, and then we will put in a standard there if the item is not to standard the stores should not accept it. The two examples can be that we can be brand specific, or we can put a standard and say that the vendor can provide equivalent, if it is at the standard

that we required.

Me: So you will still mention the dimensions in the description, but say sunlight 1L or equivalent?

I6: In that case there should deliver 1L as per the specification, if they differ from that there has to have a reason why they are deviating. Because we have a whole lot of processes in place, like non-conformance, deviation reports if it is not what we specifically requested from the vendor, and that is [a] process on its own again. That's why I said for me it is important to have sufficient information for the user to get the correct information at the end of the day.

Me: So you are saying that another challenge is that you cannot create a materials master for all types of soaps?

I6: But we have a Pick and Pay.

Me: Actually how far do you go in terms of describing the product? Dimensions/weight/name, and the standard.

I6: SAB standard or plumbing standard items, no we try and get as much as possible as we can. Because at the end of the day we need to send it out or Procurement needs to advertise, so you need to make sure that the data that is put on there, is the item that is going to be delivered at the end of the day. I always say it doesn't matter how perfect your description is, but the end product that is delivered will always determine if the description is sufficient. The product and the understanding determines the description.

Me: Can master data update become a cause of stock-out? If yes, how?

I6: I suppose it can if they need stock of a specific item and we take long to create or to update the materials master, or it takes long for us to get the authorisation for instance, because the code will not be created/ updated. Or if we do not get the relevant information form the user, procurement can't procure until we give them the code. So it can have an effect.

Me: How often does this happen?

I6: Not that often.

IQ 2.1.6	What are the challenges with regards to ERP availability?

Me: Do you have problems with the system, say sometimes the system does not accept certain G/L, and what do you do when this happen?

I6: Yes, we do and we log a call with SAP MM.

Me: Do you have any problem with the response from SAP?

I6: The call gets allocated within the team and they will come back to us. I don't have a problem with them, as they do a great job.

IQ 2.1.7	What are the challenges with regard to policies and regulation in SCM?

Me: Do you feel that there are any internal policies and regulation that contribute towards stock-outs?

I6: Policies or processes?

Me: Processes.

I6: Processes are always there for improvement, these are not stationery or fixed, it is a continuous improvement, is the same as the data, maybe one vendor can make a turn and challenge something and then we will think and say this is actually very important, then will have to check if it applies to everybody, or it is vendor specific, and if is a vendor specific issuer we can't do a change for a specific vendor. But data is an on-going thing and is an on-going improvement.

Me: But at this point, are there internal processes like the processes of sending the form to the area head? Is there anything that you feel can lead to stock-out?

I6: Nope, that process has made it easier for us because now it is a controlled environment where we do not create unless we have authorisation from the area head.

Me: How was it managed before?	

Me: How was it managed before?

I6: The store keeper sent it in to us, but the responsibility there of was of the area head, but we made it a clear cut that without the authorisation form the area head we will not proceed. And that was fine, because there is more responsibility. So we are happy with that process.

Me: How is the term uptime, does the area head respond quick enough?

I6: If it is linked to all various plants, let me use toiled paper as an example, remember the toilet paper is all over, we consult with each area, are you happy can we go ahead with this change, can you sign your materials master form, can you give authorisation via email to say that you are in agreement?

Me: Who drives that change, is it the area controller or is it you, in terms of contraction all other plants?

I6: When we get the materials master form we will actually see which plants are involved, and we sent out an email, you get the area heads that actually sends out an email but is it not a problem, and we will do it as well, just to make sure that we have informed everybody. So that tomorrow when one is getting a brown toiled paper not a white toilet paper they will know that it was the decision that was made, it is basically to ensure that the communication filters through to everybody.

Me: Do you ever get someone that says no, I do not want to change this description because my people like it this way and it works for them?

I6: Yes you do, but then in that case is up to the area heads to decide; I am not part of that, I step out of it. Remember I am not stocking the staff, I just put the data on the system to ensure that they get the correct product in stock. If it is not resolved via email, they will have to come to management, and the manager will have to decide at the end of the day.

Me: The manager being?

I6: I3.

IQ 2.1.7	**What are the challenges with regard to policies and regulation in SCM?**

Me: Do you feel that there are any externally policies and regulation that contribute towards stock-outs at COCT?

I6: Not that I am aware of; we just have processes that are in accordance with the SCM processes.

Me: I heard a lot of local content?

I6: No, that is on Procurement's side, we do not have anything to do with local content here.

Me: Ooh! I see is there nobody of knowledge that governs master data maintenance, and the processes.

I6: No, I think that is basically on the Procurement level, if there is anything that has to do with the quality of the product that will have to do, with our quality controller. But like I say, it will be on the Procurement side.

IQ 1.2.1	**What are the common features or characteristics of materials that are commonly out of stock?**

Me: Are there commonly out of stock materials? If yes, how is the rate of out of stock known?

Me: We are only aware once we have the SCM improvement meeting with the graphs and the stats because that is the only time we will be involved. We are not really involved in the stock-out and staff like that it is more MRP, and the areas heads and the stores, it does not really involve us unless if there is something that needs to be changed. Like the parameters.

IQ 1.2.2	**What are the significant causes of stock-outs?**

Me: What are the significant causes of stock-outs?

I6: Tenders not being in place.	
Me: Any other if you had to rank them?	
I6: I don't think it affects us that much, but I think for me it is tenders not being in place and proper planning.	
Me: Proper planning?	
I6: Proper planning form the MRP perspective, and is not just that, proper planning form the project managers, because they have, because if they have a project or any project that is going to be initiated, they have to ensure proper planning by ensuring that they communicate with stores, to say that this are the products that needs to be stocked, and obviously they need to get proper information, as well as the proper descriptions and the usage, and that is from the stores' perspective that they need to get. But I think planning is time management the major concern there. so it is tenders not being in place, then planning that is an issue.	
Me: Yes, from the project managers side, and I think we do have control measures when it comes to our MRP, and I think you already spoken to I5, and that has been going quite well.	
Me: Any other causes, for the vendors side or from procurement or any?	
I6: Obviously form the procurement side if there are late deliveries it does have a huge impact, and for stores for having stock-outs. And I believe that this local content also plays an important role, for them not having materials.	
IQ 2.2.4	**What should be monitored in order to manage the causes of stock-outs?**
Me: How do you identify multiple causes of stock-outs that result into a single stock-out?	
I6: Manage.	
Me: Monitor, or look at.	
I6: As mentioned before. proper planning maybe is measure, besides our planning which is going well with the MRP, the users' needs to plan properly because we are ultimately going to stock the stock items o for them, and communicate with ISM as such, in the appropriate time, they must have the time management, and I don't think this will be such a major problem, you see. I hope I was informative.	
Me: Thank you very much, you were very informative.	

APPENDIX D7: INTERVIEW TRANSCRIPTIONS I7

Me: Hi, I will be interviewing Mrs I7.	
I7: To tell you the truth, I have nothing to do with stock-outs and I am nervous about being recorded but it is ok, let's do it.	

IQ 2.1.3	What are the challenges with regard to supplier performance?

Me: What are the challenges with regard to supplier performance?

I7: Ok we [are] just speaking about the default process in terms of the supplier when it defaults, so when the initiate, will call it the initiator, or the person that requests the service, the supplier will supply the milk. Say on the tender document it says low fat milk, and on several occasions he was not able to supply low fat, he then started supplying us with the full cream milk. So you are not happy with that service because he tendered and said he can supply you with low fat milk but now he is supplying full cream milk. So when you are not happy with the service you will notify the Procurement Department team lead, the team lead will contact the service provider or the supplier, and set up the meeting because he is not supplying you with the correct service. You will meet and the supplier will come [to] some agreement, and he will tell you why he can't give you that and he can only give you that, and that will be put on paper. Then after he will fulfil the promise or he won't fulfil the promise. If he does not fulfil the promise then it goes to the legal department. So basically this is what it is the buyer, the supplier and the person that initiated it in the meeting and everything is documented.

IQ 1.1.4	How is the information regarding stock-outs communicated to staff members?

Me: So the person that initiated is part of the meeting?

I7: Yes he has to be part of it because remember the team lead, will never know the details and if the service provider was compliant or whatever the case can be. So he will always have to liaise with the initiator or the requester. So he will have to inform the buyer is the supplier has fulfilled what was promised at the dissatisfactory meeting. Then assuming that he still doesn't comply though they are leasing, then this document goes to the procurement manager, and the procurement manager will compile compliancy default section 225 he calls it, and that letter is then sent to our legal department, and legal will decide should we take this further or not. They will investigate, and will do whatever they need to do. If they find that a vendor has defaulted in terms of our legal now, it will come back to us and then we will block the vendor. So the blocking of the vendor will only be done based on the legal communication to us. Does that make sense?

Me: Yes, it does make a lot of sense. Is there a process that you can email to me so that I can go through it?

I7: I think there is a default process on the system, I can down load it for you and sent it to you.

IQ 2.1.1	What are the challenges with regard to master data?

Me: May you describe the process of managing the supplier information and the status.

I7: Ok if the supplier wants to do business with the City, either he will come and collect the form at our counter or will collect the forms off the database. Either download it or will collect it here, there is certain requirement which he needs to fulfil in order to be registered on our database as a supplier, I can't mention them of my heart but this is the list of the requirements, and I can give it to you. So basically if he meets all the requirements then we load him onto our database. We have a 48hr turn up period and he must be informed within that 48 our period that he is registered. If we have any problems registering him say we find his ID number on the state parasol report, then will tell him that we can't do business with him because he is a state employee. Then we have to send him a letter to come and collect his documentation because he cannot be on our system. If everything is fine, he will be notified with a confirmation letter after the 48hr period, informing him that he

is registered. Then he can go onto our website and onto the portal and can submit for RFQs and tenders. If his documentation is date specific say for example the tax clearance certificate expires after a year, after a year we will block him. But during the period of that we will inform him, is normally a month before expiry, and a month afterwards. We don't give him a grace period but we tell him before and we block and after that you are now blocked. And if we do not do business with them for 2 years we procurement manage them for deletion from our system. And if he wants to revive his business and want to starts doing a business with us, he must re-apply.

Me: Is that with new documentation? Will that be with the same vendor master?

I7: He might but some of them come back and say they bought, ABC over, for example, so they have the different legal entity but want to use the same trading name. They can do that but however is a different entity. So we can't use the same number. So we end up creating. So there is a lot of reasons why we do not open the old vendor, and we just let him carry on with the new. But for tax purposes it is always good to give him back his old vendor number so that there will be visibility in terms of transaction history. And also how much work we have given to him for reporting purposes, because we need to report on how much money we spend on BEEE.

Me: But then what are the challenges in term of maintaining the supplier data, say for example the Procurement Department say that block this supplier, for poor performance what are the chances that the supplier can close a company and start a new one again how is that managed or picked up?

I7: Very good question, assuming that the supplier is blocked for poor performance, and then he goes to open another business, we will link him by his ID number. So we can immediately see that so, so has come back into the system, yet he was blocked for poor performance and he has done 10 of them, so even if he comes back to the system with a new company, his ID number will link him. And the buyers will be informed that it is the same person running two different companies.

Me: What if he uses his wife's ID?

I7: Then you won't pick him up unless somebody out there informs us, what do they call them again? You have those people that tip the City with certain things but want to remain unknown. Because they do not get any work they will inform us an say you know so and so is the same person, but he is using his wife. But you cannot do anything; it is a different company and it is under a different person; it has different directors and members so you cannot do anything; however you can note it. Say for example if a supplier is running a business out of this building, say a mechanic, for cars and now he is on poor performance, so not what he does is he goes and opens another company, and takes himself off and it is run by his wife, this is the same building where the motor vehicles are going so all this is him been wise to take himself of the books, but he has got the same mechanics and same machines, but just be aware that is it same performance that you got from him except the change in management. Is not like we can do any legal thing to him, unless if he has stolen from the city or something, then we would get the forensics involved to investigate him.

Me: Can you please go through the process of blocking and unbooking the vendor in relation to procurement? And inventory management for stock items, when do you block or unblock the vendors?

I7: Blocking of vendors is only based on non-compliancy, the one that will impact Procurement in terms of the stock item that you keep speaking about is the tax clearance certificate, that will be the major one. So assuming it is a tender item and the vendor is blocked, we will be informed by the Procurement Department and obviously we will have to lift the block, because it is a tender item and on tendering he was compliant, so for the duration of the tender we have to uphold the agreement.

Me: Even if the vendor is no longer compliant?

I7: Even if he is no longer compliant, he was compliant at the time of tendering so now we will go into the system and put the soft block, we call it. So the Procurement Department will be allowed to purchase from them, but only for that specific contract.

| IQ 2.1.7 | What are the challenges with regard to policies and regulation in SCM? |

Me: So it is possible that the vendor can just sort out their papers for tenders and after ignore until they have to tender again, what is the legislation around that?	
I7: Our policy reads that the vendor has to be compliant on the award, and does not say for the duration of the award. So all of our supplies know that, or most of them know that. So if they become non-compliant during the award they will say to us I was compiled on the award, we have to uphold that. However, the City has a process where we monitor this vendors opened with the 90 block, the soft block. Then we go to them, I don't want to tell you another information because that is privileged and confidential. We do work with the other parties within the other government for compliancy status of particular vendors. If you are non-compliant, and you have a tender you think is fine. I was compliant when the award was done, and that I can be non-compliant. but we do have policies to monitor that, forensics and our legal department investigate those. Because at some point you are going to have to issue us with a tax clearance certificate, because it is required here, it is not like you will only be working with that contract only, there are other RFQs, and other new tenders, so at some point will have to be compliant if you want to carry on doing business with the City. We open you for the current contract, but you cannot be awarded a new tender nor an RFQ.	

IQ 2.2.1	How are the suppliers assessed for capability to adhere to the contract requirements?

Me: There is a document that you said you will give, send, with respect to the criteria for registering a vendor.
I7: You can grab one on your way out; it is open to the public.
Me: Ok so this is separate from tendering because tendering will come with its own requirements on top of the requirement to be a registered compliant vendor.
I7: Correct, but if you want to tender you don't have to be registered on our database remember, we have a database of people who are never successful. So there is a tender process assuming that you are not registered but you apply for one of our tenders. If you are successful they give you 7 days to register on our database; however, if you want to do the RFQ process you must be registered, because it is online, and they need your supplier number. So we don't ask everybody to be registered but this big contractors, some of them are not registered but they want to tender. So you can tender, and provide your tender documentation, then they will check onto the system if you are registered or not, and then they will notify you only if you are successful, and then you will have 7 days to comply with everything. The danger of that is that if you do not have a tax clearance certificate it takes you 21 days to get it. So assuming you tender with the City, it is to your benefit to make sure that you are registered with the City. Because there are requirement which will not take you 7 days to meet.
Me: So you stand a chance to lose a tender?
I7: Yes, because I mean, you have 21 days to get a tax clearance certificate.
Me: So it does happen that the tender gets awarded to someone else although they did not initially win?
I7: Correct, so whenever there is a tender award it will come with supplier 1, 2 and 3. So they go for the first one to see if he is compliant in terms of their requirements and then, if he is not registered must be able to get onto our system before the 7 das period is over. And if all that does not happen then they will take the second one. I mean the second one is non-compliant in some way but they are registered.
Me: I guess the same thing applies to the RFQs, if something is missing they will notify him first?
I7: They will give them [a] few hours or days to meet whatever is missing and if that is not fixed then they will be considered not compliant, then they will give the job to the next one. So my involvement once again is supplier management database. Managing and controlling. If does impact various sections.
Me: What leads to a deletion of a vendor, or termination of a contract?
I7: We can only termite a contract form the legal perspective. It can only come from legal and the reasons for terminating a contract are various, for example breach of contract, it will never be for the tax clearance certificate, like I said, they were compliant on the day of the award, they become non-compliant, I can't block them. Assuming they give me a fraudulent document or there is another unknown case that goes to legal. Or the vendor could be misinterpreting stuff, doing fraudulent act, something in controversy of our policy, abuse of supply chain policy, but I will go back to legal first and legal will tell us if we should block them or not.

Me: With regard to RFQ vendors, referring to the vendors not on tender, is it the same reasons that could lead to the vendor being deleted?

I7: No, we do not delete the vendors, the vendors are only deleted if we do not transact with them for a more than 2 years, that's the only reason. The blocking would be the tax clearance certificate, would be the soft block of poor performance, would be the 95 for the person who is in the service of the state; the other block is the reporting block, if you have a family member working for the state, if we pick that up, we block you with the soft block, the 96 block. Because you did not report that my brother owns the company and I work for the City.

Me: So not only your immediate family matter?

I7: No, not just your immediate family, we take all family members. If you have a brother in law that works for the City and you are supplier you need to declare that, but then depending on where he is working, he could have an influence, he could be the person that will be adjudication the RFQs, he could be the person that is managing the project. So he could have some sort of an influence or a potential influence, so we record it and we report on it.

Me: So there is a specific block for that?

I7: Yes, we use the work block but we use it very lightly, because when you block something you block it such that you cannot use it, so this is German product and is not made for our purposes, that why we refer to the soft block and the actual block. But the terminology is still the same.

Me: You mentioned another one of soft block.

I7: Information block is a soft, so you have a 93, and the 96 or reporting.

Me: What was the 93?

I7: Poor performance. We also have 01 which comes from legal, that is our National Treasury, so not only you are blocked from this database but you will be blocked from any other database that you register with. To use the blocking reason 01 we go to the National Treasury portal, and we look at the restricted list, to see if any of our suppliers are on that list, and if they are registered with the City then we block them with 01.

Me: So only the blocking reason that is limited to the specific contract allows you to do business with the City?

I7: Correct but let's go back. The 91, you will be allowed to do business if you have a contract with the city, the 94 suspension, supersedes the 91, so even if you have your tax clearance certificate or compliant in all respects, you are being suspended. You cannot do business with the City, we call it blacklisted, from the credit bureau point of view, but we don't use blacklisted, we use suspended. Then your 95 supersedes your 91, because you are the member, you are the owner you are not allowed to be a vendor, so even if you bring your tax clearance certificate I will not open you. If there is a breach of contract assuming that you were here, you will go to that block, then 94, which means legal will get hold of you and you will be suspended and will also be disciplined, because you work for the City and you were supposed to tell us and you did not. So 91 will supersede 96 because it is reporting, so is a very complicated soft block. 91 will supersede it because we can't do business with you because you are non-compliant. So if you are compliant, [we] will have to put the 96 back on because we need to report on the spend, so every time we give you work we must report to National Treasury. Total block 99 is the master of them all, we don't need to use any other because you will never pass that. But we won't use a 99 if we have a 94 on you because you are suspended, or you are sitting within 01 because 01 states specific that we suspend you for up to 10 years, the abuse of the supply chain policy can go up to 5 years the 94. So more than likely if you have a long suspension I don't use the 94, I need to inform the Treasury so that you have a 01. Legal will inform me whether I need to inform the National Treasury or not; if I don't inform them I will us the 94, and then you will go into the restriction list that is on the portal. You see we have got a portal also for all the bad suppliers, so is you have got to award a contract you can go onto the portal and you will see exactly what that guy did. Poor performance and what he did and what he was charged with.

Me: Is it because everything will still be documented from the minutes of the default process?

I7: Yes, this process here of the default process, and then it went to legal, all that is documented, and legal still gives a vendor a chance to state his case. And they will decide whether it was legitimate the process that we followed. Then they will have a final say, if they are not happy with what we did also, there is another

process that they will follow, so in terms of favouring vendors and all that type of thing we are trying to close all the loops, but you know how it goes.

Me: Thank you very much I7.

APPENDIX D8: INTERVIEW TRANSCRIPTIONS I8

Me: Hi, Today I am going to be interviewing Mrs I8. Hi I8, This is just to verify that you voluntarily took part in the study and to assure you that the information you provided will be handled in a secure manner.

I8: Ok.

Me: Until my study is completed.

I8: Its fine.

IQ 1.1.1	How are stock-outs experienced at CCT?

Me: I tried to tick the questions that are more relevant to you.

I8: Ok.

Me: What does out of stock mean or in you understanding?

I8: In my understanding stock-outs mean when we do not have stock on the shelves in stores. Yes that would be my definition, and in my environment we look at the red traffic lights and those type of things. We look at stock levels from Procurement's view not from stores' view, so basically is will be when we do not have stock in stores to issue to our users.

Me: In your experience, how does your line of work contribute towards stock-outs hence service delivery, say for instance, if you do not something will result into stock-out?

I8: Being in procurement we have a direct, link to the stock-outs if we do not procure the items there will be stock-outs or if we do not buy from the reputable service providers that can meet their planned delivery times that can result into stock-outs. We are also mindful of the fact that although sometimes we can cause stock-outs sometimes the information from the stores to us does result into stock-outs, if they do not provide us with the information that is not to specification, it does not allow us to do our function. So there is some things specifically which we cause stock-outs but there are something's which result into stock-out because of the poor information provided to us. In the first scenario we cause stock-out, but in the second we do cause it but it is not our fault.

Me: What do you do to overcome this problem?

I8: I have recently or for about a year and a half ago we started supply chain optimisation project, and this puts a closer link between us and our stores department, monthly. Before we started the stores we all in all high, we use to meet weekly but now we have sort of got to a point where by we try and maintain the stock levels that we have and improve, and we meet once a month where we discuss ISM issues and procurement vice versa. We now how we can improve service delivery to our end users by looking at things like stock-outs, turnaround time that affects them. The SCM optimisation project has helped us to get in tune with what they require.

IQ 1.1.2	How do you identify the materials that stock-out?

Me: Can you determine the history of the material being out of stock? If yes, how?

I8: Yes well, from my perspective with buyers we have a meeting on Tuesday with [name deleted], he is training us on how to view the MRP screens, but we do now enough of the basics to know that when there is a red traffic light, we are out of stock and we seriously need to do something about it, we know how to run those reports. And obviously my role as the supply chain management senior management practitioner, I will draw the reports and sent it to the buyers to investigate

number 1 either we are causing a stock-out because the supplier is delivering late, we need to check if the company is in breach of the contract, what hinders the service provider from delivering the goods; no. 2, we draw a different type of report to say that the stock-out is caused by the outstanding requisitions, we still need to advertise. My job then is to prioritise once the requisitions are ready. Every Tuesday we are getting the introduced to the new MRP screens. I got equipped first and now they are rolling it over to the buyers and then it will be rolled out to our assistant buyers. So in this calendar year they have started doing the assistant buyers as well, so now we are rolling it down the chain because I need to understand the buyer needs to understand and then the assistant buyer needs to understand in order to improve our performance.

Me: How do you identify when a material is out of stock at present?

I8: We go onto SAP and look at the red traffic lights. There are different categories so we will specifically choose the ones related to stock-outs.

Me: What do you do when you have identified that the material is out of stock?

I8: I chaise people around the first thing I do is to determine the cause, because it could be anything, we just had a problem with unreasonable usage problem. So somebody didn't plan properly and now they went and cleaned out the stores. I need to determine what the problem is before I can inform the buyer to take the necessary action.

Me: But what is the action that it takes?

I8: The action it that I draw a report and give it to the buyer, to see where the problem lies, and will call the supplier if it's a delivery problem but if it is just a situation where someone came to the stores and draw more than what we normal cater for then we will have to go an look into their master data. And make sure that we cater for more stock if need be.

Me: So in terms of the planned orders must they still all be, converted by stores?

I8: Yes but the stores.

Me: Or do you pull from them when you see the red traffic light to say guy convert or is it just an aid for you to know?

I8: The red traffic lights in our environment, is an aid for use to know when there is an issue so the action that we take is to determine if it is our issue or the stores issue if it is an issue that they have not really converted the planned orders is not really our baby. Only when it hits our environment is it our issue. So we will exclude those if it is not with us. Then it will become a secondary thing that we look at. We look at the problems we cause first, because look they should be doing their work. So we are not going to call the stores and say you have a planned order please convert it into a purchase requisition. We focus on ours first and if we have time we will do it but in most times we do not have the time to do it because we do not only serve stores we serve everyone else in the city.

IQ 1.1.3	How does consistency in your area work with regard to stock-outs?

Me: Have you experienced any inconsistencies with the system? If yes, please describe the inconsistency as follows: what was inconsistent, when and the frequency? Let's say for example reports giving incorrect data or something similar.

I8: No, it could only be that we don't like what the report gives. No, I do not think the inconsistencies are that much in terms of the system. I don't think there is really anything. If I draw a report A and I compare it to report B then the information is the same depending on obviously the factors like the reservation totals my go up as you draw the second report or whatever but there is nothing that I can say is a major thing that would make us not determine the causes of it. I think the inconsistency that we experience in our environment in our environment is on the master data its self in terms of what is maintained by the MRP controller. So that is more our issue.

Me: What about the PO differing from the requisition what are the rules around that issue?

I8: You see, if there is something substantially wrong with the requisition we will sent it back to the MRP controller. The only difference we will do is that we will add

additional information to the purchase order. If the company comes back and there is specific conditions that they want to add to that purchase order or the delivery date, but otherwise everything technically remains the same, but what they ask for, is what we will put in there will be no substantial differences. The only time we will do the degreases is if there are rounding issues, so we will do the change and go back to the MRP controller. So for example you can't order 12, because it only comes in 10s, we will change the order to 10 and notify them that they need to change to their requisition. We are getting training I think you guys from the ERP are training them as well because we are getting a better service from them. We do not have as many issues as we used to have in the past.

Me: So if you change the delivery, are they informed as well?

I8: They are; there is a development in the system that when you change the delivery date in the system then it sent the workflow massage to the MRP controller's outlook inbox, that will inform them that we did a change. The buyer or at least the assistant buyer are supposed to put in the note when making the delivery date change. So that note goes along, so it will tell the store man exactly the that the date has changed and this is the note that the assistant buyer has put in, so they are always aware that if we, extend the delivery date and why we are extending it.

Me: So you said that this is not very frequent?

I8: No, we try and keep the communication going.

Me: But how frequent does this occur?

I8: The delivery date amendment?

Me: Yes, or rather any change that forces you to communicate back to the MRP controller.

I8: Look, [it] is a daily thing, every day there are materials to be delivered, every day there are changes that need to be made. A typical example is that we assumed that there would be a price list agreement on the 1st of May and there were none responsive bidders, so we have to re-advertise, so we have to notify them, to say look we cannot order this materials for you, because we have to go through the RFQ process again. But we try and keep the constant look op communication going.

IQ 1.1.4	How is the information regarding stock-outs communicated to staff members?

Me: Is the information regarding stock-outs communicated to staff members? If yes, How and to whom is this in formation communicated?

I8: Yes, it is communicated; they normally inform us the communication regarding stock-outs normally comes from ISM and is never from procurement to ISM, because when we draw reports we draw them to improve our performance we do not do it to look more into their side. They normally send us a report and say we have 10 stock-outs, but please focus on this 5, because they know the end user and they know exactly what the end user wants. So don't try and give me this because no one is asking for this, yet rather try and give me this this 5. So the communication is more from their side to us but when we do affect them will affect them then we will notify them.

Me: Ok. Can you touch on supplier capability?

I8: So when we do our expediting 2 days before delivery, the service provider gets a reminder letter. And this is a reminder that says, please note that you have a delivery due in two days, please ensure that you deliver. If he does not deliver, he gets a secondary notice. That reminds him that you should have delivered a day ago. If you do not deliver today this purchase order will be cancelled. In most cases they will get back to you after the secondary notice to say that, this is my problem. Please extend the date. But if the supplier does not respond then we will take it to a totally different realm, because it now becomes a performance issue. And now we will be checking the supplier's performance in general, not just related to the specific purchase order.

Me: Do you have any other issues let's say with approvals? Let's say the stock items about R200.00 are not approved or workflow but takes longer to be approved. Let's say you are supposed to create a purchase order within three days, and..

I8: Sometimes, suddenly we get it on day one, and there is a very little checking time. If does not happen a lot because I find that stores and inventory manager is

very good with releasing his staff, and there is probably one or two scenarios where he did not, and he had his reasons because he was still checking, you know the things that he should be checking. But it does put more pressure on us because it does eat into our lead-time. So it just means not we would have to look into the issue more quicker that we would normally do and we need not to prioritise those items. And the things that goes to him for releasing the store man does not always understand that it goes to him for releasing and does not come directly to us. And they start asking where is my staff, this is on contract why have you not create a PO. Look 99% of their staff does not get authorised it workflows directly to us, and they forget that some of the staff goes to him. And if we tell them is with stores and inventory manager they are not going to bother him.

Me: Do you have any other challenges with regard to communication, let's say with suppliers or the end users? Do you communicate with the end users regarding this?

I8: We don't communicate with the end users, it is in the stores environment, the only reason we would interact with the end user is if they are trying to buy something form outside that is kept in stores. And there we will go and notify them that they can go and get the item form the stores. And we do not buy the stock items at all directly for the end user, even if there is no stock, they must place a reservation with the stores. So that is our main communication in terms of the stores component with the end user.

Me: What about the end users not planning properly?

I8: They do not want to plan, so the development that the ERP has put in place is that you cannot put the requisition with the delivery date in the past. You have to look at the availability of the product, so now they look at the availability and they see is too far, now they want us to go directly to the service provide and want to bypass the stores process. So we cut them out and say you have to go to the stores, the item is there, the most we can do is to call the service provider and say, and ask them if they can re-schedule their delivery in, so that the stores will the product sooner than anticipated. So that the end user can go and draw it from the stores, but we do not buy out stock items.

Me: Regarding the ones that just wipe out the stores, do you guys communicate with them or what is one?

I8: But we don't, but I know there is the stats that we do when we have the SCM optimisation process; meeting that shown inventory and stores manager who the end users are that place the reservation in the past, and that makes huge reservations in a short notice. And it is his team's responsibility, so they will say for example it is water services in that area, the area head, in that area must engage with those end users, and as how can I assist you so that you do not clean out the stores so that we can stock more. Do we need to stock more or it was just for a particular project, so the do the investigation from the procurement aspect, but you must also realise that we are going into financial year end which is May, June, so automatically people just clean out the stores because they have all this extra budget that need to be used. So we are not going to do this exercise between May and June we cater much for May and June with a little bit of buffer, not too much to take our capital, because otherwise we are left with staff that people will not buy, we use a reasonable projection of what type of materials we ordered a lot between May and June last year so that we sort of look at those ones this year. So we look at what kind of items people buy with the extra money they have at the end of each financial period.

Me: How have the lines of communication improved service delivery?

I8: It is really 10 times better. We encourage they buyers and the MRP controllers to communicate often, we take the buyers offsite to the stores so that they meet the person that they talk to. Relationship is improved better when the people physically meet not just over the phone. So that has improved service delivery. And the fact that us as the management team from ISM and procurement meets regularly to discuss the problems, that are not necessarily resolved at a store man or buyer level, us discussing that has improved service delivery. Definitely in the last year, the service delivery has improved and you can look at the stats and actually see that. from the time that we started the project to where we are now, if you look at for stock-outs in the last three four months we have recorded low in teams of stock-out. So it is continuously improving and it is due to communication I would say.

Me: You keep on saying ISM, what is ISM?

I8: Inventory and Stores Management.

IQ 1.2.1	**What are the common features or characteristics of materials that are commonly out of stock?**

Me: Are there commonly out of stock materials?

I8: Clothing, the cable and the valves.

Me: If yes, how is the rate of out of stock known, do you look into the period or the number of times?

I8: We look at the period and then the number of times the respective materials within that group were out of stock. We look at the stats once a month and then we will say for the month of April, the materials within that material group, how many of those are outstanding? And then that will be the basis and next month we will compare it with the previous one.

Me: So it is actually the number of out of stock materials?

I8: Yes the is the number of out of stock materials over a period.

Me: Are the any common features or characteristics on materials that are commonly out of stock or this applies to individual martials?

I8: No is not the individuals, because cable is a prime example, because before it never used to be an issue. The Department of Trade and Industry can at any point it time designate a sector. Cable got designated like late last year and before that we never used to have a problem with the supply of cable, but from around October, or November we started to have a problem with the supply of cable, because of the implementation of local content.

Me: Say when you go the history of the materials that are out of stock, what are the features, or common features?

I8: The common features, the common features are specific to each commodity, say you will find for example that say for example clothing, you will find that is something specific like golf shirts, for example, and we will know that the specific material that is used to make golf shirts is not here. A simple thing like socks, there is a specific string in a sock that is not manufactured in south Africa. If you look into the stock-outs you can pin point which materials gives us problems all the time. In cables, it is the cables that have copper in, and the city only buys copper cables, you will find that some of them will have a mixture of copper, PVC and XOP, but then you will find that the majority of the ones made out of copper is a problem. so there are common products within the item its self, that causes the specific product to be out of stock.

Me: And so this is specifically to imported materials?

I8: Yes, is the imported materials, is like if you buy a Crenate T-shirt made out of a local materials every time you go on FRQ, you will get about 5 the responses because there is a couple of businesses that can manufacture that, but you want to buy a golfer, you will have a problem with the supply of that. And also [it] is seasonal, clothing for instance you might not have a problem with some materials now, but some of them will spike like the rain suits, because we are going into a rainy season so the materials requirements are slightly higher because you were not ordering rain suits in the last six months. But now the added burden of us not able to buy the rain suit before the rainy season comes will spike the out of stocks, because now, you are buying materials that you would not buy normally. We stop in September buying overalls, sorry rain suits. So in October the out of stock will be taken out of that environment but now it will increase, because we start buying in April, the out of stock will increase for that particular commodity. Each commodity comes with its own challenges.

Me: What are the challenges with the locally manufactured products? Say we put the season and local content aside, is there any other issues?

I8: I think on our side there is still a lot of the buyer training issues that causes stock-outs, the expediting for instance. Say expediting for instance, we just recently introduced the buyers to that process as it used to be the assistant buyer's function. So now, [name deleted] gave them training to see the out of stock themselves and direct the assistant buyer to see what is out of stock so that they can prioritise the expediting. They should also use the training that Willem gave them to prioritise their requisitions, because you can have 20 requisitions and buy 10 items that nobody needs, is not a need in stores, so they should be using the tools that

Willem is giving them to identify. I can have 100 requisitions, but if I do this 5 today I am solving an out of stock issue in the stores. Because the other 95 can wait until tomorrow because there is not open reservations, people are just ordering them to fill their minimum order quantities. It doesn't mean that I am ordering because somebody needs it. The system is also giving the MRP controllers different reasons why he needs to order. If you take the legislation out of it, we still have a lot of work within our environment to ensure that the buyers understand the training they are receiving and are utilising the training they are receiving.

IQ 1.2.2	What are the significant causes of stock-outs?

Me: Ok, second last, What are the significant causes of stock-outs? If you have to rank them.

I8: I think again I will go back to the human factor, I think people needs to understand what they need to do, stock-out is caused by various things, you made a point earlier that is a chain, and if someone does not do what they have to do in the chain then is collapses, but if we I have to speak on why people are not doing what they are supposed to do I will speak for procurement, I can't speak for ISM because they have their own problems. For me [it] is the lack of tenders for the products that we procure, we have to find another way to find the newly created materials masters, because when you create a new materials master you automatically get a red traffic light, because you do not have, stock and we are engaging as supply chain to the materials master project where we are trying to get as many materials as we can that we buy on text onto a material mater, so potentially all those materials become red traffic lights, as a senior I think we need a different classification on the newly created materials masters. I think we need to look more into training to understand stock components.

Me: Let's say, if you break the chain into different components, like purchaser requisition to purchase order or purchase order to goods receipt.

I8: Form the requisition, I think the biggest causes of stock-out are non-convention of planned orders to purchase requisitions on time. And when you look between the PO and GR if think the biggest causes of stock-out is the vendor not delivering on time. Is my experience why we experience stock-outs.

Me: So if now you have to rank them you are saying that the biggest cause is the training issue, and the second thing is the non-conversion of planned orders.

I8: You didn't look into PR to PO so if you look into PR to PO, the biggest cause is the convention of a PR to a PO is a problem, so yes taking out the local content and the time, we get the PR and the time we create a PO sometimes that does not happen upon the agreed time, but we affect that, so. My adjudication is done, but the assistant still sits on it before they create a purchase order, or the buyer goes on leave and the assistant does not give it to someone else to authorise. These are the smaller issues that if you take the legislation out we still affect the stock-out situation, and this is the what I have.

Me: How is this monitored?

I8: I look at the stats, I look at the conversion types I can't look at the planned order stuff, because it is outside our environment. I only look at it from the time that it hits our environment, how long did it take you from the time that it came in to the time that it went out, why was your RFQ processing lead-time so long, is that just a specific RFQ, must I get involved as the, is there a problem with the material, is there a problem that you don't understand how to execute, that is where my job comes in to actually look at, those things.

IQ 2.1.1	What are the challenges with regard to master data?

Me: What is the process for creating and updating master data? Either vendor or material.

I8: Look we do not do any of those, but the little intervention we have is us requesting, because sometimes we see items that users buy regularly that would be a benefit for users to have in stores. And it also minimises procurement lead-time so in terms of materials master we would go to Codification, we sent them the specification and they will fill in the necessary forms and sent it to the area heads, to ask whether they are in agreement that the item materials master can be created, whether it will be a stock item, whether it can be set to a regular, where the stores will hold stock for users. And whether it will be set to PD meaning the materials master is created but it is not stored in stores, we only buy when somebody asks for it. So those types of discussions they have and then they notify us. In terms of vendor master details we never deal with vendor master details we never ask we never ask the for vendors to be created, the vendor only comes to our sphere only, if it has been created. And if there are any changes to their data, we generally sent them directly to Supplier Management. So in terms of the vendor

matter, [we] will really have no interaction.

Me: Does it happen that the vendor can get deleted or change while you are in the middle of the procurement process, and how does this affects your process? Say before you sent out a PO you find out that the vendor is deleted, and you know it will not go through.

I8: We do get instances like that but is mostly, we will pick that up through the evaluation phase, once we have received the quotes from the service providers we check for the validity of the service provider. Are you a valid vendor in to our system, do you have a tax clearance certificate, do you have your BEE certificate, so we check for a qualifying criteria, so if we find that the problem is with the service provider we will call them and ask them to clarify their issues with Supplier Management and get their details updated but we won't sent it to Supplier Management and say you need to contact the service provider. We put the ownership onto the service provider because he is bidding and wants to be considered. So we will still consider his quotation but we will not give him the preference points for his BEE levels and he will not get the points for the particular quotation because at the date and time he was marked for deletion on the system. We will consider him because we assume that he will get the necessary information. So we give him price points but no preference points.

Me: Have you have any challenges with that?

I8: Sometimes you get a lot of resistance from vendors because they think is not their job, you work for the City you should do it for them. And the other problem that we have is that the suppliers sometimes do provide the necessary documentation to the Supplier Management, but it does not get captured onto the system, so that causes a problem for us and then we need to engage. Now the supplier says you marked me invalid or I didn't get my BEE points but I gave in my BEE certificate before the closing date and time. So those as some of the challenges that we have with Supplier Management, the turnaround time for the information being captured.

Me: Or sometimes they hand in exactly at the time of closing say 12:00.

I8: Exactly, and is not captured onto the system. So we always tell the vendors to check a day or two after they have submitted it. If it expires in a week of so check with supplier management to ensure that it has been captured, alternatively if you submit your documents at 12:00 and the closing time is at 13:00 the same day attach copies, to the submission, so that we can contact Supplier Management to ask if they have the paper work with them. We kind of have a work around in that scenario but those are some of the challenges that we experience with the vendor master details.

Me: Can this result into stock-outs sometimes?

I8: It could cause stock-outs, say for example this supplier could have ranked number 1 if his BEEE certificate [was] captured. So now I can't appoint him because he ranked number 2. So the supplier that ranked no. 1's lead-time is 4 weeks, so instead of getting my item in 2 days if it was supplied by the first supplier, now I am going to get it in 4 weeks. So the updating of the vendor master details could have a direct impact of when we get our stock in, because now the conditions are changing. The stores could have urgently needed the item but now we have to wait 4 weeks instead of getting it in 2 days.

Me: But now what do you do in this case because service delivery is key?

I8: Look we can't just discard someone that ranked no. 1 just because his delivery time is longer. We will tell him that we are going to order form you now, is there no way that you can deliver the product sooner. And we will tell him the other company said two days you should be able to shorten the lead-time. And generally the companies will try and make a plan, because the COCT is such a big concern they will try and get the product sooner.

IQ 2.2.1	How are the suppliers assessed for capability to adhere to the contract requirements?

Me: What are the criteria (tendering requirements) used to decide on the supplier for stock materials?

I8: Look there are not criteria used whether you supply stock, whether you supply services, or non-stock materials to the City. The criteria are the same, you need to be a registered company with the City, you need to have your tax clearance certificate, you need to have your BEE certificate which is not a responsive certificate but it gives you the advantage of scoring the points. And obviously any qualifying criteria for that specific item that you supply. Say for instance you supply water

services equipment, stuff for your pump stations they need to be a registered argent so that we know if the product breaks after is delivered we will get the after care service. So it commodity or a product that we buy might have its own qualifying criteria. But if we do not stipulate that to the vendors up front, we cannot use it to exclude them. But there is not rule that says you are registered as a supplier for electrical therefore you can only supply electrical; as long as they meet the criteria of being a valid vendor and having a tax clearance certificate.

Me: What are the influential platforms in deciding on the supplier, say for example when everyone has got the same price or there is a tie somehow?

I8: Look we will run the ranking schedule an see who ranks number one, and then we will do our checks like are you performing poorly, are you listed on the restricted list of the service providers, of the COCT or the National Treasury. But in general, if you rank number 1 and you are not a poor performer and you can give the product within the time frame that we have requested, you will be awarded to provide the product.

Me: What if no. 1 is someone that you never worked with before and number 2 or 3 is a service provider with a good reputation that you know for sure that he provided good service?

I8: I understand, unfortunately according to the regulation we have to go with the company ranked number one unless if we have justifiable ground that we cannot. An in this case just knowing number 3 is not a justifiable ground, we will have to give number 1 the opportunity to run with it and prove himself.

IQ 2.1.4	What are the challenges with regard to managing suppliers' information?

Me: May you describe the process of managing suppliers information and status for stock materials?

I8: In what aspect?

Me: You talked about your communication with Supplier Management say for example you know that supplier does not perform well, what [do] you do?

I8: We do notify them but only after we have gone through the formal dissatisfaction process. So what we do is either we will initiate the dissatisfactory process or the end user will initiate the dissatisfactory process, by filling a form to say that they are dissatisfied by the service provided by the particular service provider. And only after we have concluded that process we will notify Supplier Management. We will put a note on the service provider and say that this service provider has now gone through the dissatisfactory process. It can either be resolved or needs further action by the legal services and they will manage that for us. Supplier Management is a mediator between us and the legal services if we require further action. And they manage sort of the history in terms of the poor performances or terminations, and that's about as much inter action as we have with them in terms of that. so we don't physically do it, but we notify them so that they are aware that the supplier is going through that process. They also get some of the things, they get informed by SARS that somebody has not paid their tax, they will do the necessary blocking on their side so that Accounts Payable will be notified to deduct the money from the person who owes SARS, so [it] is not only us giving them information they get it from all sorts of sources.

Me: But from the end users perspective, you guys are the mediators?

I8: From the end users perspective, Procurement and tenders solve everything. They don't know about Supplier Management, they don't know about support services, they think that we do everything. So they will come to us and say I am trying to use this vendor but the vendor is blocked? We will first look at the reasons why, because not all the reasons are visible to the end user. So we will look at the supplier management screen and say the vendor is blocked because he does not have the tax clearance certificate.

Me: So you guys get involved with the disciplinary hearing, let's say the vendor, is being accused of delivering late but is not really the vendor, because he always gets the POs late?

I8: Ok, so there is a lot of exploratory work before, so although the end user sends us the dissatisfactory form that states exactly what happened we still do our own investigation. Procurement mangers track all factors that apply to suppliers, be it poor performance, non-supply, whether is a problem from an RFQ or a tender. There is a lot of exploratory work that it done because we know some users in the city due to experience, will blame the service provider and then when you meet

with the company you find that the user is actually at fault for example printing staff, the vendor said that he will deliver within 14 day but only got the art work on day 12, And the person still expects the person to deliver in that 2 days. And then they will fill in the dissatisfactory form because they still expect the service provider to deliver and they are unreasonable. So we actually do our investigation.

Me: So the intervention is actually done by you guys?

I8: Yes, we are the mediator between the department and the vendor, as well as the Supplier Management. Our first intervention is by emails if it is something easy, and ask the end user what exactly is your problem. but on the services side, they would have a clarification meeting, and call the department in an say tell me exactly what happened here before they call in the vendor, because our experience is that when everybody sit around the table it becomes a problem.

Me: So you mean is better to talk to them individually that to call them all together?

I8: So we talk to both sides and then we call them all together, so that it is not a 'he said she said' type of situation. So that is where we come in and we will do that.

Me: I think you have already covered how you overcome the challenges.

I8: I think is the tedious function because tenders use to handle the dissatisfactions that result from tenders, and we would do the procurement dissatisfactions, the RFQ staff, now we as procurement manages everything, so it is an added burden on us as practitioners because, because we don't tender staff, the RFQ conditions and terms are pretty standard, but with tenders the standard conditions remain the same but the special conditions differ with every tender. So now you have to scrutinise the 300 page tender conditions just to be sure that the company is not in breach, u know. So you need to familiarise yourself with that and there after read the dissatisfactory to find out if the company is actually in breach. But the department will say but he didn't deliver but we will then come in and say but if you look at clause so and so he can ask for an extension he can do it. But so we will feet that information into Supplier Management, we did receive this, and they will log it still as the dissatisfactory by the department, but then will make it clear that no further warrant is needed because the service provider is not in breach. They hold the information on behalf of everybody.

IQ 2.1.3	What are the challenges with regard to supplier performance?

Me: What are the challenges with regard to supplier performance?

I8: I think the supplier performance that we have noticed is people quoting outside of their business core function. Say for example a stationary company does not get a lot of stationery work, so suddenly they want to do electrical work. Or I am a clothing company and I don't get enough clothing work so now I start quoting for hardware because my friend has a hardware of I think I can just walk into a hardware and buy what the city requires.

Me: So is not a specialist?

I8: Exactly, so the issues we have is that the people supplying the products are not the specialist in the products they deliver. And that's what we find mostly.

Me: So basically, quoting will always be flawed because they do not really understand the costing?

I8: Yes, because he does not understand, what is been required and do not make an effort to call the technical specialist as COCT, they just read what is being advertised and they are automatically, like I know what this is. They have to understanding of what is it that is required, but if you are in that environment you will understand what is it that is required, so from stationery to electrical you don't know what the product should be and what is should look like, you will just be taking chances. Because all they want is just to get the job. So that is the one thing and the other thing is non-supply, the goods are not delivered when we expect them to be delivered, is one of the biggest challenges that we have.

Me: How do you overcome this challenges?

I8: With this SCM optimisation project we have added in a clause that allows us to put a vendor in a sort of a hold status, clause 2256 of supply chain management, says that if a vendor has a history of poor performance we do not have to wait for legal to make a formal restriction, we put you in that hold status, we refer to it as a

commercial or financial risk to the City. Because if you do not supply and you quoted me R10 and now I suddenly have to go to company B, and now I must pay R12 for it I didn't budget for it, because if you supplied I could have only paid R10 for it, so you post a financial risk to me because I might at some point have additional expenditure.

Me: So you do not trade with them during that period?

I8: Yes, but for every, but every time they quote and they would have been, we still consider them as if they were an open service provider but we will give them a formal letter that says we will not consider your bid for this as we are aware that you are going through the legal process. We do not just leave the service provider hanging. So we will inform them that you are ranked number 1 you would have got the job but due to you history of poor performance, you will not considered for this bit. So until that matter is settled with legal services we will not give them work as they are in that hold status and the settlement can take anything between 6 to 12 months, so it is sort of an added little advantage or push.

Me: Does this apply to contracts as well?

I8: if they have a formal contract that they got through the tender environment we will still trade with them but only for that specific contract and will not be allowed to bid for RFQ work. Say if I give you the job on the 1st of the month and on the 2nd we realise that you are a vendor with the history of poor performance, we will honour the POs that are already into the system. we will not go back now and cancel all your stuff that came from an RFQ, but any basically anything going forward you will not be considered.

Me: What about the suppliers that would use a different name to bid?

I8: Yes, we block them there and then they open another company, we do find that, and we find it all the time. But that is the loop in the system because they are not opening the business on their ID number, because or Supplier Management is set up such that they look for the link between the business and the ID number of the owner. And will tell them that this ID number already exists on vendor so and so. When they are registering a vendor, but in this case, we get that, say I register with my husband's ID number the 2nd company, and there is nothing we can do about that, but once we have find that there is a link between the two service provider, we will now start tracking the performance of the vendor. Because generally you can open a new company but your poor service will just continue even in the new one as well, because is the same company, is the same set up, is the same entity so, will be the same all the way through.

IQ 2.1.5	What are the challenges experienced with regard to following the supply chain processes?

Me: What are the steps involved in procuring stock materials?

I8: Ok it depends on the type of stock you are procuring, the type determines the steps, but generally speaking, all RFQ will be the same, we receive the request we scrutinise there requirements we determine what value it is being procured at. Over R30000.00 is advertised for a certain number of days, under R30000.00 is advertised for a certain number of days as required but MEMFA. And then we will procure the item for the stores, the added leg now is the new legislation now of the local content. So that kind of adds a different dynamic to the RFQ process, because there are some industries that have been deemed as the local contend industries, by the Department of Trade and Industry. There we follow, follow a slightly different time from and a different evaluation process, for stock particularly.

Me: What about the approvals?

I8: The approvals remain the same, the procurement process changes but the SAP system remains the same. They will still great a requisition, and sent us the specification on the requisition, if it is above R200 000.00 it gets approved by inventory and stores manager, and then is automatically comes to us but if it is lower that R200 000.00 is comes straight to us, so the SAP process remains the same. But the step in between, when getting it through the process is slightly different.

Me: Are there any challenges with this regard?

I8: No we don't have any challenges, I see more challenge with the end user, coming back to procurement, we block them a lot from trying to buy items over R200 000.00 without a tender, we do have the challenge of them saying that they want to move it into our sphere, although the item is more than R20000.00 they

still want to create a requisition. Because the do not want to affect their BAB stats, because director of Supply Chain will look at them and say why have you not ordered this items, so instead of explaining it they take it to procurement and they want Procurement manager to explain it to director of Supply Chain we can't action those requisitions because they are more than R200 000.00. so those are the kind of issues that we experience but in terms of stock the process is pretty standard the materials master is set up, text you get today is the same text you will get tomorrow, we find very little deviations in terms of that, I would say. We will pick up issues where suppliers will came back to us and give us tips for improvement and we will work on that, say go to Codification and say, you know what the supplier is saying, can you please include this in your text for next time. Say the packaging size and those type of things but, we get very little of it.

Me: Do you ever get the challenges where say for example the material is marked for deletion and cannot be procured?

I8: Yes, but cause the material was valid at the time they created the requisition, and now you go through the entire sourcing process and when you try to raise a PO, you find that the material is flagged for deletion. That can be very frustrating. But is also got better now because the store man will now notify the buyer and say can you please cancel that RFQ. Because they have been notified by the area head that the item has been marked for deletion. It was a huge problem where they were ordering staff that they have not ordered in like 2 to 3 years, now they will come back to us and say, the specification is all right, I ordered it 2 to 3 years ago but I went back in to the specification and I checked that it is all right. Cancel that RFQ because now we have marked the material for deletion. The communication has improved all those errors we used to have. We still do find 1 or 2 that do not but on average it is dealt with.

IQ 2.1.9	What are the challenges to the process of goods receiving?

Me: What are the reasons for goods to be returned supplier by stores and to stores by the staff members?

I8: We find that or to be specific in the last statistics that we looked at the goods are being returned because of the poor specification. So the specification itself is not correct especially for chemicals, solvents and those type of things not being clarified enough, or secondly the quality of the product being delivered itself.

Me: So the problem lies both with the supplier and the City?

I8: Yes the problem is with the city and the supplier, that is also stats that we track as part of the SCM optimisation project. How many items, per month are returned to the supply and what are the reasons for the return. So we can pick up the trends like is it the particular supplier or is it a particular martial within the City that is causing an issue because I mean, if 10 people can return stock to different vendor for the same material number it means there is a problem with the specification. Me: you and another buyer can be buying the same thing but each time the supplier deliver we are returning it, that means there is a problem on our side. our specification might not be clear enough for the vendor to determine what our need is or alternatively we are all buying form the same supplier and he is giving us a grapy paint. but we do track that and we have a quality control officer who, do look at the statistics on behalf of the City.

Me: But then what about the challenge that suppliers change almost all the time every time you buy?

I8: That is why we have introduced the price list agreements, a price list agreement is an informal, but maybe informal is a wrong word, but it is an agreement between you and the City but does not go through the tendering environment, it goes through the RFQ environment, it is a fixed price agreement between you and the city for 6 months. So basically for 6 months we will know that we are getting a good product at a fixed price. The price does not fluctuate all the time and it one vendor to manage, and we are guaranteed the right product every time the delivery is made. That is sort of what we came up with to address the poor quality issues.

Me: But does that mean that every six months you have to create a new contract?

I8: Yes, this is a more administrative burden on procurement to create a contract, but is better that getting the same material returned, each day for that six months. Is one RFQ and 20 POs are being created and there is a contract into the system and we get the benefit of not having to manually create the purchase orders, as the purchase orders get automatically created, which makes it easy as well. Therefore is let administrative burden as well.

Me: Do suppliers ever reject materials returned back to them?

I8: They do because sometimes they say it is the right thing and then it becomes more on training from our MRP controllers. Because our quality control officer is not the person who received the stock. They know that it is right but the store man does not necessarily know that it is right, only the person that is going to use it, so it can be the materials master that we created, from the very first time and he will have nothing to gauge it against. So if I buy, this phone today and I must buy the same one tomorrow I will know, but the first time he gets it, he does not know he only knows that it must meet criteria ABC. And now the thing is delivered with the extra attachment he is going to think that it is a wrong thing. Or in this case we will get the quality control officer to check the product and actually resolve the matter. But the companies are more than willing to come and show you that it is the right thing. That it is within the specification and it will meet the outcome you want to meet.

Me: So the supplier always refers back to the specification?

I8: Yes.

Me: So if he deviated, is it not an issue?

I8: If he deviated he must take his product back, he must provide the product that we specified, at the price that he specified or he must withdraw.

Me: Is it never the case that when the goods are returned they tell you that you were supposed to return within this specific period?

I8: No when they sign the RFQ document they accept our terms and conditions. So as soon as they alter the terms and conditions or they add to the terms and conditions we will go back to them and say, you cannot do that you can only except the City's terms and conditions and if they confirm yes, then we will consider them for adjudication and if they don't then we will not consider them for adjudication. So their terms and conditions never override ours. We make the rules.

IQ 2.1.8	What are the challenges with ERP with regard to resolving the reported calls by the staff members?

Me: How long does the SAP MM at COCT take to resolve the queries reported by the staff members?

I8: I think the response time is good. Sometimes we hamper our own resolution of queries, your prime example that MRP thing you are doing for us, we can't come to a conclusion, of what is best practice so we hamper our own solution, but if is it purely dependent on the ERP team then, we get our responses in an agreeable time, I don't think, there is no unnecessary delays and also, and now that you guys are divided in a way that you have a specific person managing the specific area of procure to pay process, like I2 is ours and I1 is stores. So that person meets with you per month to discuss, the issues raised for your department. Which requirements do you want me to push or down in priority? So you are constantly, so they know what you want so you can say move this down, because I will only need it after this and that have happened. So I would really say the ERP Support, what we get is really good.

Me: So are you saying that you never get challenges?

I8: No I thing we give you guys challenges. I think sometimes we are unreasonable, in what we ask in the sense that we want it now. We don't understand that you need to do an investigation from your side you need to understand what is happening, u know get to the root cause of the thing because I might be looking at it because is applicable to me but it actually will be a problem to someone else so you guys need to look out for such not the interests of the users. Is a personal thing whether is happening quick enough or not, you know what I mean but I think there are not issues.

Me: At least it is eliminated from the causes because if it is the problem the people would not able to complete their tasks.

I8: No, really, the service levels are high and the fact that we have so many meetings to discuss our business processes and we are including you guys. We are thinking of where we should be going but we are not thinking of the system, and practicality of where we want to be and how is going to affect other people but the fact that we include you guys in those meeting makes it easier. Because you can say yes it is a business requirement but this is what the system can handle. So the iteration is really good I have no problem from the ERP perspective.

IQ 2.1.7	What are the challenges with regard to policies and regulation in SCM?

Me: Do you feel that there are any externally policies and regulation that contribute towards stock-outs at COCT? You said something about local content.

I8: In terms of external, that is a huge hampering block to the process. If you look at the industries that have been marked for local contend by the Department of Trade and Industry, clothing is the largest hit to the COCT, in terms of stock-out at the moment. And that's what we need the most PPE is important but we have most of our stock-outs from that environment. Our external policies have a direct link to our stock-outs, more than the internal policies.

Me: Are there other external policies, except for local content?

I8: I don't think so, look except for local content, we have normal policies that govern us, the enforces issues like how many day you can advertise so, so if I need something urgent I can't just go and buy it from somebody, I must have 3 quotes, it dictates how you must get the quotes, we have our own like MFMA but is more the external ones that hit us, and the hottest hit at the moment is the local content, we could recover from the all the rest to make them work. It has been with us, since November 2013, and not getting proper guidance even after engaging with the Department of Trade and Industries is our main issue.

Me: What happens to all this materials, are all materials affected by this or how does it work?

I8: Yes, all materials are affected by this because we can't buy them, you see was local contend does is to set a specific percentage for a specific industry, say clothing for instance, they say we may not buy any imported items, as a municipality in terms of clothing. But the truth of the matter is that not everything is locally produced in south Africa. So if the company needs to supply the COCT with an imported item, they need to apply to the Department of Trade and Industry, to get and exemption for it. But the point is if the Department of Trade and Industry say no, there is no guidance as to where they must go and buy it in south Africa. They will just say no, this product is available locally, and we will not get any responsive bids because nobody can supply it. Now we need to re advertise, and stores have catered for 14 days in terms of our lead-time because they know it must go on RFQ but we will never hit that. because if there are no responsive bits you have to re advertise again for 7 days. And you have the 14 days gone just in advertising, so now you have to target three service providers, and we can't expect the stores to hold huge amounts of inventory that we do not know if the people are going to draw it. So they are looking at the minimum order quantities also, the best thing as the city to prevent stock-outs it terms of local content industries is to have tenders, because instead of the suppliers going out every time, for every RFQ as you do not just get one letter, say for example do you have a check sheet, the supply cannot say, I made the check sheet so give me the letter for it, the city does the check sheet and he must go and get the letter. Tomorrow we ask for same check sheet, he must go and get the same letter, so every time a supplier, there is an RFQ, but if is a tender, he only gets that letter once and it is valid for 3 years.

Me: How long do they take to respond to the supplier?

I8: They are supposed to respond within 2 days, but we have documented a proof which we have sent to them that they can take up to a week to supply it. Because they have one person writing all this exemption letters for the entire country, not just for the western cape but for the entire country.

Me: Is this specifically related to clothing or there are other industries affected?

I8: There are 11 designated industries but our ones because they affect our stock-outs are, clothing, cable and valves.

Me: Cables fall under electrical, but what about valves?

I8: Valves fall under your normal COCT stores, because they get your housing stores and our water services stores, and so those are our 3 hardest hit and when you look at the stats, their supply chain performance is the worst at the moment but that is because, we are just not getting the responsive bits or the company, are unable to get their exemption letters from the Department of Trade and Industry and we cannot award to a company without those. And this is the major impact, because if you look say 4 months back, in terms of clothing the byer was averaging in the middle in terms of the stats for the stock-outs, in the last two sessions we had the stock-outs have gone well over a 100. And when you look at the stats those are the three commodities that rank the top, with the amount of stock-outs at the moment.

| IQ 2.2.4 | What should be monitored in order to manage the causes of stock-outs? |

Me: How do you identify multiple causes of stock-outs that result into a single stock-out? Like you mentioned that a specific material can be out of stock because there are specific components that are manufactured internationally.

I8: All of the above can apply, a particular stock-out can link to any of the reasons I mentioned, it just depends on the circumstances on that day, that will determine what it will fall into.

Me: What are the challenges and what do you recommend with regard to this stock-out situation?

I8: I think the challenge comes with the problem that we do not have formal tenders. The supply chain goal is to work on an 80:20 rule, 80% of what we procure to stores should be on a formal tender and the 20% will be the odd staff that you do not regularly buy. You don't want to fix the supply's price on a contract for 3 years because those things you will generally buy once in three years. So those type of thing we generally on RFQ for. You buy it regularly then it should be on a formal contract. 99.9% of the issues we have will be resolved if we had the tenders in place for the items, and if we do not have that we will constantly have the human factor, and we will constantly have the fact that the lead-times are over lapped because, we do not only buy for stores but we buy for everybody else, but if we were buying for stores we would meet the lead-time and we would generally have less of an impact on the stores environment, so we have the stores to keep happy and the end user to keep happy that buys on behalf of themselves.

Me: So in general are the materials that are on tender delivered of time?

I8: We have a better rate of on time delivery for items on tender than the items that are not on tender.

Me: How do you identify multiple stock-outs that results into a single stock-out, let's say that the planned order was not converted on time, or rather the planned order does not batter in this instance, let's say the requisition was not converted on time to a PO, and was not sent to the supply on time?

I8: Ohh! You mean the multiple causes?

Me: Yes, multiple cases that results into a single stock-out, say all of them result into a vendor's lead-time.

I8: Ok, because the starting point already laps the times and everything rand into one another and you end up eating into the vendors lead-time. In terms of the contract.

Me: How do you, identify, or how do you know what exactly happened?

I8: Look the only thing I can think of is that you will have to do your investigation into that particular stock-out and you will have to determine why, that thing is causing you and issue and if it results into unless….. I think I will be more concerned if it results into multiple stock-outs, if is a single stock-out, I can leave with it unless it is a strategic item but I think to me is to fix the rout cause, because one stock-out, is one stock-out to many, that is our model. Because you see one stock-out but you are affecting 10 end user that want that item. Yes is one stock-out but you are affecting 10 people that want that item. Their projects are planned around that single item so it is important for us to find the route cause, for that single thing, so the we stop that from happening again.

Me: Let's say is a single commodity and there is multiple causes, how do you determine that specifically this is the root cause for this specific stock-out?

I8: We get one source document, say vendor A does not deliver correctly, let me just see if I understand you correctly, are you asking me how do I know how the multiple causes were, whether is the vendor or the city, the only thing we can do is to use the system for that analysis, there is not one transaction that I can put in and put the materials and I will see all the details, I have to, work through starting with the known information. At that point I have a vendor I will have to work back and see what happened, and if I have the material I will look for the specific material and see when did this material get delivered, when did the planned order come in.

Me: Ooh!

I8: When did this happen, and discover what were the root causes in between because it could be justifiable reasons, but that what I will need to do?

Me: Actually I think you mentioned that earlier because you said that the vendor will come with the proof that they did deliver. What happens if he delivered late according to the system, but he actually did not based on when he got the purchase order, because according to the system planned delivery time is planned delivery time irrespective of when the supplier got the order?

I8: He gets a PO, and which has a set delivery date, but delivers late, but is actually within his planed delivery time.

Me: Based on when he got the PO.

I8: That is why it is very important that we process that requisition to a PO within the 3 days. Using an example of a contract, we have 3 days period that we must convert that, otherwise… because when the planned order is converted into a PR and the company's lead-time is 6 weeks then the system is going to calculate 42 days, from that day. Is going to take the 3 days, and then the 42 days, so now if I, create it on day 4, it has now eaten 1 day into that supplier's lead-time, so now the supplier only has 41 days to deliver because his days is now too short because I have eaten into his lead-time, but I as the buyer before I release a need to check that, because is only the creation date and It has not gone to the buyer yet. As an assistant buyer I delayed and only created it at 15:30 and my buyer can only, came in tomorrow morning day 5 and they release it, and then sent it to the service provider we have now wasted 2 days into his lead-time and now has 40 day. Before they click release they are supposed to check that the planned delivery time is correct in terms of the order, and if they don't and for whatever reason they sent it off. And that is my job to address it with the buyer, I have to cut over the system to see why now the vendor is delivering late. That is why you cannot just say that the vendor delivered late, you have to look at every scenarios in there. But for us we just come upfront and say to the vendor that you delivered late, we leave the responsibility to him to come back and say no but I did not. If is one of two orders I will do the analysis, but if is the vendor is an active vendor and gets awarded 100 orders I am not going to check through 100 orders, we are just going to say you are in breach of the contracts and if you are not in breach come to us an tell us that you are not in bridge. And for those purchase orders that he comes back to us and say but I am not in breach, we will go back and do the analysis on those and then we will use that analysis to improve our service. Improve the on the shortage and also improve the training on the assistant and the buyers. This is what you have to look at, which we constantly do.

Me: You do it with stats?

I8: So we use the stats to do our training, we use general report, but also use specific examples so if I pick up something from a specific purchasing group, I am not only going to discuss it with that specific purchasing group. So in Monday morning, at the buyer s meeting everybody will be informed.

Me: What should be monitored in order to manage the causes of stock-outs? Should have a mechanism that monitors the entire chain. Maybe get tally that marks the number of occurrences.

I8: We have asked for sort of an escalation thing within the system, to set the time so because we would like to know when the person exceeds that time. In SRM that is one feature that I liked because it allowed you to do that. it came automatically with that feature, and gave me as a practitioner more reporting ability. Because in ECC I have to draw 3 or 4 reports merge them into excel to the information that I require. That makes it a little bit hard and you start wondering to I really have to go to all this extra mile. But is part of your performance measurement so you do it. But I think it that case we analyse the right data. I know if there is anything else we can add. I don't know if you have seen the supply chain optimisation slides that Willem presents every month.

Me: Yes, I think I have seen some.

I8: So if you look at that I think we, are looking at the right things, and it is basically taking the information that is provided and converting it into something positive, so we are constantly improving.

Me: I think we are done because you answered is actually covering how you address this issues.

I8: Thanks Moletsane.

APPENDIX D9: INTERVIEW TRANSCRIPTIONS I9

Me: Hi, today I will be interviewing I8, she is the buyer in the Procurement Department. I will have to go through the ethics requirement quickly before we can go through the interview; basically the most important part of ethics is that you voluntarily took part in the study.

I9: Ok.

IQ 1.1.1	How are stock-outs experienced at CCT?

Me: What does out of stock mean?

I9: Stock-out?

Me: Yes.

I9: Stock-out would mean basically mean that there is not stock in the stores, or the project manager outside the stores, will require an item, and if the stores cannot provide an item they will have to procure an item, and if the reservation shows that there is no stock that is basically a stock-out.

Me: In your experience, how does your line of work contribute towards stock-outs hence service delivery?

I9: It affects it quite badly because I am the electrical buyer, so cable gets stolen on a regular basis, and I procure cable. So I must always make sure there is cable available, especially cable because we have a problem with cable theft. So I must always make sure that there is all cable stock in stores. But stock-out can happen due to various external factors, where I do not even have control as the buyer. I got the request and processed the order and now the company cannot deliver. Delivery is mostly smooth but there are things that can impact delivery, for example major strikes because most of the cable comes from Johannesburg. So major strikes, petrol strikes, whether is truck driver strikes. Eskom, because now with load shedding there is another factor that is added towards stock-outs. With load shedding some of the people's machinery gets damaged. If they have to run the few 100 thousands metres of cable on a particular machine, when the shed is coming on and the machine break. We have a special machine that does milling for our items also, that machine has not been fixed yet so I have to move my delivery dates because that service provider, cannot help me because the milling machine is not fixed yet. That is a direct impact of load shedding. When the machine went off it did not come back on again.

Me: Ok, so now it need specially parts.

I9: Special parts and skills to get it fixed, yes. Basically, stock-out, I can control it to a certain extent only.

Me: Now, how does stores impact you, let's say in terms of quantities ordered?

I9: You see, there are perimeters in stores which they set, say for example, we say they must have 10000 metres of cable all the time in stores, because there is planned work and unplanned work, stock can be controlled for planned work because the project manager outside says I have a job that I must do in two months so he can reserve the item now already and once he puts a reservation, most of these things are automated, so the store man will punch in some information and automatically it will calculate and say how long it will take, me to get the delivery, and how long it will take for the request to get to me. We have turnaround times, for the order to be created and for the delivery to be made. The tender department put the tender two yearly, so most of the big items like cable is on tender, for two years, so the awarded tenderer has already indicated how long it will take for him to deliver the goods to me. Say for example 12 weeks delivery awaiting period, so the vendor must make sure that he delivers within the 12 weeks. But this is the sure thing because you know that the vendor said he will deliver in 12 weeks, but when the external factors come in, then the vendor will not deliver in 12 weeks, because now there is a truck strike, and now there is petrol strike, or there is this kind of, strike, there is this and that, load shedding.

Me: What about internals constraints? Do the MRP controllers set the perimeters as they should?
I9: They try, amm! Yes they do. And they have appointed people now to help them control that, and it is very streamlined at the moment, and the IT guys are also helping us get it streamlined, so we have been going out on training once a week to make sure that we follow up on out standing orders, and not wait too long and tray and reduce the out of stock situation. So there are processes that are in place to try and reduce the out of stock situation but there is only so much that we can physically do as people. And as I explained to you the external factors are the ones that we do not have control of.
Me: Ok.
I9: But they are controllable and it is becoming more so because we are looking at the stats and the stats are coming down drastically, from the time when we could give no reason for out of stock but now I can account and say this is what is happening. So every single item I should be able to give reason for it.

IQ 1.1.2	**How do you identify the materials that stock-out?**

Me: Can you determine the history of the material being out of stock? If yes, how?
I9: There is a record in the system, there is a transaction you would go to, you will go into the material and you will also see the record of the material, when do we buy it, how much we use of it, the MRP controller, have access to that transaction that is why they can set the perimeters. Say if we use an item once a year we will not have stock-outs for that item, because we are not going to have it continuously ordered, understand?
Me: Yes.
I9: So this IT, not IT, the consultants like [name deleted], they are working directly with stores, there is a team working directly with Procurement, there is a team working directly with tenders, there is a team working directly with stores to get this stream lining working and it has worked because our stats have come down drastically from last year. So every Tuesday we go for training. But it was not like that before, when I first started working in Procurement I could not read my out of stock, I did not know the transaction, I did not know, what to do. It was only because I am now working here for a while and I understand how things work, therefore getting better at my job and had to see that we do not get out of stock. but we do get out of stocks. I can give you another example – the Department of Trade and Industry have now brought another variable, the content aspect, so we can't advertise, so we can't advertise certain things without the local content. For example that lady that does buying for our clothing she is struggling terribly, local content on clothing is 100% so we are not allowed to import a sock, we cannot import a single thing of clothing. That is a very hectic commodity because or disaster management team, fire fighters, our traffic police, needs the uniform and she buys the uniform. So with local content the out of stock situation arises by her now more often. Because the vendors in Cape Town or in South Africa are not meeting the criteria of 100% local content, they need to import a part of their garment, but they are not allowing that because DTI says it is not 100%. Now when we put something out on quotation it comes back because the people now do not have letters from DTI to say they are 100% we can accept their quote. So if they do not have the letter they automatically become non-responsive.
Me: How long does DTI take to respond?
I9: That you will have to ask her because I have just started, am now at 90% local content on cable therefore have advertised 6 items so far so I do not understand the time frames as yet but she has been working with local content, now for the whole year and she has been bringing up out of stock a lot because she cannot get the correct responses, so she has been re advertising, until somebody in DTI says, this company can be exempted, that will be when they have audit report and everything. The auditor has to physically go and say this is 100% local content. This is for every single item that is on RFQ, on the web. And now the vendors are complaining, and I agree with them, because some of the auditors charge them from R650.00 for a signature.
Me: Is that for each and every item?
I9: Yes, for each and every item, because we advertise separately per store, I don't know how many add she does, how many quotations she gets but the quotations are not valid. If they are valid she has to clear that and need to have a special meeting with our manager, procurement manager. And the decision needs to be made,

of whether the company is compliant, and only after it has been decided we can go ahead and make an order. And only from that day you can calculate how many days they are going to take for to deliver. So out of stock is happening now more on clothing, this commodity.

Me: Ok.

I9: So that is some external regulation, and is not thumb sucked it is a legislation coming from the top government, so we have to implement it. So now you have to try and tell them that we are not DTI we only try and explain to them, the legislation, because DTI is not doing their job by informing all the vendors about the requirements and that they need to follow this process and that and that. they are saying that we must give our vendors or the companies that are registers with the City. So that can't be right, because how does this become our responsibility. So is a whole vicious circle, so I am going to end up getting that problem also in my environment the more my commodities are put on local content. But lucky for me I have a lot of big tenders, that covers most of my staff and also we have the price list agreements that covers 6 months that my senior helps us put out. We has a sort of informal tender running for 6 months, where the companies give us a price that is fixed for 6 month so we can use those prices for 6 months. But on that, on the RFQ stage, we tell them that you are going to have to put the same price for 6 months. So that I will not have to physically go and advertise every time. So that is also helping with the stock-outs. If you have the pride list agreement is just ordering and delivering, because we have a valid tender. But if you don't have a tender, I can show you in my inbox, I have the stuff that is not on tender, and for them my assistant is busy advertising. You have to advertise every single day, everything under R30000.00 you advertise for 2 days, and everything over, R30000.00 you must advertise for 7 days. You must remember in Procurement we do not create orders or advertise for anything above R200000.00. Everything that is above R200000.00 must be handled by the tender department.

Me: Mmm!

I9: So now you can understand why my work is mostly there because cable is not a little money.

Me: No, I understand.

I9: Because [it] is copper, so copper is like thousand millions of Rand. So you have to have the formal tenders.

Me: So the tender process is handled but the actual buying thereafter is handled here?

I9: Yes, the buying is here. Tender department goes to the specification meetings where we meet the project managers, when they discuss what the needs of the project are, for example I have a meeting request now for the 20th of May, with the project managers and our tender department to put out this document, the document is for design manufactures, supply, off loaders, putting of high mass poles, so all this mass poles will have to be advertised and will be on a formal tender because it is going to be over millions of Rends. And this will run over 2 years. So this is only the initiating meeting, the start of the ender, it is going to take another 6 month before this thing get awarded.

Me: Is there a tender in place at the moment?

I9: We currently have a tender in place that is going to expire in due course that is why we are currently, but before it can expire we have to put this one out.

Me: Ok.

I9: But if they do not get it out in time, they can as for an extension, but that is all done through the BAC, you know the bad adjudication committee, and that is a separate entity to tenders.

Me: Do they handle all the extensions, etc.?

I9: They will also meet to determine who is responsive and not, when the quotations are closed. They will determine who is responsive and who is not. They will check to see if the companies meet the criteria. Or if the documents are there, or if the prices are in line, if they are not thumb sucked or if there is nothing else fishy.

Me: Do they physically go to the facilities of the vendors or?

I9: No, no, no. They, take the document, the face value like that and they hope, that you are giving them the true reflection of what you are saying.

Me: Ooh, ok.

I9: Because electricity is so intricate area that you can't play with it, we know which companies there are, because you only have certain manufacturing companies, in south Africa. They are few and far between type of thing and you know you are getting the correct item type of thing, sometimes you get some whose staff is already existing in the City its self, you know the box that you get at the robot, where the robot workings are in. that is called, a stubby, so that particular box get manufactured by the specific people, and they manage that box. Our people can be able to fit it in but if something goes wrong with the mechanics of it, they need to come and sort it out. Because there are stuff that we can't fix. So that is how intricate the tenders are.

Me: From the internal perspective, what does the end user do when they find that there is a stock-out?

I9: Its hectic. What I will have to do is to ask the vendor, or what I do to manage it is to run a report every day, we sent out reminders, say for instance your item is due in two days from today I will sent you a reminder to say, sorry what your name again?

Me: Moletsane.

I9: I will say, Moletsane, you are due to delivery on Wednesday. And tomorrow I will tell you again, Moletsane, you only have one day to deliver the items. I expect you to deliver the next day and if you didn't deliver, I will draw up a report and see that you did not deliver, otherwise the stores could have taken the stock in and captured it on the system that he has receipted it.

Me: What if the stores did not capture it on the system?

I9: They will tell me, but [name deleted], but I did deliver yesterday, you can follow up with them, maybe they will sent me a POD or something, and the stores will maybe say the gentleman was sick that does the GR'ing, but the day or 2 is the longest we wait. But we have to follow up the whole time. So every day I draw up the report to see what amount of orders I have, what item are late for delivery. We have another thing in place hey! Early delivery, on time delivery and late deliveries. We basically want them to deliver on time but there some of them mostly deliver too early, some of them deliver on time, and there is a few that deliver late. We need to manage our suppliers outside even before we manage stock, because you need to tell them that I cannot have the out of stock situation. If we miss, I have a report here that will tell me, say if I am reading a report. And the vendor will tell that, [name deleted], I have got no stock here because of this and that, then I will call the vendor and say we needed a 100, can you just give us 20 in the meantime, then see if the project cannot work with the 20 say for today, and see if I can get is a whole pushing of stuff all the time, but like I said, I am lucky that there is not many out of stock situations is my area. We have this things (KPIs) which we monitor to try and control it, before it actually happens. Only when the external factors come where I do not have control. Say for example if you were a vendor and I ask you to deliver and you tell me that your hands are tight you can't deliver, there is nothing, basically nothing that I can do. There is absolutely nothing that you can do, you can just manage that vendor, and force him to give you the stuff and even if he still [does] not give you the staff, there is a process that you can follow, to blacklist him, but not really blacklisting but we just not use him until the comes to the party. But in the meantime I cannot just stop because I still need the vendor to give me that staff. So the relationship must always be open, you know what I am saying, it is very tricky. But then my senior and our managers need to take control, you see if I can't get hold of the vendor, if he is not really listening to me or not performing I have to escalate it. And that is a default procedure on its own and you can't just start the defaulting procedure, I have to compile a proof of all the mails that I sent him and hand over to the team lead. The team lead will also try another letter or two, and if she can also not get hold of the vendor then we have to follow the defaulting process. It is a whole formal thing and from a formal thing we, call the vendor in and we have a discussion with the vendor, not me, but I mean like the seniors and the managers, and if the vendor still cannot deliver then it must go to legal. And is only legal that will implement that legal process, we are not allowed to implement.

Me: Unless if they, you get an instruction form legal.

I9: Right yes. So [it] is a whole long process.

IQ 1.1.3	How does consistency in your area of work with regard to stock-outs?

Me: Have you experienced any inconsistencies with the system? If yes, please describe the inconsistency as follows: what was inconsistent, when and the frequency? Say when reporting you get inaccurate data, anything that you can think of that was in accurate.

I9: So the inconsistencies will start here by me, you know what I am saying, If [name deleted] sends the reminder letters every day and he is the person that is in contact with the suppliers first. If there is a problem he will escalate to me, so I do my work correctly and he does his work correctly there is no inconsistency, you know what I am saying.

Me: Mmm!

I9: So basically there is a process for everything to follow. I can't think of any.

Me: Ok, under what circumstances would you change the PO quantity, or the delivery date?

I9: Ooh! Delivery date. Ok, the delivery date I will change only if the vendor comes back to me. Say the stores comes back to me and say where is my things, and I call the vendor but the vendor says, but I never received the order, but I can see on the system a green light from IT, showing me that the vendor has received the order, between our system there is a waiting space where they say, what is that thing? Is it a two day? There is a report that you ran, SOST, that you run to see if all of your orders have gone out. That report will show you a red dot to show you that you must re sent. So when the vendor say that they did not receive the order I go to my SOST, because if I remember I had no, red light and I run it again for that particular day that I showed me that it went through with a green light. So if there is a green light I can safely say from our side and from our server's side it went through, so he must have had a problem with his server.

Me: So what about if it is grey?

I9: But now, he does not have a proof of that. He could have got the order and just did not have the money to buy the stuff or whatever. He can tell me that he never received, and I can't tell him you are lying. So then I have to send him the order again and then, that is when the date is going to change. Because he is only going to get the order today when he had to deliver yesterday already. So the lead-time is two weeks so I must give him full to weeks to deliver, so then I have to pick up the phone and tell the store man, sorry Moletsane did not get his order so you will have to wait for another two weeks, so he will have to go and check the ZMM report to see if the there is still stock or not and then they will tell me, no [name deleted], I needed it for the project manager for a specific project. So then I will have to pick up the phone again and tell the vendor, I cannot give you two weeks, can you give me something in 3 days, or what can you do for me, so that is your whole day business here.

Me: So quantities you never change basically?

I9: Quantities we only change on request. We only change on request but stock quantities you will not change, like this morning I got a request, I had an order where I changed the quantities, I did not change the quantities but say the order is 300 meters right, but the 300 metres came over to a value over R200000.00. and I am not allowed in this environment to create an order over the value of R200000.00. so what I asked the store man was to reduce the quantity to 150 meters, and give me anther request for 150 meters on a separate order so that I can create them as separate orders, so that they will be under R200000.00. is still 300 meters, but I created the 2 orders to stay in line with the policy of this office. Because you cannot created an order of over R200000.00 so that is not an inconsistency as such because the stores is still going to get what they need.

Me: So the stores amended the requisition? It is not like is the PO, only that is different.

I9: Yes, and there is no price changes and staff like that. So if the vendor calls and says I am sorry man I underquoted you, I tell them, if you cannot deliver then I will have to cancel your order and give it to someone else, the second responsive person, because I am not allowed to increase orders, once my assistant has captured the quotations, you must have made sure that you quoted the correct prices. You cannot come around when I sent you an order and tell me that you made a mistake, because we are not going to change. We don't change prices, the only price changes that we make is the escalations on the formal tenders. Because then I will get

the mail from them.

Me: Or the price will automatically kick in.

I9: I will get a mail like this, "showing me" the price for tender this and that will in increase from this date. So then I will notice that the price has gone up.

Me: So you mean, say the 31 the requisition is created with an old price and the 1st the new price is effective. Is it allowed that the PO be different in this instance?

I9: Yes, because then I have the mail or approval from our tenders because they control and manage the tenders, so managers tell me is fine, I can go ahead. Is like business escalations like Capitec and staff, capex, indices, JSE kind of price changes, but it gets approved at tenders, so the companies must apply for it.

Me: Is the application up front?

I9: The company must apply for it because they will get the notification from their suppliers that this has gone up because of copper went up by so much and so much, but is all indices. It is written somewhere man where is it gazetted. Is not thumb sucked stuff. It must be specified in the tender that you are applying for a Rand-Dollar exchange ,you don't just put it in randomly. And [it] is not just a rand dollar exchange, capex all sorts of staff, like CDI, is not like a Mickey Mouse thumb sucking thing, man, [it] is like real staff. The company must apply for it with all his proof and then it will come to me like that.

IQ 1.1.4	How is the information regarding stock-outs communicated to staff members?

Me: Is the information regarding stock-outs communicated to staff members? If yes, how and to whom is this in formation communicated?

I9: Yes, they will mail me, there is emails that comes for stock-out, but the stock-out is onto the system I can go to the system and see it. There is a transaction for me to see the stock-outs, it will give me red lights, it will show you red lights on certain materials.

Me: So you are saying that the end user can see the commonly out of stock material, and know to that they must book up front?

I9: Yes, they sent themselves the perimeters where they order more of something, if they know that it goes out quickly. Cable theft been so bad, there are certain types of cable that get stolen often, and they will increase the perimeters of such materials for just encase the anything happens, so that we do not have stock-outs. So all those thinks (KPIs) put in in place, it was never so controlled. Because now we have appointed people to focus specifically on this and IT is working with them, like [name deleted] and them and it has really improved dramatically, in the last year. And the fact that we go for training, it was there but we never knew, where, and how to look. When I started there was not so much contact with the stores man like we "put the two fingers together" and not you over there and the other person over there, I can't contact you and I don't want to talk to you type of thing but not the gap has been bridged because there were very bad form of communication before.

Me: You mentioned earlier that the store man sometimes GR 2 days later?

I9: Yes, but now, they are not allowed to, they have to GR before 9:00 am the following morning, and they are accountable for it because you go and tell their bosses.

Me: Do the bosses do anything about that?

I9: Yes, they take you to task in the meeting?

Me: Ooh ok.

I9: We mention names now, [it] is no longer the name and shame time any more. I mail, I tell them is Moletsane and Moletsane can go back and say is I9. The communication is better now because we expose one another now, in the sense that, I do my things strictly, and you do yours, because if you do not, I am going to tell your boss.

Me: So what about the end users that cannot plan?

I9: No there are the major problems. I don't think there is something we can do, our bosses can go to the bosses meetings and complain there, please sort out your

planning.

Me: Why don't you call them in yourself and tell them?

I9: Me, no, most of our end users, or project managers out there, we are in term in the sense that I can pick up the phone and they can pick up the phone type of thing. But they kind of work in their own heads man. They are not open, they are so busy and they are engineers and it is problem with the project managers out there they do not understand the admin processes. They do not understand what I want form them that type of thing. The project managers are some of the last people that must go to work shops and be in training.

Me: What about the approvals?

I9: The staff that must be approved if they are over R200000.00.

Me: So my question is more around the approvals, from this to that, how long does the approvals take? How often are the times adhered to?

I9: No, we have to adhere to it every day. Say for example the meeting that [name deleted] went to now, all of these issues will come up they will ask her, and tell the team leads and the manager there. Draw reports, that you have 118 requisitions that were not converted in time, what happened there, most of the time we have reasons for it. It could be that the company's tax clearance certificate has expired, and we send an email down stars to our Supplier Management department to un-block the supplier so that we can still use them. Because the system blocks you out as soon as your tax clearance certificate expires. And the purchase order won't create, it will tell you that, it will tell you that the tax clearance certificate has expired, but if it is a formal tender, it is our job to mail the Supplier Management to tell them to unblock. The unblocking reasons would be 1 the source listing by tenders was not run correctly, amm….. what else is there.. what else can there be.. amm! People off sick, maybe me and my assistant off sick. Maybe there are few people to help… but is things that are normal man, is things that you can't help, but the thing is she must be able to report on it and say.

Me: At least to show that she is managing it?

I9: Yes, that's it. She must be able to report on every single thing, why it has taken so long, so long over the time.

Me: What about the dependency now, say a requisition, you are not able to do a certain thing because you are waiting on someone?

I9: I know, I know, that is a problem. that is a problem because, to mage because it is not just black and white. It can be managed most times but there are the times when it cannot be managed, and then there is reason for that miss management of under management. But is not that we ignore things no we don't. it is managed and it is reported on. Even with … they will ask us why is there a request in the box, of a month ago, and you should has auctioned that a month ago, because you have maximum of 3 days. [Name deleted] can say because she had to re advertise, and if you go into that thing you will see that it was re advertised for 4 or 5 times. Because she is not getting here documents in.

Me: So in that way then, then [it] is managed.

I9: Yes, [it] is managed and under control but in this instant is beyond our control. This is the type of thing where your external factors come in. but definitely managed and reported on. that is the meeting that they go to, to ensure that we stay within our perimeters, because they set us perimeters to do thing within, and the store man has perimeters, so everybody, works within specific perimeters.

Me: And if there is a deviation, [it] is managed.

I9: It is managed and is reported on and is out of our control. Because if it is things that we can control, we will. Because since last year we have been working very strictly towards, our policy and procedures, and at the end of the day is for the audit. We want a clean audit.

IQ 1.2.1	What are the common features or characteristics of materials that are commonly out of stock?

Me: In your area, are there commonly out of stock materials, the materials that you know that, this ones are commonly out of stock?

I9: Huh!

Me: Are there materials that you know that if you order them form a vendor you must make sure that the vendor must deliver because they are commonly out of stock?

I9: Yes, there is quite [a] few materials that I need to make sure that they are there.

Me: Can you name them?

I9: In my head. Yes, there is obviously the cable, what's the other things terminations, and also meters, we have [a] problem with hey, this new electrical metre boxes, because, it has to be tested first before….even our cable, goes through the inspections.

Me: With this few that you mentioned, what are the common characteristics between them?

I9: Amm!

Me: Is it because they are imported or…?

I9: I think ones that are, with copper, once I had a problem with copper, and copper was imported and there was a problem with getting copper from Germany or something like that. What is the circuit breakers that gave us a problem last year? Yes, imports also is a problem beyond our control. But you see that was before local content came in because now it has to be 100% local content. With cable also that, [it] is going to be a major problem soon.

Me: But now with local vendors, what is a problem with them, because imported materials normally have long lead-times, so what is the problem with the local vendors? Is it the quality? Or is it...

I9: No, it will be load shedding now. It is difficult man, because I can't.. I am trying to think now what was the problem if I had. But like, I said there is always a reason and it is not just because. There is always a reason. And it is never a supplier's fault unless if he does not have money to pay his own people or suppliers, but he is not going to come out straight and say he has a problem with finances. That is a tricky thing, you are not going to tell people that you have a problem with finance.

IQ 1.2.2	What are the significant causes of stock-outs?

Me: Last one, what are the significant causes of stock-outs if you have to rank them. Say if you have to rank them from the top to bottom, 5 ones.

I9: Must I give you the materials?

Me: No, the significant causes, of stock-outs.

I9: It is definitely non delivery, late deliveries, aaaa!

Me: You mentioned…

I9: What did I mention?

Me: End users, which one comes, end users or planning?

I9: Unplanned orders, project managers not planning properly.

Me: When you compare late deliveries with end users, not planning, which one is more?

I9: Late deliveries, unplanned orders, an then your external factors like we have now with no control of load shedding and the strikes and theft.

Me: Theft?

I9: Yes, vandalism and theft, that's the major problem; you can even put that right at the top. Yes you can, decide. Thank you very much you can go now please.

IQ 2.1.1	What are the challenges with regard to master data?

Me: What is the process for creating and updating master data, referring more to the materials master and the vendor master as you are in the middle of it?

I9: We have a Codification department that maintains the materials master.

Me: And the vendor master?

I9: The vendor master is maintained by Supplier Management.

Me: Now that you are in the middle of this whole thing, how does it impact your work in relation to stock-outs, les say for example when the vendor is blocked, you cannot order?

I9: No I can order, because within a day I can just mail them to say unblock this vendor.

Me: How effective are they to react to your request?

I9: Yes they are very much so, so it will maybe for the latest a day. You see all our work that we do, there is somebody else checking it. And pressing another button, like he will create the orders but they cannot be released unless if I check it and I sent it off. But for anything over R100 000.00 I have no control, I can release but it will go to the senior who will release and sent it off, for over a R100 000.00. so there is a check mechanism for every single thing. So you see there is somebody that makes sure that everything is right. So I have to take responsibility of everything that [name deleted] does. Because I have to release his stuff.

Me: What about the thing.. the materials master, how often do you get problems?

I9: Yes, I do get problems, but not very often, you see that is also one of the things is that they put good people in. and it brought about a new department called Codification. So [name deleted] and them, are busy with that. where they cleaned up all the materials masters, where they streamlined the descriptions and they have given everything the material numbers. So every single thing that is in our stores has a material number. So we buys stock mostly buy non stock also, the stuff that have no material numbers.

Me: But in terms of Codification, how often do you get problems with them that limits you from doing your work?

I9: Yes I do.

Me: Say with a vendor master you have a problem, you wait a day, and when eventually you want to buy the materials, the material if flagged for deletion and you are forced to wait for another 2 days. And the third day is the only time you can actually process the order and you have like, a lot of orders you have to process.

I9: That's also streamlined, flagged for deletion is very far between. The materials or staff that is in stores is staff that gets used most of the time. Then there is stuff that gets used one or twice a year. But then there are stuff that has not been used to two three years; those at the stuff that get flagged for deletion. Most of the time we will not get orders for those things but will get it here and there, but like I said they are far between. But today I had a typical example of an item, that I purchased, the specification said it had to be printed on a white paper, but the vendor called me to say, but the store man wants on a yellow paper. And so I said, I am not giving it to the store man on yellow paper because the specification say, white paper, so I sent the email to the store man and to the health manager that is in charge of that thing, and to Codification to say I will cancel all the orders that I have made and the request in the box for all the items that the specification says white paper, if you want yellow paper than you must fix it. I told them that I will cancel everything until it becomes what it should be. But you see that health manager is the one that must make up her mind whether it must be white or yellow. She said white, but when she went to a meeting somewhere in February, some of the clinics did it in white and some of them did it in yellow, and she needed to make a decision there, whether white or yellow. So she did send Codification a message to change it to yellow. And she didn't know where in the system to check if it was changed; she only knows that it brings up the query, she noticed that it has not been changed, so now I mailed her to tell her, sent me the email that you sent to Codification and I will make sure that it gets changed. Because clearly you are not doing your job, but I did not tell her that. I am serious because is their job, and she told me she didn't know where to look on SAP. So I told her call me again she said she could not get through to SAP, and then I said give me a call so that I can run through the transaction with you so that you can see what I am seeing. Because the spec clearly says white paper, and

I put it on white paper and the man gave me a price on white paper, so don't turn around and tell me that we must print it on a yellow paper, because now, white paper printing is R11.00 and yellow paper printing is R19:00, and I am not changing his orders to an increased price of R19:00. So I am cancelling this orders until you fix that, and I am not buying the materials till the problem is fixed. So that is going to impact on the stores because they are waiting for those forms. So you see what I am saying, I won't buy it. Because I am not in the wrong here, Codification, must respond why they never listen to that woman and changed it, they must tell their bosses, they must explain that it how it is if there is a problem I must explain. There is a report and accountability on every single person, that is why I say we need to work like that, you with me and me with you so that this can run smooth, I must tell you is has started to work better because of that open dialogue thing. So everybody knows what exactly they must do because it will implicate on one the other and the other. And this is all the help of Willem and them I must say buy stream lining the processes, because everything is on SAP, I never worked on SAP like I work on SAP now, there is so many things that we can run now to see staff that we never knew.

| IQ 2.1.2 | What are the influential platforms in deciding on the supplier? |

Me: What are the criteria used to decide on the supplier for stock materials?

I9: No, they just fill in the form and they decide down there. But the vendor master maintained.

Me: I mean to award?

I9: Ooh! To award, we put out the request for quotations, right, you see the suppliers are sort of streamlined already, stationery supplier will not quote by me. He won't quote by electrical because he does not know what is going on there, most of our vendors… Only our new vendors try their luck, but the soon find out that they can't manage because there is certain, there is certain products that you need a huge capital and a huge bank account for, especially the electrical staff you have to work for years because they are not going to give you credit, you have to work for years for a manufacture to allow you to buy a circuit breaker from him. It's all I am saying. So it hard for the vendors out there, and I feel sorry for them, because everybody wants to earn some money, but you must also try and stay within your field of expertise, stay, because then you are going to quote correctly and you are going to give us the correct item. So that is how it gets managed and streamlined, we do not try and not give you work, but you must also understand that if you are giving [name deleted] pens, you cannot tell me that you will give us a circuit breaker that is R86000.00 and the pen is R80.00. We do not streamline it that way, but say I get 10 quotations for my electrical item, right and two of those companies I know for a fact that they supply coffee and tea then we give them the benefit of the doubt because they are going to go through the process where they get adjudicated and if they are awarded I will give them the award and even create an order for them. And then I am going to watch them, because I am going to send them the reminders to remind them that they must deliver for me. And if they do not deliver or they come back to me and say they underquoted, then I know that you tried your luck, just don't do it again man, but you will get a strong message once I cancel your orders, that you can't try your luck this is not a micky mouse business here. So we do not exclude, we do not discriminate, we don't do anything like that. I accept anything but I check all the specifications that you are giving me, the right thing. And if you give us the wrong thing more than once, I am going to call you in because now this is a problem.

Me: What are the influencing factors say this guy quoted the same price?

I9: The price is the same?

Me: Yes.

I9: Then their Triple BEEE level will determine who is going to get it. Because everybody does not have the same Triple BEEE level, so it's the price, the Triple BEEE level, and whatever that is required at that point in time. Your price may be the cheapest but you are not going to win that.

Me: So Triple BEEE level is more important than price?

I9: Yes, everybody thinks that when the price is cheaper they will get, but everything goes beyond price.

Me: So its Triple BEEE level, then the price and then the requirements?

I9: There is a lot of all other stuff.

Me: Ooh ok, depending on the commodity.

I9: That's it. When its services there is other stuff, say they must be in the construction in dusty and they must have QUOIDA, they must have aaa! what you call this thing….. insurance, public liability, all of that we don't have here because we only deal with goods. But there is no way that anyone can point a finger and say you manipulated the system because you see …

Me: Ok, can I just ask, because I did not know that Triple BEEE level is considered above price, to what extent do they balance these things?

I9: I do not know because its built into the system. We used to do a manual adjudication before then and it was very tricky, there was a formula that you had to type…

Me: Then you get liable.

I9: Yes, and it was hard as we had to concentrate on this thing because you can't make a mistake. Now is easy because the adjudication is put into SAP, your vendor master, Supplier Management make sure that all your criteria, Triple BEEE level, your QOUIDA, everything is loaded for the vender. The only thing we capture is the price.

Me: Is it?

I9: The price is the last thing that gets entered. And everybody thinks that they win buy price.

Me: I actually thought that as well.

I9: Then everybody would underquote, and it would be the whole cut the throat, and we are not going to get our right items.

Me: I though its price and everything else but then hei!

I9: Price is last, we put it in last. The system throws out the responsive, and gives you a ranking. Let me show you, there is your preferential points and your ranking, you Triple BEEE level, and all of that. All we need to see is who is first, who must get the order. See it tells you that [name deleted] was number 1 and [name deleted] was number 2, so he must get the order, once he has captured the prices. I press the button and say adjudicate. Ok I make sure that he has captured the correct prices correctly and will press the button and the system will do this entire thing for me. And now when the auditors come they get access to the results. So the system automatically tells you who is the responsive vendor and I have no control there. Because Supply Management should have updated. And if your status has changes hey! And you don't come and tell them, or you don't bring in your Triple BEEE certificate, say your Triple BEEE level was 3, and now is more, say you have a lady that is on a wheel chair in your board now, any you applied for a Triple BEEE level change and they made you a 1 now, then [it] is your responsibility to bring in that Triple BEEE certificate so that we change it, because if you don't do that how much work have you lost already. The responsibility of all of those things lies totally with the vendor, they have to give all the details to Supplier Management, we only manage.

Me: What happens if someone submitted but did not get the job, say before the closing date I already submitted my details but I was not considered?

I9: Now you will request why there is a form online that you fill, if you want to know why.

Me: Yes, but in this case my question is more on how does this affect Procurement because the forms were there already.

I9: Ok, say it was not captured, changed or saved and it is not my fault.

Me: What do you do on your side especially after you have adjudicated?

I9: Shooo! That's a difficult one, have I had one of those already. No, it's only when we get late quotes, but remember what I do is, the decision must be made, if to include the delayed quotes that are responsive, and then re-adjudicate. You see I have to re-adjudicate and phone, and phone that person that I initially gave the order to, and say I am very sorry, but I have to cancel you order, because the adjudication was incorrect, and I can tell him the reason why because there is nothing fishy going on. but it is up to that vendor to accept, because remember, I have already given him the official order.

Me: No, I see what you mean.
I9: But like I say, we have built up the relationship with the vendors such that, even if I tell them, sorry but I have to cancel your order, that the vendor would say no. you can't have that order. Lucky for me, I have never had that situation but we have to re-adjudicate. There is no other way we have to because that man, must have a chance of getting that order if it was due to him. So you have to investigate and run this process through.

IQ 2.1.4	**What are the challenges with regard to managing suppliers' information?**

Me: What are the other challenges with regard to Supplier Management or maintenance of master data.
I9: That is the most challenging when they initially have the person come in, to fill in the registration form. Supplier Management needs to make sure at that point that the supplier is awarded, say Mr Moletsane, it says here that your tax clearance certificate expires on the 31 December 2015 or the 31 March 2016, then for me to tell you that your tax clearance certificate has expired. So you as the vendor have a responsibility to always make sure that your stuff is up to date. I can pick up the phone as a meter of courtesy and tell you to do that, but it's not my job to do so. You should have a PA or if you do your own work you must make sure that you are checking it.
Me: Do you sometimes initiate any form of communication, say if the vendor has to be flagged?
I9: Yes, I do.
Me: No, I mean if the vendor did not…
I9: Yes I do. You see when their tax clearance certificate is...
Me: If they did not deliver. You mentioned the process that must be followed.
I9: Yes I have to call him, I have to phone him, I have to mail him, and if he still does not deliver, and has a lot of stories, then I must escalate it, because then she must, listen to both sides of the story because I have come to where I cannot listen anymore and the vendor is still not delivering. It must be escalated, she must then still do formal stuff, she must sent him a letter saying that you are still not delivering, but I9 has been calling you are regarding this, da da da!. If she [is] also not getting any joy and the vendor keeps asking for a date forwards and not delivering, she must escalate to the manager and he will call a meeting first, we will see when we meet face to face and ask what is your problem Mr Moletsane, the guy would be like, I do not have the money or I am struggling with this and that, can't we make an arrangement and then will see if the vendor can say cancel the order and get me out of this.
Me: That happens in the meantime when this discussions are taking place.
I9: Just the stupid stop is not there, but you cannot do anything and that is the problem, that is the thing Moletsane, you cannot go to somebody else.
Me: Are you allowed…..
I9: We can actually, if it is an urgent thing and we are already on our red robot. She will ask how many do we still have, say for instance your order is 100, we cannot ask somebody for a full 100, maybe will email 3 vendors and tell them that I need 50 of the items as the meter of urgency, of this thing that this man must give a 100 of. I will look at the prices and see if they are under what the man initial quoted and if it is ok. I am not going to pay excessive amount of money for it. Then she must give me permission to buy 50 as a pass over until, this man has sorted out his problem type of thing but we can, do that, but I am not going to ask one person.
Me: So once he is done…
I9: Done what?
Me: The man has an order of 100 and you bought 50 somewhere else, is he still expected to give the 100?
I9: Yes, his order is 100, the stock will just be 50 more, but is not a waste type of thing.

Me: I thought the 50 is off.	
I9: No we can never cancel his order number. The City has to honour the agreement with you the same way as the City expects you to honour your agreement with us. That how it is, that's how it is.	

IQ 2.2.1	How are the suppliers assessed for capability to adhere to the contract requirements?

Me: How are the suppliers assessed to adhere to the contract requirements?

I9: Assisted?

Me: No, assessed to ensure that he will be able to deliver, before we make an…

I9: No, at the time of quotation he must give me a detailed specification. He must physically write it there to say that is what he is going to give me. He cannot say on the quotation document, as per your request. Say for instance here, "showing me papers" here is my request, I am looking for cable, and I am giving you a whole detailed specification of what kind of cable I want, it must be 250mm, it must be core, it must be copper, it must be hard drawn and it must be red and it must be in lengths of 100 meters, I am telling you that. then I expect you to physically, write there what I am asking you, because I am going to hold you to it, I cannot expect a quote that, is as per your request. You are not going to give me the right thing, I through you out completely, and immediately, you are non-responsive because I am telling you there that give me the specification.

Me: No, I understand.

I9: And I am telling you to give me a brand.

Me: I see.

I9: I will write a big red on here, non-responsive. Because he was captured he will get a number, he will write there, non-responsive. Say he has already given him a 600* number, I tell my assisted to reverse (cancel) that RFQ number, because he is non-responsive. That's how I know that you are incapable if you do not write, because if you do, you will write what I am asking you. They have to because this is my quotation document and in here I tell you how to complete this thing. I tell you everywhere in this document what will make you non-responsive. You must physically familiarise yourself with this document, you must down load it onto your PC, maybe a vision of this document will stay the same for a couple of months, say 6 months to a year, before we make amendments. Because we always try to improve our documents because we always want to make it better for the vendor to understand when they read it. And this document must go to legal, is not just a petty document that is being changed and sent. So they must make themselves familiar with what we are requiring. In my area is specific, and my vendors know but if you are new, and you are coming into electrical, I will explain everything to you there, I will tell you come and will give you chances, because I have got very new companies that are performing well because you giving them a chance, and that is how is supposed to be.

IQ 2.1.3	What are the challenges with regard to supplier performance?

Me: How do you measure the performance of a supplier? In general how do you measure supplier performance to know if they deliver as required? What do you look at in a supplier?

I9: No, you manage him on a day-to-day basis, by making sure that he delivers what he has outstanding, so you can only manage a supplier based on the orders that he has got. If he has not had orders in 2-3 months, what am I there to manage him for? Nothing.

Me: What about quality?

I9: Yes, definitely, quality gets checked at the stores.

Me: So do the stores inform you when they do a return to supplier?

I9: When they do a return, yes, like now with this paper thing that I have now, the supplier was going to print on white, but the store man told him to print on yellow. But that vendor was supposed to tell the store man but your specification says white. The store man knows but he is trying his luck to get it yellow type of thing, you know what I am saying. As long as the supplier keeps to the specification of what we required the stores cannot demand something else. For certain items there is, you know like the streets light, and the pole, the pole maybe specifically is bigger so, I bigger pole will only take a bigger lamp, because of the fitting, so when somebody gives me, so when somebody gives me another name band it is not going to work because the pole I bigger and must have a bigger fitting.

Me: I understand.

I9: So when we advertise, we are not allowed to give the name of the brands, but if it is something that must fit, it is something that must fit into existing thing that already has a brand you can say, the brand name or equivalent. That's the magic words or equivalent because if you can't bring me the bigger and bring me the equivalent somebody must test it. There is a technician that must test it, and if it works we must accept it, that is why we have appointed a quality controller or someone.

Me: What about the colours and stuff, or will it be included in the specification?

I9: Everything! No thickness, width, diameter, must come in the detailed specification. We must scrutinise our request or detailed specification. The materials master team works with such kinds of detail that is specific enough for you to give me the right item. That is the staring. But there is another problem now; all our lights in the City needs to be changed to the energy efficient ones. So now we have the energy efficiency department that must sort out the lights or what is required to be energy efficient, so now the people that, are going to put on lights now, we are going to have to wright the new specifications. And then we are going to have to go out, to advertise for new energy efficient lights again, because now the City must not go green, with light efficient lights. So now, what I am trying to say is that the more this changes come in the more our work gets more and more, to implement changes all the time, so it just gets added on, added on. This whole thing with DTI, it gets added to our workload. And we just have to take it in because is from top government, what must we do.

Me: How often do suppliers get changed doe to non-conformance, due to say late deliveries and you are forced to go the legal way?

I9: No, we manage them over a period of over six months I would say, we manage them, if they perform well we do not worry about them but if they don't then we do the process and they do not get blacklisted or anything, then you get a time where they sort out their business and they will come of do default again at a point and they can start quoting again. We stop them from quoting, not from quoting but adjudication, it is called the 225 list, so if you are on that legal list we are not allowed to create orders to you. They can submit their quotes but is pointless. But we are not allowed to disregard your quote we only disregard your quote, if you are the responsive person, that is when the adjudication comes up and you must get the order, I can't give you the order because you are on the 225 list by legal. Legal says I am not allowed to create an order for you, or for that company, so then I can't; then I have to go to the second company. Until legal feels we has given you enough time, let's try again.

Me: But then how often does this happen?

I9: I don't know because we have this defaulting thing has really only started now recently, or when we are really strict with it.

Me: For the suppliers that are already into the system, what was done with them?

I9: No, they were not monitored this strictly, because you see our perimeters and our controls have now changed. We are looking at them, but other years we never did. So now only this thing is in action.

Me: So this new way of looking at them actually came with the new default?

I9: So only now we can see that they are not delivering on time, or were measuring them. There are 1000s of vendors, so you can imagine how hard it was to control them. With thousands of orders going out of this office every day.

Me: Per line item.

I9: And not forgetting about the line item and stuff. At least you understand that. Is my hour not up already? You picked the wrong person, I talk too much. .

Me: I just wanted to get to the ones that I really need you to answer. Can you please give brief descriptions just because of the time.

I9: Ok.

IQ 2.1.5	What are the challenges experienced with regard to following the supply chain processes?

Me: What are the steps involved in procuring stock materials?

I9: The project manager or end user will reserve and item, and that reservation will kick start the request, and the request will have to come to me and I will have to create an order, and then I will check the materials and see how I procure it. If it is a formal tender, I will automatically attach it to a tender number. Then it is easy because I can't track the requisitions, one-by-one, by the click of the bottom requisitions that belong to a contract all come up. Contract orders are the easiest and the quickest, because once the store man puts in a request it links to the contract. And I will have a list in my inbox. Of requisitions that are linked to contracts and it will automatically, create orders for them because everything, is in the system, the company, how much money, what is for, every single thing will be there. So those are the nicest orders to create, the ones from tenders. The formals tenders,

Me: What are the challenges with that, do you have challenges with them?

I9: Yes, we still have challenges. Like I said, vendor tax clearance would have expired. That one will have to remain there until vendor management comes to open then up. Or is a price change say I did not get this in time, they were not updated in time so the only price still came in. and now we must manually go and put in the new price. Because they have not don't the actual….

Me: With regard to that, how do source list materials affect this?

I9: Yes, source list, so basically when there is a problem I stand up and go to tenders and tell them to fix that. I can mail, but is just here so I do not mail. And I tell them I have got the problem with the material and that. and if I go there they do it quickly that's why I go there.

IQ 2.1.9	What are the challenges to the process of goods receiving?

Me: Returns to suppliers, can you please say the challenges with returning goods to suppliers? Do the suppliers sometimes say we cannot take this back?

I9: Yes, it all depends, but he can only say he cannot take is back if he gave it according to the specification. If he gave it according to specification then we must proof, we must provide a technical report, to prove that it was not according to specification. You know what I am saying? Somebody must test the thing, then if we say that it is not.

Me: But how often does that happen?

I9: Is also seldom. Like I said, our stuff here in my environment are specialised, so most of the stuff that I get is already to spec, because when I put it out, the vendor goes and does his homework to go and see that they do the right thing.

Me: This vendors, do they go to stores?

I9: Yes, they can go to stores to look at the thing, anytime, they are welcome to go to the stored to look at the staff. Even with this new energy efficient thing that I was talking about, they are welcome to go to the stores. They will have to have the staff physical in stores so that the vendors can physically go to stores to go and look a the thing. Most vendors do, especially our traffic signal, they physically go to the stores, and even my printing, for printing cards and staff, and if it is a new company they will go to the stores to make sure they know. So the store man will show you that this is the card you have to have so many lines printed and so many lines this way. So nobody is restricting vendors to go to the stores, to go the stores and physically look.

Me: Are they encouraged to do so?

I9: Yes, and our store man now is encouraged to take pictures. Willem also advised them to do that, so that when we advertise, we can advertise with pictures. That is making it better that way also.

IQ 2.1.7	What are the challenges with regard to policies and regulation in SCM?

Me: Regarding the internal policies, are there any challenges there? Say in terms of disciplinary for the people that do not do their jobs. Say in Supply Chain you know that everyone must be a role player.

I9: No, they probably escalated it at the manager level and I would not know about it. I would mail if I have a problem, I will mail my team lead if I have a problem with somebody and if they have a problem with me they will escalate to my team lead. But is away from us, you know what I am saying. Discipline, is in the sense that you get called in and you get spoken to. If I do not do my work she will call me and say can I talk to you. She will ask, why are you not doing this or whatever, what we have strict, it's a weekly by meeting, where she draws all our stats so that and she will ask, where things are not done on time, you must say that I am trying to manage this or I can't manage this, that is why the challenges are escalated so that she knows about them on time. She has to tell me and I have to tell her.

Me: The same applies to suppliers as well.

I9: Yes, everybody is being managed now, whether you are the supplier, whether you are the store man, whether you are the buyer, you are the MRP controller, you get managed. And if you cannot manage your situation ….

Me: Who manages managers?

I9: Wuuuu! That's another problem!

Me: Say if they do not approve, or do certain things on time?

I9: That is a question, I don't know. A very good one, a very good unanswered question.

Me: If anyone in the chain does not do the job on time, say goods receipt a day 2 days later, entire chain.

I9: Is affected but in our office we definitely escalate it, we don't play. No, we are at the point where we give our all, where we try to stick to or time parameters, and we expect the other parties to do the same. And we are very strict with this thing.

Me: And if they don't?

I9: I don't know what happens to them because I just escalate. We try not to go that way, because we [are] trying to have a good communication, and service delivery. You know the main thing here is service delivery.

Me: Maybe here, but when you go out there… not that they do not want to do it but because they have different priorities.

I9: Especially outside because it's not a controlled office administration, man.

Me: Yes.

I9: So it must be difficult to control somebody that is in the field. And not in the strict office environment I can imagine that. We mostly have problems with the project managers because they are mostly on the fields, or on the sites. They have to make time in their day to come to their PCs to read their mails. Or to respond to me. I can imagine how difficult that must be if I have to be a field worker, because you must actually really make time to go to the PC, to check mails, problems and all of that.

Me: Externals ones.

I9: I am talking about the external ones.

Me: Except the local content, are there any policies that negatively affect the Supply Chain department, or rather the Procurement Department?

I9: Did I mention the strikes, and the local content and the…? It is mostly strikes, what's that other thing we had last year? Load shedding, because the machines break, is the petrol strikes. Yes, main I guess that is just about it, the strikes, the load shedding, and the local content.

Me: Ok.

APPENDIX D10: INTERVIEW TRANSCRIPTIONS I10

Me: Hi, today I will be interviewing Mr I10. Basically before we go through the interview, we are supposed to go through the informed consent. It just wants to find out that you voluntarily took part in the study, and there is a close in there that also says the interviewees can leave the desk at any time.

I10: I like that one.

IQ 1.1.1	How are stock-outs experienced at CCT?

Me: What does out of stock mean?

I10: We normally call them stock store when the stock is not available.

Me: So it basically means when there is not stock, in stores?

I10: Then we have to start looking into other stores, all over the City. Amm! We like an emergency, the first line response, so when there is a call out you must attend to that call immediately. We need materials that the guys must have on their vehicles if they do not have them. Then we have to go to stores, and if there is nothing in stores, then we must start going to other stores. When their people say we do not have electricity, now I must sent the guy to Strand, to go fetch the materials – that is what is happening at the moment.

Me: Ok. In your experience, how does your line of work contribute towards stock-outs, hence service delivery, or what is it that if you did not do will result into stock-outs say for example planning?

I10: We can't plan, the next call that comes in can be no power which can either be, circuit brake drip, faulty cable, lines down, faulty metre, theft. It can be anything so we can't plan on what is coming because you don't know what is going to happen, but the only… no we can't do planning. The only time we can do is in business for example the metre blow on the Friday afternoon, but then we will bypass that 3 phase metre and for Saturday, we will go to replace that metre if there is stock, if there is stock in stores.

Me: So basically you do corrective maintenance?

I10: Nope.

Me: So you only do corrective maintenance, not preventative maintenance?

I10: Yes corrective, not preventative, a call out. For any breakdown, the first people on side, is our people.

Me: What about the history of consumption rate, don't the stores know it, say on average how much was consumed?

I10: No, they do have the minimum and the maximum stock, for any stock item that is in stores but our experience is, not the stores, 90% of the time is procurement late, but the problem is with procurement not the stores, the stores order in time they order or inform them in time to put the order through to get the materials, say we look at ATM barkers, say I book out but someone else has already booked out before that, say 60, the first 60 is reserved for someone else now. Now I am out of stock. Now when I need a box, they cannot get me, you can get nothing, go to that guy and that is hectic. And we will sit with nothing. The reservation system, is a problem, I don't know when I am, am going to need what amount of cable or metres or circuit breakers, and the last time I was looking for circuit breaker but they were not there and that was a procurement issue, they were asleep, the same with the 70I globes, city wide, that was the procurement problem not the source. The stores were in time but procurement I don't know what happened there, the 4mm cable and the 2 mm cable, because of the reservation system a specific user from contraction booked 4000mm of the 62mm core cable, is now reserved for him only. Tomorrow I am looking to 20 mm, and they say, sorry you can't have it, because it has been reserved. That is the other huge problem.

Me: But then in terms of procurement, is it always procurement, or [do] the suppliers also deliver late?

I10: Yes! I think there was one with the circuit breaker? With the circuit breakers what happened is, the tender they had was the wrong price of the breakers, and then it took another 2 months to correct that just the tender, for the price of the breakers and we were sitting with nothing.

Me: Now what is done to prevent this from happening?

I10: I don't know. What we do on our side is that the moment there are a lot of circuit breakers we book out 5 boxes and we keep here in our store, we are not supposed to do that but we do that with circuit breakers, prepaid metres. I can't remember what else we stock up in here. I don't know. We store the key pads, and so on. Because we can have a breakdown over the weekend, all over a sudden we need the material like meters, say 40 metres blow out over a weekend, so we must have, stock of meters in the store, but we run out of stock also in metres and they just say we don't know when they are going to deliver. And then me and .... then start with the bypassing of the meters.

Me: Aren't stores supposed to protect their normal users? For example, since you are their mediate customer, say for example, when someone comes from a different area they tell them that there is no stock because the one that is left is for normal users.

I10: Yes, that's what happened. Say [name deleted], is also using this store, all of a sudden they come here and they take metres and all of a sudden there is no metres. If you are from other area they stop you. The main thing between me and my colleague is that they know how we operate so they will always go out of their way to help us. But if the start putting their hands in the air, you know what happens then, then we start, going to Wynberg, Gugulethu, Atlantis, is not me and colleague's job to look for stock we must go to, the stores and get the materials to do the work. And that is what is going on in the stores at the moment. But we tried to build a nice relationship with Ndabeni, but just remember, even if I can build a relationship with Wynberg also, all of them go to Ndabeni to reserve stock. They just don't worry about East, here in the East we have about 3 stores, and when we run out of stock we must start running around. Yes, Bellville for example I know the area head stopped them, some people book stock from Helderberg to come fetch stock here but I know I4 stopped it because they have their own store, and there is another reason why the area head stopped it – that store is not under I4 anyway and has got another manager. So to prevent himself looking like you know what, I look into the system, and if I see that there is nothing in stores, the first thing I do is to call the area head. If I can't get him on his landline, I call him on his landline, I need this now, and he is very helpful. This is the best stores in the City, the other guys, Brackenfell, Helderberg use to be under I4 so they still would like to see if they can help you. We often help them. The area head even now be book 2000 metres of cable 62 core, he stored it for us, that is just for us, nobody else can have it because he know the situation. So when the cable comes, he calls me and says, [name deleted], there are 4 drums of cable, book out a drum. I will book and he will keep it on one side of the store so that we will have it when we need it, so some kind of protection, he will protect it for us there. So whenever we need to use the cable, our guys just go and take what they need and we do not have to book it out, they just report on what was damages and how much they took. Is nice if the store manager is helpful, because Helderberg, Brackenfell, those guys used to work under the area head, so we have a nice relationship with Brackenfell and Helderberg. And we know the store man there so is quite nice.

Me: But then how do you feel about moving around, does not this moving around create problems for the individual stores?

I10: Yes. If it is a drum of cable we must get a vehicle from Ndabeni with a grain, that type of thing, and that is time wasting. Yes, definitely, because the first person that suffers is the customer. Instead of fixing the problem in one 1 hour as per the tender, we spend 5 hours sending vans around to stores to look for materials, which is costly. I need the labour to get the van there if is more than 20m, I need to get 3 or 4 guys, or book out a trailer. Sometimes if it is after hours, the store man has to be paid overtime. 2 or 3 guys needs to be paid over time, petrol. At the end the guy that is on the short end is the consumer. Tomorrow the boss receives a call from the counsellor, asking why it took so long.

Me: If I may ask, why is this not prevented let say from authorisation's perspective? Say only people from a specific area can make reservations, or rather only the stores will do the stock transfers between one another. Say for example if a user needs the cable and one store does not have then the stores themselves would take responsibility to ensure that they follow up with procurement or they will make a stock transfer from other stores.

I10: The area head does it, I know it for a fact, even for lamps.

Me: With the area head, we can say is because of the relationship. What happens if it is someone else from a totally different are that just did the reservation and there are shortages therefore the person s order cannot be fulfilled? So I am specifically asking what would be the challenge of restricting users to create reservations for specific stores, instead of getting users jumping from east to south?

I10: In the beginning, people in Procurement think this way, if you need the materials go to the stores, and if you cannot get it there go to another one, it was that and I do not think thy changed. But it is time consuming, or is after hours or whatever there is. I4 for instance as me and want to pick up materials in Brackenfell stores or Ndabeni but is not there, we sent him an email, with the bin number or the material number, please I4, open the bin, he does it. Taking metres certain meters, u can use at a specific address and others you can't, because of the metal kiosk, or the house is too far from the supply point, or there is no communication between, the Arial of the metre and the ICU. Or there is no cons cable. We need a different type of a metre this one we cannot use, no use this one. So that's when we start making a plan, where are the metres at Ndabeni stores. Then we go fetch the metres we want form any store we want. Bottom line is that they must have stock control, and Procurement must wake up. I4, transfers for us when there is a material that we need from other plants, upon receiving an email. Metres for example. Say we tell him that we use 60 metres per month but transfer at least 80 meters for us. But what's going on with the metres is that there are such a lot of different metres. To keep it in stores it must be this and this and this. See what happened some time ago there was a certain kind of a metre not available and said that we need that metre and we are not going to bypass any more metre and we start using another one. The South bypassed 4000 metres, they had to get price increase, you know, some people if you by pass a metre will never come up because [it] is getting electricity free, and every time you have to go back you make appointments, that is why me and… if they call us during the weekend to say this and this, we say ok bypass, but first thing Monday morning, make sure that he is at home otherwise we switch off. But the South just went crazy and by passed any metre that had a problem.

IQ 1.1.2	How do you identify the materials that stock-out?

Me: Can you determine the history of the material being out of stock? If yes, How? Can you go onto the system to check the number of times a material was out of stock say it's for the first time you reserve material.

I10: …already did that, he puts a list of materials on paper and went to I4 to say this is what we need and must be in the stores all the time. We give I4 a list of materials we need with the amounts. So I4 knows what we need per month more or less or what should be available the minimum and the maximum levels. Yesterday for example we needed an electrical wire for fish tape, to take the electrical wire through the pipes, go to SAP. Ndabeni has got one, I book out the one, but when I enter, there is not. Not available, Not available. So you see that there is one, but the time you try and book it out there is not available. [Name deleted] was here, because he is the one that delivers metres form the lab, I asked him to come and see what the problem is. It was reserved. And that's the problem. But whoever that reserved it did not come and fetch it, so either the stock level is one they should order now or the stock level is zero. Fish tape normally go slow so they said we are not going to order now. So basically the material is there but I cannot get it.

Me: So normally, does the stores contact the person that reserved or you contact the person yourself?

I10: We don't know who reserved it, the stores can check but we can't. And quite frankly I don't even want to talk to Ndabeni stores people, they are bunch of …ok different kind of people, not very helpful. You just want to hid them. Say for example just to fit, a 30 or 32, I am not sure, you are not allowed to fit anything. You see they are not pushing the wagon they sit on it. Somebody else has to pull it while they increase the load. I can call just one guy and say please show me this, but they will say we are not here to show you, book it out, ok what this material number, can you just show me so that I know what I will be booking out. Its headaches, say you book it out and the staff does not fit or is a wrong material they won't take it back.

Me: Does not that in itself create a stock-out for someone else?

I10: Exactly, you see they are too pity, if no one wants it you will sit with it. You can't operate like that. we are the City of Cape Town but each storage location works differently, some stores you can go and have a look others no. there are not standards. Check on the system but there are no photos on the system.

Me: If they say check on the system, do you know how to check on the system?

I10: Yes, we know you put the name say HTCI lamps* and enter then select the one you are looking for. Say you find out that there is 400 of a specific material, when you try to book it they say sorry already reserved. And you are strewed.

Me: So you cannot know up front, if it is reserved or not?

I10: Me and [name deleted] spoke about that is there not a way to, flag materials when they are reserved. Because you reserve and sent the guy through and he get there and they tell him sorry you can't get anything, the materials are reserved. We don't know if a material is reserved or how many is reserved, we can't see it on the system. you book out two boxes you say I4 is here for circuit breakers something, something! Yesterday we were sitting in my office, sir I need circuit breakers, fuse wire, everything, this kind of lamp, so I book them out for him sitting there, so I booked out 70 ooh no! they do not have it so I booked it out there, so get there, sorry reserved.

Me: What transaction code to you guys use to see the availability of the material?

I10: You can see it the moment you open it. That there is availability as the total is there, but is will not tell you if of the 400, 200 is reserved. So you can only have 200, otherwise, if we saw it we would not book it out or sent the guy there. So the contractors are not killing us or the consumers are killing us, stores are making us crazy. We use contractors and now we must set the contractor out of his area to go fetch the materials in another store, no to do what he is paid for. You know contractors and money, they do unnecessary driving; they have trackers into their own vehicles to monitor their own people. So basically if the vehicle is seen outside the designated are the first person they call is [name deleted], did you sent our van to that and that area? Who is going to pay for it? You are supposed to have the materials in the area.

Me: What do you do when you realise that there is no stock in all plants for the material?

I10: Maybe is better to open up to show you, will start the PC so long. Most of the time it goes well but then you gut the days like yesterday where they just say non. So I mean that is 12 km and times 2 is 24 kilometres.

Me: You can use transaction code CO09 because the available quantity will be the exact quantity available excluding reservations.

I10: So, if we want to check will have to go to the transaction. No but is should show in the create transaction, not for us to go to a separate transaction to see what the hell is going on? We don't even know about that one.

Me: What happens when you click on the availability check?

I10: It shows you the total.

Me: I am always toot that the people fail to do the availability check that is why they book materials even if they are not available but never actually checked it myself. But if you say it shows totals, there is a problem.

IQ 1.1.3	How does consistency in your area of work with regard to stock-outs?

Me: Have you experienced any inconsistencies with the system? If yes, please describe the inconsistency as follows: what was inconsistent, when and the frequency?

I10: For me, what is inconsistent is will show you now, you that it is not available, it will lets you to go through and book out the material. And save the transaction but, the guy gets there with the van, sorry is reserved. But does not show you upfront that there is a problem. I can now go an book out 10000 meters of cable 2 core and will allow you.

Me: Even if it is more than what is available in stores or more than the totals?

I10: No, you can book out the total, i can show you. It will go through but you get there you will not get it. Even if the 9000 of the 10 thousand is reserved it will allow you to book it out until you go to the stores.

Me: Are these reservations done through the maintenance work order, not a direct reservation?

I10: No, no, no, maintenance work order. I can't work through a direct reservation because I need [name deleted], or one of the managers to release, and if they are not available I can't do my work, so we have to work on work orders. come and have a look here quick, let's go to ATM breakers OK, MCB* our store here is 6130, now I want to check ATMs and I have 256, can I book out 256 now? Yes I can. I will put 260 and do it the right way and put my them then enter save. Now you go to stores and thy will say 250 is reserved are you mad. Yet you can see there, and is laying there.

Me: It seems like the validation is done on only on the manual reservations, but the work order no, especially for the type of work you do.

I10: You know what we start doing now, say we are looking for specific material, we start from Ndabeni, book 40 there, come like that until this store, booking small quantities because in that way we are guaranteed. Maybe will be lucky to get everything we need. Let me delete this sample reservation because all the materials are now reserved for me an no one can get the materials. Exempt for I4 he did it once or twice, he told me, if you only want 10, he then changed the reservation to reduce the quantities. I don't know if you have anything to do with it, last weekend they cut some cable badly and once badly cut you can't use it and the only store that has is ester river store, and when you go there sorry you can't have it, because we are busy stock taking. Now I must call I4 and say please speak to you guys I promise I will book it out as soon as you are done with your stock take, we have emergency. Sorry you can't have it.

Me: What is being done at the moment to resolve this issues especially for work orders?

I10: I don't know what they are doing if they are doing something about it, they have the emergency list now for months, and still not doing anything.

IQ 1.1.4	How is the information regarding stock-outs communicated to staff members?

Me: Is the information regarding stock-outs communicated to staff members? If yes, how and to whom is this in formation communicated, if say there is a change or something?

I10: No sir, if I need metres I must phone, I must pone 3 to 4 time a week asking the buyer, did you hear anything about the metres, and the response is, no I can't tell you, sorry. If I sent then and email please when in she metres arriving? After a week still nothing, all of a sudden I call and they say, but the metres are here. No communication. the communication is one way. From us to them they do not come back to us.

Me: Let's say you place a reservation, and the supplier delays due to any reason, for example local content, do they inform the reservation creator that there is a problem.

I10: Nope, the only guy that ever done it was I4, on clothes, he will put it in boxes for us with the amounts, with the slip in it, and one of the guy will call and say… your stuff is ready come and fetch it. If they do it you will get feet back but the other stores, never, but then again is not always, if they remember, say… was looking for this whatever then they will do it. But the is no role so, it is just a one way communication; they won't come back to you.

Me: So you create a reservation and hope that when you get there, the materials will be available.

I10: Do you know the amount of time we spend looking for materials between me and ....? It's upsetting, we call here, call there, sent the van here, I mean we as the emergency must walk into the store and say thank you sir, and leave with our staff, and we go and do the work but it doesn't happen like that. now I can't even jump on the contractors head because they say remember we didn't have cable or we didn't have the metre, or we have to go to Ndabeni to get the meter or to go to Atlantis to get the cable. Our procurement is like HR, do you know what we call HR? Now human resources we call them HD, Human Disaster. Now Procurement is knocking on the door for competition.

Me: What are the other challenges with the communication? do you guys report to Mr I3, or who is your mid-manager that you speak to, to address this issues?

I10: There was a stage where I reported to my boss, not to Procurement, not to the procurement boss, we reported to him, and he asked us on paper and show how much the kilometres costs ant that, so, that was the problem with the cable but later on it was just not with the cable, metres, lamps. It is actually easier and faster to deal with I4 directly, than to talks to my boss, he first has to contact I3 if he remembered, and sent an email, so is long circles, and it comes back to the same

conclusion, so rather phone I4. And he always tries his best to help, always, and he will start looking to say, you can go to Wynberg, they do have it, or you can go to so and so.

Me: Did speaking to your boss shown any improvement because the people that are looking after the entire chain are supposed to address the issues that are logged by the departments?

I10: Nonsense! It is better to go directly to stores, nothing improved. What is it that I complained about ok, Lunch time the stores in Ndabeni close, and tea times, now my guys have to sit there for 15 minutes, so teatime is 15 minutes and it lasts for 30 min and lunch is supposed to be 1 hour but I walk 10 minutes to the kitchen and that is not part of my launch time, lunch time starts when I eat, the same after eating, and then the guys have to sit there waiting for stores to open for another half an hour.

Me: What happened?

I10: I called him within 5 minutes, but I can't remember who was there, [name deleted] was there and they didn't want to give him the stuff. So I phoned him and then phoned my boss, and who is that guy in charge, I phoned him on the cell phone. To say this is what is happening in your store in Ndabeni. It took [a] few months and after that it happened again. Lunch time and teak times they close down and they still do that, and there is no emergency. And they tried not working on lunch here also few weeks ago and we told them, we can't work like this here. I4 comes to them like thunder. You try it once with him, second time he will discipline you.

Me: I think that is the way it should be handles. Because if there is no one to oversee everybody will do as they please.

I10: Yes that's the way to handle it. The relationship between me and… and [name deleted] and [name deleted] and them, must be excellent, if you don't know the guy and you must introduce yourself, and say I so and so, you must do that otherwise you will be in problems. If you do not have a personal relationship with the guy you are going to battle. Except for Ndabeni, you can always do whatever but is always up to no good. You see they will not try when still report to I4, he is a different type of guy he doesn't take nonsense. You see the two stores used Helderberg and Brackenfell they used to be under him, and the one that is on the mountain also used to be under him, you can get in there any time an you will be helped.

IQ 2.1.3	What are the challenges with regard to supplier performance?

Me: What are the challenges with regard to supplier performance?

I10: Yes with circuit breakers, circuit breakers kept on tripping all the time. O yes, there is a lot of staff that are of poor quality. But I mean with breakers they sent boxes and boxes, sometimes when I am walking the stores will call me and say just have a look at this because we don't know, Now [name deleted] open of the box and I see white ATMs and I told him, [name deleted], we do not use this breakers. And then he said but they delivered then I said but it is completely wrong. And the we wait for two months for other breakers to come. But the boxes were still standing there and I don't know why. While they should have sent it back to the supplier. And if you speak to store man they will tell you, is not us, it not us is Procurement. It's the buyers is not us. Insulation tape 2 to 3 years ago. It was like a plastic with no clue on it. We could not use it as insulation tape.

Me: But the buyers are sitting in Procurement at the Civic and will not know how the breakers should look.

I10: This guys have been working here for years they know how the breakers looks like, they know we don't ever use the white ATM except for the time we use them on streets lights. They are circuits and the others are not circuits are supply and they know so they know, orange ATM that's it.

Me: What did they do?

I10: No, they called me and asked me about them, but I told him that no we don't use this breakers, the stock keeper said but I told the guy that, delivered. But the guy that delivers said we are here to deliver, sign for it. They didn't order it, but Procurement ordered it. When you have 100 in stock, when you get to 50 then you must put your next order. You can see that they are use so much in a week and so much in a month, they should pick it up but no you sit with zero. Is either you are too late or there is not flags coming up, upon creation of a reservation, when they book out on SAP there must be some indication showing them when they issue into the

remaining balance. If they do have a system like that I don't know. Or they go and count physically to say ok there is 50 left I don't know.

Me: The system does actually tell them that this is how must they must order, but they can still have to manipulate the quantities.

I10: We are all human we make mistakes, even is parliament that is a very nice excuse. But these mistakes happen so often. You see what happened is, the contractor walks in there and he says I need ATMs, and we book ATMs, and he says wire and we book wire, so we sits here writing things for the stores, I haven got time to say [name deleted] (store keeper) do you have this in store now, did they deliver? It is his job I don't have time to go to stores to go and look for materials, is his job. I want to book out the materials, print and give to the guy and say go and fetch your materials. But now they come back and say this is not here, that is not here, that is reserved, now we sent the guy away and now and again we keep calling the stores to ask did you receive the breakers? This store says nothing yet, the other store, no nothing yet. Now me and .... start looking everywhere in the City.

Me: It sounds to me like the stores do not take care of the reservation creators, because my understanding was that if there is any deviation from the date that you hoped to receive your stock, they should inform you to say there is a delay can you extend your requirement date to this future date.

I10: You can work like that if you were construction or if I could plan my work. But in my environment I need it now. We cannot plan anything. You know what happening, say meters me and… try and keep a certain amount of metres in our store, say a construction guy must put a meter for intendancy (where the meter must be put because the guy did not pay the electricity). At that moment the people are sitting without electricity now, the guy will go to the stores and say we have nothing, you know what they do, first line I know you have. Because we are nice we end up helping construction out because there is not stock in stores. That's what is happening, sometimes they use us as the stores.

Me: How is the cost split now, because you would have drawn from the stores already?

I10: The cost is on first line support. So basically we share the cost centre or WBS with them, the cost centre manager is the same guy. We do the metering so basically either way the cost centre manager pays for that as a metre that was drawn. If they must go the write route, the write route is two three weeks, so there is a home with 100 kids, now they say they do not have electricity and we say, sorry wait for three weeks, we can't. Or a church or something like that, we can't. Goodwood nursery, and church the metres were stolen. At the church wiring was stolen 7 times we can't wait, we must do it now. And the material must be there. You can't leave the church off, you can't leave nursery off, and you can't leave, the garage or factory off.

Me: Can't the material be reserved for only first line response, from stores, or block first line response stock from being reserved for any other purpose?

I10: We are asking for that I don't know for how many years now, asking for this, we told them please do something about this, this our list, this list is of our emergency materials.

Me: My understanding is that there should be special policies for emergency stock.

I10: Yes, you see we can't tell them what to do, but we can only ask them, please this is what we want, but is not happening. You see last year, say October to November, I had 32 houses in Goodwood area the cable was stolen from the house to the pole. I have to reserve 4000 meters of red wire black wire. And then we decided no we can't, because you reserve it and put it up just over night is gone. Because is nice, and it shines, 72 rand/kg, they stole it again. At the church they did it 7 times. They got to the cable through the water pipes, and we asked the church please remove the water pipes. You go to the stores and they tell you that we have red but we don't have black. Now we start looking where can we find single core 60 mm. now we thought, let's try something different a cheat cable that can do the same job, that they did not steel. And it is difficult for them to get to the core. Even to cut it. And now you know what the new thing, they are burning the complete Kiosk with everything inside. We the fire is off now the can take it. So they just brush the black layer and try and make it shiny again.

I10: Thick 12mm copper bar, which is about 500m, long, and 2mm wide, is nice money.

IQ 2.2.3	**What processes should be followed to ensure that the normal reservation creators are not affected by planned or unplanned material withdrawals?**

Me: What are the rules around creation of stock reservations and stock transfers? It will just be reservation, will it be just reservations for you, are there any rules?
I10: Yes, only in [the] management meeting where I4 was talking to the guys to tell them not no one is allowed to book out of here. But they asked about the circuits and metres, but he said no, each must use its own store.
I10: If the policy is in place, it means that if they cannot book here we cannot book there, so you tell me.
Me: The way to manage it could be, but area, to say that people from this are needs can reserve form this number of stores. Other that managing it politically.
I10: Internal politics.

IQ 2.1.9	**What are the challenges to the process of goods receiving?**

Me: This step taps into the challenges with returning goods to the store. What are the challenges, with returning goods to suppliers by stores and to stores by the staff members?
I10: Lately we didn't have a problem with the stores, our store, and we have not given back the staff to Ndabeni or the other stores. The normal bread and butter, like the joints we give it back to them and they take it, it is now and then when they will give issues. When they take it, whether they throw it away of sent it back, I don't know. They generally replace it, the dunce and the insulation tape also they replaced. what happened with the breakers, we sent boxes and boxes back and what happened with that, so whether they were refunded and got the new ones I don't know.
Me: So when it is used, do they still accept it?
I10: Yes, they used private contractors, and we and our contractors are finding the faults.
Me: So that's the only way you can find that there is a problem?
I10: Yes.
Me: With regard to, so with regard to clothing is it still a problem, say the safety boots?
I10: Clothing is a total mess, is a disaster, some of the guys need special boots because of sore feet, so we used to buy out from intecro, set the guy there to fit the shoe. If it fits, happy, give me that quote, I buy, or book it out from them, not going through the stores, but now we are no longer allowed to do that 100% local content. So I feel sorry for him and the other guys, I am not going to do it. So [name deleted], I told them, and they told me a nice word that starts with F, and they said they are not going to do all that paper work, to get work so get lost. [Names deleted], not [name deleted], they told me get lost. We don't need the City to buy our shoes, if you don't like our shoes get lost.I buy my own now, R1400.00 for a pair of boots. Out of my own pocket. But we are going to have a meeting with [name deleted] next week about this, about clothing, I booked out last year all flash clothes in January, it was reserved, everything, we are still waiting, no clothes, now we start looking for normal jeans for the guys and normal T-shirts. Now our bosses start jumping on our heads, asking where is PPE approved, clothing, how can you do that?. and they do not inform you, whether is there or not, the only store that has done that is the Bloemhof stores, now we have to give the keys to one of our electricians to go to the stores and kneel down and say please show us the clothes that you have got, do you have enough stock, you have all the sizes can I book out now, I will go back to my office now, please keep it for us. And they will tell you we are not sure if we can keep it for you, and that's the attitude that we are getting.

IQ 2.1.8	**What are the challenges with ERP with regard to resolving the reported calls by the staff members?**

Me: Do you ever have to log a call with SAP help desk?
I10: In connection with what?
Me: Let's say for instance you create a reservation an you get strange errors.
I10: Aaah! It happens, there and there once or twice a year, if there is something funny with SAP, I can't even remember as specific incident. Sometimes if pops, and

says not in so many words that there is not money, not is no money, but once you see it, the chance is very good that there is no money.

IQ 2.1.7	**What are the challenges with regard to policies and regulation in SCM?**

Me: do you feel that there are any internal policies and regulation at COCT that contribute towards stock-outs? Say the internal processes that you feel contribute towards stock-outs. You mentioned something about having to call stores and inventory manager himself?

I10: Yes, but that is, was because tea time and lunch times those guys did not want to work, they are not available.

Me: But there should be a process that says what must happen when is lunch time.

I10: Somebody must be there, there should be someone there, here there is always somebody.

Me: So there is a process that says that the must always be someone there?

I10: Yes, yes, but here they are working according to the policy. Ndabeni no, no, the others I am not sure, I can remember that we picked up any problem in the East.

I10: All the stores in the East are working fine, you can come anytime you will get served. Anytime somebody is there, that what I say, is the City of Cape Town, but they do not operate the same.

Me: Other thing is that is there any policy regarding feet back from stores, regarding created reservations or other communication.

I10: It would be nice? I don't know if there is a policy but we do not get any feet back. There should be a policy to say you should go through your reservations…

Me: As part of the job description.

I10: They should go, now in the morning and say this, is reserved this is reserved, ... is here we received that, ... you can come to collect. No sir there is nothing like that. the only store that, has done it, is this one here. because of the good relationship, [name deleted] your say [name deleted] your staff is here, you can collect. And you get it packed in boxes, nice closed, "whistle" you can collect your staff. [Name deleted], that's your box, [name deleted], that's your box. Ticked off, everything is there we checked, but you can check if you want to.

I10: I mean, what I can, do if say, I need to send a guy from here to Helderberg say we need 50 metres of cable. I can phone and say can you organise that 50 metre of cable for me so long, so that when my guy gets there is cut, and packed. Here we go. They do that with some stores, try and do that with Ndabeni. There is the word that they will tell you, they just won't do that. And this is just for emergency, to get the guy in and out of the store. I can promise you here if I call them, and I say [name deleted], my guy will be there I am looking for 50 metres of cable, by the time the guy gets there the cable will be ready. Because of the relationship working nice together, or the material will be out, packed in boxes on a counter, or the meters or whatever, they will say give me the material numbers of metre numbers, contractor, the staff will be there.

Me: So probably [it] is more of a relationship than what is in the job description?

I10: Yes, yes, "sigh".

Me: Because when someone does performance measurement, they will look at the job description versus what is been done.

I10: Yes.

Me: Also how many complaints are logged against the role.

I10: Yes.

Me: So, if there is no job description that says that the person must do this and that at the job, then there is a problem or if there is a job description but no one actually follows up to see that the people are doing what they are supposed to do. The policy will be there but only the adherence to the policy.

I10: No but, don't expect… it is actually being nice of the east stores, to roll out the cable and cut it for you. We don't expect them to do it because is not their duty; to

do so is not their job. The electrician should get there and they should show him where the cable is. He will cut and put at the back of the Bucky.

Me: So the electrician has to cut it himself.

I10: Roll it down, here is the 10 metres, the other staff, that is behind the counter is a different story. They don't wait until you get there, if you tell them your order number, they check immediately, they should ask when you call, is this already booked out, is there order number, when the guys get there they sign and they get it.

Me: I was referring more to the deviations in the process the delivery date that is stated on the reservation when they know that they will not be able to make it, as stores they follow up with procurement and they know that they will not make it, for the reservation requirement date.

I10: If they will not make it or us.

Me: If they will not be able to deliver, basically not having the materials when you need them….

I10: They don't call us.

Me: Which hinders service delivery, which is the goal of the entire Organisation. If don't know if there should be a policy that should say that reservation creators should be informed.

I10: But is very dangerous if they informed us, the moment you change that date you lose the old reservation. And the guy next in line puts the date, now you pick the date say your reservation was reserved for the 13th and you have to change is because is not there yet, to the 15 or the 16th but somebody else is for the 16th then you fall in line, behind that guy. He is going to get that material before you get or, if there is anything left then you can get it.

Me: Eish! Is a little bit difficult from the maintenance side, because of the system allowing someone to save the reservation though there is no material. And I think I do understand the frustration form the maintenance side. but in for a normal reservation the date is a variable, it only looks at the quantity, the system will assume that that specific quantity will be out of the system by this specific date, it will not affect the reservation its self but, from why you are saying now I hear that you cannot afford to change the date.

I10: No you can't afford to change the date.

Me: Because changing the date means that guy can come and take whatever there is before.

I10: Until the MB or [name deleted], who ever, change the dates, you can do whatever, I am not going to change the dates. They know what is going to happen.

Me: Do you feel that there are any externally policies and regulation that contribute towards stock-outs at COCT? An example will be the local content that is becoming a bigger issue.

I10: I think, ….aa. with the safety boots, what's the label again, "bovers", they are going to remove it I heard. There was a big scream about the only shoe that fitted everybody. I think they are going to change the local content, because the rubber, or something is not fully from south Africa, I think the badge.

Me: So they keep…

I10: No they are going to remove the Bovas, and is going to be a big problem, because the only other ones are lemetry. I mean, we are from Africa, we do not have, feet like…, we have wide feet like this, we don't need narrow feet. And the lemetry is a narrow shoe, nobody wears them, nobody wears them here and there but majority, bovas. Is a wide shoe, is nice and is confortable, you can walk with it every day.

Me: Is there any other external policy that is affecting stores, the availability of materials?

I10: Delivery times I suppose, with this charge for instance, was delivered yesterday, is not a policy is operational, they had to import it from, where did they import it from, Poland or China, yes China somewhere. The lead-time was 6 weeks, which was not 6 weeks because procurement, decided that, they do not like the quote, they want another quote which took me another 3 weeks. And nothing was… ok they did not come back to me to tell me if I am going to get it or not, I had to keep looking into the notification, and see that there is the requisition number, and so I had to phone them. So we had to wait for 10 weeks, despite the delivery date of 6

weeks, because Procurement was fooling around, aaah! We must get a better price. The better price was R20.00 cheaper on an item that costs R1500.00 I mean, 3 weeks, and it was 5, so 5 times 20 it was R100.00 we score waiting for 3 to 4 weeks, stuff like that.

IQ 1.2.1	What are the common features or characteristics of materials that are commonly out of stock?

Me: Are there commonly out of stock materials? if yes how is the rate of out of stock known? The ones that you know that, this ones are mostly out of stock. Cable I think is one of the ones you mentioned.

I10: No no, cable, we are sorted, we have our own drum there, no body uses it, or hopefully no one uses it. The meters run out of stock, the lamps run out of stock, the 100 amps are always out of stock, there are never 100 amps in stock, and the 100 amp breakers, they are always out of stock, but those are, but I think is because maybe their minimum stock level is maybe one box. Say if somebody does a development of say 4 or 5 houses in Welgemoed, there is 40 of those houses, but there only that one box. Or 2 boxes for 24 breakers, then the contraction team will come and say there is only 24 and we need forty then the will say let's take the 20, then we sit and wait and wait. And our guys need it. But is the same with the single phases, new developments, 40 to 50 houses or40 new urban, kiosks to be put up. [Name deleted] starts and puts the 5 kiosks there and 9 times 5 is 45, equal to 45 circuit breakers, and they will tell the guy to go to the stores and get the 45 circuit backers now. Because is a 9 way kiosk, [name deleted], "whistle" install, finish. All of a sudden there is no more circuit breakers. Just like that 45 is gone.

Me: I think it goes back to what you said, there is normal usage and there is project work, the other guys have got an opportunity to say, we know that we are going to being therefore we need this and that, upfront but for you can plan because of corrective maintenance.

I10: From my point of view, they should somehow pick up that there is R400.00 circuit breakers reserved. Maybe we should get 400 extra for maintenance and first line response, staff like that. they should have a history, I mean I can go into SAP and tell you now, how many faults we had last year. And what kind of faults. Since 2007. How many streets lights faults, how many metre faults, I have history, they should have history themselves, why, can't they do it.

Me: I think they do have the history…

I10: Do they just not pay attention to it?

Me: But if there is a development being done, some other people come to disrupt the process.

I10: They come from the site.

Me: They come, from the site and say I want 40 of these, there for the people that use the 40 as per normal consumption have got a problem, because of this, side line projects that keep taking away stock.

I10: But then they should, block other people…, which is not going to work because is not practical, because if they don't have I go to Ndabeni or Wynberg, but is the same the stock must be correct in every store so that you do not have pollination from one store to the other, the materials should be there, enough for the consumers. if they know that the construction is going to take as in 200 and there is 400, that 200 is already as in gone. Then they must buy 200 so that there is 400 again.

Me: The problem is that construction does not inform them in time. They only show up to collect.

I10: But they should see the reservation.

Me: Me they make the reservation and they come and collect.

I10: But sometimes they don't collect it in store. Sometimes, when they know there is a project coming, we receive the project plans from DSD. They sit with it, and they know the project will start 2 months from now, so they reserve.

Me: But they don't reserve.

I10: But they do, though. They reserve too months ahead. [Name deleted] reserved mini-subs, a year ahead. They should pick it up.

Me: Thanks I did not know that.

I10: They do, ooh ok, those people need 400, the other people also use the 400 maybe we should order. I can take the example of the cable, [name deleted] booked 4000 for that cable of underground, they had the cable, and they knew about it but just did not notify us. The cable is there in the store and they know that [name deleted] is going to us 4 kilometres of cable. And there is only 5 kilometres of cable. We should get another drum of two, for emergency, or for a small project coming on the side for about 5 houses, which need about 5 metres of cable. I mean we would love, to have our own store where we put everything so that everything that we need we just put in there so that we know we have it but you can't, we are not allowed to do it. But can we ask them once please one store for us, first line. If you know we use 100 ATM a month and there is 40 left order another one.

I10: They must actually do that I want to ask I4, are they going to build then new stores now, if they are going to build a new store for us not first line.

Me: Because anything that is classified as emergency will be there.

I10: Then we won't interfere with their staff and we won't interfere with their staff. And we walk in there, first line, we know all our materials is in there.

Me: I think in that way the responsibility will lay with you to inform them how much they should stalk for each item, based on the history that you referred to.

I10: Yes, they can do that, yes.

Me: Are there any common features for this commonly out of stock materials, are there any common things around there commonly out of stock materials, are they stolen, or what is common? You mentioned the lams of 100 amps.

I10: 100 watts, yes. 70 watts, that was out of stock for a very long time. 70 watts, that was out of stock for a very long time. That was out of stock for 2 weeks.

Me: But what are the common features in in this materials, say imported materials, you know that chances of out of stock are very high, or if the lead-time is long, for the specific item? Are there any features that you can derive form the materials that are commonly out of stock?

I10: "cough"

Me: Or is just random?

I10: Its mostly random, it was streets lights or lamps, at one stage there were no joints, remember, meters,… the lamps the metres, joints, the cable. The only problem is how it works, it seems like everything is booked out in Ndabeni and from there it goes out to different depots. That how it looks, the meters work like that. that's why I am saying it looks like that. but other staff like cable they deliver if here.

Me: So you mean the cable is stored here, so everyone else in the City gets the cable from here?

I10: Yes.

Me: So this store distribute to the rest of the stores.

I10: Yes. But Ndabeni, Helderberg and another store gets their own cable delivered there. and Bloemhof, the only thing that goes through the lab is the metres, so every depot, they will ask for example me and… they will ask how many metres you use in a month, and will say 60, then they will ask can we transfer say 100, ok will transfer 100. Will make sure that there is a 100 if there is stock in Ndabeni. And that they must do buy themselves. I can just go in if I book out the metres if see that there is 50 in stock, on a common base, let's say 50 maybe, and book out 20,20,20 20 is 80 metres, just common base, maybe there will be 80 in store to get the 80. Maybe every week or every second week. And they must ensure that they have meters in store. and split metres, we need split metres, is now being tested and do not know when it will be done, I took the last 50 split metres from Ndabeni. you see now is being delivered and we are still waiting for it. From there is must go to the lab, from there to the stores, and thereafter to our stores, and they have to open another bin for that here. I just want to tell you how it works, we work with a certain meter, certain Arial, and a certain key pad. From the beginning we use the normal, Arial and the normal blue key pad. Within 2 days, the phone me to say [name deleted] is not going to give you any of this meters, and [name deleted], because is discontinued. There is nothing you must use this meter, this [name deleted] and this key pad.

Me: Was the status of the material, changed by you or rather who decided that the materials are discontinued?	
I10: [Name deleted].	
Me: Is [name deleted] the supplier?	
I10: Yes, [name deleted] is the supplier. But we were informed very late, I mean you have 4 contractors companies, and there is now a new meter, we must be trained, they must be trained, there is not more the old, to bridge, between the old and the new one, to carry on, ok we are not sure how, this works, every meter has got, its own electronic politics in it. The metres we use today does not faction the same way as the other ones. That is different because is different companies, but in this case it was [name deleted] replacing [name deleted] with another [name deleted], but everything was defend. Everything is changing. Everybody must be trained 2 days before we start using it. So nobody attends to calls because everybody will be in training, because not we sit there for an hour, 2 to 3 hours.	

IQ 1.2.2	**What are the significant causes of stock-outs?**

Me: What are the significant causes of stock-outs? If you just highlight them?	
I10: I think is bad management. Yes.	
Me: Of the stores?	
I10: Yes of the stores, and procurement. I don't know other stores but for Bloemhof stores, I do not think is bad management here because I go to him and he calls Procurement, or when you get there he is already on the phone with procurement, asking where is the staff. Then you will hear from the conisation that something bad happened on the other side.	
Me: Meaning?	
I10: Is not their doing, is Procurement. I believe that sometimes staff slips through here as well. communication between here and Ndabeni sometimes is a problem. sometimes I contact the stores person, I don't work in that store, I am not a store man but I think, we can do it like this. And he will say yes. But is now a problem because we can't get staff, from Ndabeni or the buyers, there is always, an excuse that people will say is not our problem, I am not saying is their problem, but is not up to me and .... to sort out their problems.	
I10: Either is them or Procurement, we need the materials.	
Me: What about the quality of the materials from the suppliers?	
I10: No, is not a big issue once it was the insulation tape and the joints, no, is not a big issue, you were here that time, first line response is a guinea pig. Everything that, they want to try out they give it to us, they just say they will sort it out. I mean we sorted out, with [name deleted], no, we started with first line, then the contractors, then it was the prepaid meters, and then it was the mobis, and then is the new meter, they say, ... try it into your area and see if it is working, I mean we sorted out [name deleted] I don't want to use that word, but we sorted out, that me and .... then they said thank you, thank you for first line East. they should give us a bonus, we spoke to our boss and he said we know you guys can do the work, give it a go, we give it a go and we take it on. and the contractors are complaining, that is a new meter again, and they must do it. sorry you are working for east, it will happen get used to it. I can promise you now that if there is 1 meter bypassed me and .... do not know about it, and we have a big area. there should be non the should be no meter by passed in my area. None there is left yes, but we pick them up as well.	

IQ 2.2.4	**What should be monitored in order to manage the causes of stock-outs?**

Me: I think is the last question now, I am just thinking…	
I10: Ooh! On how to put it. I put it to you, I would like you to do the same survey you are doing here with the superintendent from the South, that hold the same	

position as me. What you did here, go there and do the same and listen what is the story there.

Me: [Name deleted] too?

I10: Mr [name deleted] is the manager of first line response in Ndabeni, and the other same rank like me, the superintendent. it will be interesting.

I10: Yes it will be interesting.

Me: Yes, I will get the names.

I10: But don't tell them we said you must go there.

Me: What should be monitored in order to manage the causes of stock-outs?

I10: In firs line, give us our own store that will sort our problems. If I can sent the contractor there and I know for sure that the materials he needs is there. Not to come back and tell me, sorry there is nothing in there. They call me and say there is no item, not in Bloemhof but in the whole City of cape town.

Me: If they give you your own store, procurement and vendors will still be the same?

I10: Ooh! Yes and will still be sitting with the same problem. still sitting with the same problem. I think…

Me: Ok the first one I agree they need to have, stores for emergencies.

I10: Yes, yes.

Me: You can't…

I10: You can't combine maintenance, contraction and fist line. There should be a difference.

Me: They should be separate.

I10: Separate and maybe good Management and lift up the minimum stock levels. And wake up somebody, "swigging his hand".

Me: So you are saying separate stores for maintenance; secondly, better management of stores; and thirdly, you mentioned something…

I10: Wake up Procurement. They should not be I blame you, you blame me.

Me: What about the vendor selection, you mentioned something about the product that was delivered and had to be sent back.

I10: As far as I know if somebody delivers bad quality, product they stop it. Looking into metres only they stopped linus and gear, somebody mentioned something, what was that,…. But they put in non-conformance and shipped it back. Sorry man, that happened with lamps of circuit breakers, but they stopped it.

Me: But the problem is that, when they go on RFQ or tender they go for everyone to apply again. They stop one vendor but there is millions out there.

I10: They should actually go out and check the product. Before me and him allocate the tender for the 4 contractors for East, the first thing we do is to call each of the 4 companies, we will have an inspection tomorrow morning, between this time and this time, we check their tools, the qualifications of their electricians, their vehicles, everything they need, safety, everything, and if they don't have it, I would have not signed anything, they signed the contact. Then I can still say, go next guy. Then I can still say you can't hire a taxi driver to do the meter faults, blind fault or whatever. about 5 years ago we had a meeting with a supplier and we and… walked out of that meeting because I said this is not what we want. they put on auction millions of Rand of meters, we didn't use them, because of faults, faults, faults in those metres. It was not tested in the field, Ok most of the meters are not tested in the field. but certain types of metres must be tested in the field. you can sort it out over a period of 6 months say with [name deleted], they are the little things which they did not inform us about, say when the meter does this you can do this or whatever. installation fault, fabric fault, and. and the factory mode, that was on the metre its self. which was on the meter its self, some of them, they did not remove that mode. some of them you must punch in the code. To say out of factory mode to operate 100%. and they forgot to do it, and they did not take this into consideration before the time of load shedding, and when load shedding hit, all of a sudden, there is a problem with the meters. Basically when that happens, it must go through certain

stages, and if everything is done they you put in code 101 and it will be out of factory mode again and we did not know. But we learned by calling the guys, took them to the field and let them sort it out with their laptops. They also did not know what was going on with their laptops, so we took then on side and said plug in your laptop, and said sort out this metre, and we read his mind, see what's going on with this metre, so they sorted it out, more than once. That was the first one; the second one was with the keypad, and is also solved by putting the code. But me and [name deleted], we are old and we can't remember everything, now they call me at home and they say, tell me the code of this meter, sorry what kind of meter? Now tell me where must I get the code.

Me: Thank you very much I10.

I10: You are welcome.

Me: Hi, today I will be interviewing Mr I11. I am required to go through the informed consent before we can go through the questions. Basically the informed consent just means that you voluntarily took part in the study.

IQ 1.1.1	How are stock-outs experienced at CCT?

Me: What does out of stock mean?

I11: When there is not material in the stores and we cannot obtain the materials.

Me: In your experience, how does your line of work contribute towards stock-outs hence, service delivery? "silence" Planning could be an example.

I11: 90% of it is due to bad planning.

Me: From your side or from the stores.

I11: No! No! No! No! Not necessarily form my side but form other users. We make a point of trying to plan months before the time, we utilise a thing like that where we get out materials beforehand, and do the reservation so that we can have our materials on time, but then you get other departments who utilises our store, here and they are not supposed to use our store. they look here is the materials and they draw it, you understand, and when we go and get our materials in the stores there is nothing.

Me: What do you do to overcome this problem? To ensure that no one uses you materials?

I11: You book it out of serve and then you, aamm! what's that thing again, you reserve it, and nobody is supposed to take it, but then I will reserve it on Thursday to get it on Thursday to use it on Sunday. But then on a Thursday we have a fault and our lights have gone out so it is drawn out. Because my reservation was on Thursday, you understand, and that causes big problems because you have some departments that plan a year ahead, but they do not do their planning for materials in SAP. They see, ok we are going to need the materials, need the materials next week and they start running around and they empty out the stores. And now we sit with the problem of stock-outs. That's where I think 90% of the stock-outs results from. We see it constantly happening, the DSD and the TSD departments, the DSD, Distribution System Development and TSD, it Is Transmission System Development. They do big projects and lot of projects. DSD does smaller projects, a lot of them, see that they will have to start out a new job on Monday, and on Thursday they go out and they empty the stores.

Me: What do you do to overcome this problem? As a person, what do you do as a preventative measure for yourself?

I11: You see, what we do is we reserve it, and we go before hand. And there is a way on SAP to allocate it to yourself such that nobody can have it.

Me: Reservation?

I11: No, your normal reservation is something else that you create and go and collect. But the one I am talking about is done so that no one can go and have it, but [it] is it based on date, so if say my reservation requirement date is the 11th of this month, comes the 13th, somebody else can come and collect it because it has passed that the requirement date, if I didn't collect the materials. Ok, you do an availability check and it is confirmed. And it is confirmed.

Me: Ooh, confirming.

I11: We do that often, and plan months and months ahead of time.

Me: Is because some people put the materials in the cabins just to ensure that their materials are safe.

I11: We do to the same. If you see that the material is on shortage always, you go and get your material and put it in a cardboard and lock it up, and keep it there for

your job when you are going to do the job. We do that but don't have the space to put all we need. So we actually work on the reservation and confirm it.

IQ 1.1.2	How do you identify the materials that stock-out?

Me: Can you determine the history of the material being out of stock? If yes, how?

I11: Me? No, but I know people that can like I5, and I will phone him, to check it up for me.

Me: So does I5 actually tell you the number of times the material has been out of stock?

I11: Yes, he has got that and also that when it will be available say it will only be available on the 11 of November. Then I will change my reservation date to the 11 of November.

Me: But then, what is the interim process if say your job has to be done now and the is tell you of the future date?

I11: Then we drive all over to get the materials. Lend by this guy lend by this guy give it back again. Because you can't leave people without electricity.

Me: Do they do special procurement if say all stores are empty and there is no way to get the material?

I11: They should. But sometimes it doesn't seem like they do it because they should have a minimum amount. Before the stock runs out, they should have ran the MRP to get the planned orders. Sometimes it doesn't seem like it because it is empty for a long, long time. And when you ask they tell you that the problem is at Procurement, and procurement doesn't run MRP and do not even know how to. So stores department can only do until a certain point and from there has to ask them. Then [it] is the Procurement Department where the stuff will be stuck. There are many times that the materials come to our store down here and they call us to say come have a look, there is something wrong with this material and when we get, there is a poor quality material and not according to what the purchase order is, then we will sent it back, because we can't use it, then they send it back and the whole process starts again. And I am serious, it happens quite a lot.

Me: I think this one you have already answered, if you find that the material is out of stock, so basically you extend your dates?

I11: Yes, and if it is an emergency we lend it somewhere and replace it when the stock is available in stores.

Me: So you said there is no special procurement, for items that that are out of stock and yet they are needed. In the case where by other people also do not have it.

I11: We are not allowed to buy materials if they are stock items. If is not a stock item we can buy it but if it is not a stock item we are not allowed to buy it. As far as I know there is no way to bypass the procurement process so that we may buy, so that we can get something in, as far as I know there is nothing like that. that is why the planning is so important, and the people like DSD and TSD need to plan their project on time and plant their material requirements. So that the MRP controller and procurement will make certain that they will get their material when the time comes. And this does not happen; if it happened we would not have the shortages.

IQ 1.1.3	How does consistency in your area of work with regard to stock-outs?

Me: Have you experienced any inconsistencies with the system? If yes please describe the inconsistency as follows: what was inconsistent, when and the frequency, let's say you run a report and you see that there are 10 items but when you reserve the system does not allow it.

I11: Not to my knowledge.

Me: So what you see on SAP is always accurate systemwise?

I11: It is supposed to be. Or Are you asking me, that if the system says it is 10 and then when I get to stores I find that there is nothing.

Me: It is two ways, the first set of the question refers to the system itself say you run a report and you find that the data is inconsistent, secondly is between the system and what is physical on the floor in terms of the materials.

I11: Ooh yes, between the system and the physical inventory there is an inconsistency. It does happen.

Me: Do they give reason for that?
I11: Somebody has drawn it, or somebody took emergency stock, and has not put the reservation in. because if the SAP system is down and there is an emergency, there is a book that we fill in, they will give you the materials and you must just create a reservation because you have already received the materials. And this situation arises when someone has not done that. we try an look up and see who was issuing the materials
Me: What is done to prevent this from happening, to ensure that the materials are there when you get there?
I11: You see, what happens is that they issued first on the system and then go to pick the good after receiving the picking slip that we give them.
Me: So most of the time you get to stores only to find that there is no materials?
I11: That's right, we get there, and there is not materials but the material are there on the system.

IQ 1.1.4	**How is the information regarding stock-outs communicated to staff members?**

Me: Is the information regarding stock-outs communicated to staff members? If yes, How and to whom is this in formation communicated, high stock-out materials, main causes of stock-outs?
I11: Yes, we had a meeting with the guy from ERP, his name is [name deleted] and they explained how this whole inventory thing work, why a material is out of stock and what to look out for. If we find that there is a shortage of material, we will communicate to stores that there is a shortage of material. As for the staff here we know when there is no material because then the next person will just tell you that there is a shortage of materials, in the store.
Me: But do they communicate say for example give the results of the causes of the stock-out for the last month?
I11: No, we do not receive anything like that.
Me: Do they inform you say for example if there is a problem with the reservation you placed say the delivery date changes from the supplier?
I11: No, they don't our clothing is ordered in Ndabeni, we ordered it in June and they have actually closed the reservations, they cancelled the reservation. We haven't received the clothing and they don't let you know when they have cancelled the reservation, they don't let you know when they have received the materials and they don't let you know why the reservation was cancelled, and they don't let you know if it has to be extended or anything. It is just cancelled, that's it. And that is for personal protective clothing, they just do not communicate.
Me: Did you guys require any form of communication form the stores and if you did what happened? Say for example if you continuously go to the stores and you find that your materials are not available you will probably say guys please let me know when there is stock available.
I11: The stores down here, we have reasonably good communication they will let us know, when there is stock available. When it comes in, they will call and say it has just come in, the materials you are looking for has just come in.
Me: Ooh, is it because it is in the same deport?
I11: That is right, because that comes here to buy cool drinks and whatever the case maybe so they is always a communication, but other stores outside here, no.
Me: So probably, other stores as well communicate with their own people?
I11: That is right, yes.
Me: I want find out what you do when is outside and you see that the guys do not communicate properly, here is fine because you can communicate anytime. What is it on your side that you have done to ensure that you do not have to send someone all the way to Ndabeni to be told that there is not stock.
I11: That is difficult because when we look onto the system the system says is there, and we confirm it and it is confirmed, then it should be there when we get to the stores. But the person gets there and they say there is no material. And then they say is on somebody else's name.

Me: But then, what is it that you guys do, because if it happens today and it happens tomorrow, there should be something done about it?

I11: If it is something like that we discuss it with I5, that's as far as we can take it, to one of the area heads, we communicate to them to say this is the problem, this is what is happening, because we can't do anything about it because it is not your store.

Me: Has that form of communication shown any improvement?

I11: No.

Me: Really?

I11: What you must remember is that there are two area heads, it is I5, and the one form Ndabeni, so the stores that belong to I5 are reasonable the communicate with us when we ask them something, you will always hear something from them, but Ndabeni you will not hear anything from them. That's the two differences. Go there tea time, and lunch time, or the end of the day, they don't take 15 minutes. They take 30 minutes or 1 hour.

Me: So what do you do in the meantime?

I11: You go there and you see that it is 10:40, and is almost the end of team time, mind you tea time is 10:00, as some time you get there 5 minutes before the time they will not help you. And if you come during tea time they are even not going to help you. But now, tea time is finished you still wait 15 min for the next person to help you.

Me: Was that issue also taken up with management?

I11: Ooh yes. Buy the main stores, well I5 did everything, we took it up with him, because here we don't have a problem you go tea time or anytime they will help you. Or even Bellville they do not have a problem if you come by accident in the wrong time they will help you.

Me: Maybe [it] is still the same issue because Bellville is still close by?

I11: Yes. If you go on a Friday to Ndabeni, main store you are going to be lucky if you will get any help, if you go there by 11:00 or 12:00 you will be stuck there for 1 hour or even more. Sometime is have to turn around because it is a total waste of time. And maybe came back. Say for example the guy that works in a chemical store, that guy goes and prays. But where is the release man there, there is no release man. There is no one that releases those people there; there is a lot of cages there, and there is no people helping those people out, especially in an emergency.

IQ 2.1.3	What are the challenges with regard to supplier performance?

Me: What are the challenges with regard to supplier performance, say for example any quality issues?

I11: Yes, yes.

Me: How often does this happen?

I11: Very often, and it goes back to what Procurement obtains for us. We put in a letter one day regarding cleaning materials, that we sent it to the mayor because the quality of the staff was not alright, it was trying our hands, and was so strong that we got headaches from it, and then we said we can't use it, and Procurement said that you must use it. And that that is what we got you, and you must use it, but you can't use it because, if because it is not the right staff for the application. Very often not once, zillion times, but as always that is a Procurement issue.

Me: Do you guys design your own specification for the materials you require?

I11: Yes, this things that I am talking about have been in this store, before I came or started in this job, understand it has been years and years and years, but Procurement wants to change it because I know for a fact that the procurement lady was a friend with a lady that was selling the staff for the company, "swift", she kept on forcing us to utilise that stuff, we must use it, but we told them that we can't use it because is not good for my health, for my work, I can't put on a big mask because then I can see what is inside the equipment. You can see inside the equipment there is no way for you to put your head inside. I need things that I can use

when doing my job without them interfering with my job. But Procurement will always buy something and we fight with them over it, and we tell them until we frighten to go to the major and they will, but it shouldn't be a constant fight like that all the time.

Me: With regard to metres and other electrical equipment, do you get issues with that also?

I11: Look they try and buy the cheaper stuff, we don't use metres, are you talking about…?

Me: Not meters specifically, but something you need to do your job.

I11: Yes, they always have a problem, they always come wrong and they will try and tell us that we must use it. There is something that we bought about two years ago and it is a requirement by law that it must have a certain value, known as fault current, it must have x amount of KVA fault current, that's what we ordered and they sent a longer one than that, and they say you want that one you must put more money in, we had a cheaper a quote than the low quality staff that they had. If happens constantly, and constantly.

Me: What is done currently to overcome this challenges?

I11: You can't, it is a never ending fight even your MRP controllers, you can go an speak to them like I5, it is a never ending fight. That we will always have because they do their own thing. It doesn't matter how you try and take it through to their management, it will not be resolved it will never be resolved. Unless their attitude at Procurement is changed, and accept that they must work in conjunction with us so that we can work properly, and that is not them that must give us something and we must just work with it, until that mindset is changed you will never resolve the problem.

IQ 2.2.3	**What processes should be followed to ensure that the normal reservation creators are not affected by planned or unplanned material withdrawals?**

Me: What are the rules around creation of stock reservations and stock transfers?

I11: More than 90% or our reservations are coupled to a work order, they are for a specific job. So which ever person that has a job to do first creates a work order, and creates a reservation on that works order, and draws the materials based on the reservation. There is six of us here and six of us create reservations based on the work that we do, well that is part of the releasing of the order, the order release.

Me: After how long can you still get your materials from stores after creating a reservation?

I11: The system has an automatic closure on in after 14 days, but is easy I know how to bypass that and bring the reservation up again. Because then, if [it] is closed, then I cannot get my materials on it.

Me: So the 14 days is after the requirement date on the reservation?

I11: That's correct, if I make the reservation now and put the requirement date the November month, if will only be closed 14 days in the November month if it is not collected.

Me: What are the challenges? You said something about people creating reservation from this plant, next plant and the other when there is an emergency, what is the challenge with that? My understanding is that allowing this enables people to affect the MRP for the other stores, hence affecting the people that generally use the stores.

I11: That is correct. That's is why I told you that we went to [name deleted], every month and discussed our challenges and we used to look through the system. we as the maintenance team should only be drawing from this store, the project that we have must draw from the Bloemhof store, understand, so those people like DST should only be drawing from Bloemhof store. They should not be using materials here, this is the emergency store. But they do, they look we don't have and they see ooh! They have they go and draw the materials.

Me: What is the reason given for not controlling that through authorisation, because with authorisation you can limit the people to draw only form a specific store?

I11: That I can't tell you.
Me: I think is very difficult to comply, when you have the ability to go somewhere else even if you can told as many times to plan. Because if you have an emergency and someone took your stock, if forces you to go somewhere else.
I11: But then if the person could only draw at Bloemhof store then he would do is planning properly.
Me: If there is a need for stock transfer then the stores can do that on behalf of the people.
I11: Yes they can easily do that, and they have done it many times with one of the MRP controllers that was here. He has passed away but he use to phone them and make a transfer form where ever because there was a requirement of materials here.
Me: I think in that way they have better control and can plan properly.
I11: That's correct.
Me: So what process should be followed?
I11: The one that we just discussed, will work. The people that run projects should have a store that supplies, and delivers them the materials and then it is easy to control because then they will do the planning months in advance and know when they are going to do their jobs.

IQ 2.1.9	What are the challenges to the process of goods receiving?

Me: Has it ever happened that you get to stores and the goods are there but just not captured into the system? The supplier supplied the goods but they have not captured them into the system, therefore they cannot do a goods issue.
I11: It does happen but is not a very big thing because when the stuff comes, the guys seem to capture them very quickly onto the system.
Me: So you don't have a problem with that?
I11: No, we don't have a big problem with that.
Me: What are the reasons for the goods to be returned to the stores by the staff members?
I11: If we draw the materials that we do not use, say we do planning and we over plan. The stuff must go back. But that happens very seldom. Or if the material is a wrong item. When the guy went to fetch the item but did not check whether it is the right item. Or if the wrong material is held by the stores this would be situations like when the material is not suitable for our job, then we will return it.
Me: Do they always accept these materials when you return them?
I11: Yes, this guys here at the bottom when they see that something is not alright with the material thy will call in one of us to inspect. And if we say there is a problem then they will sent it back to the supplier. But that is because of our relationship.
Me: So if you took the items from other stores, do they also accept the materials without giving any problems?
I11: Yes.
Me: So basically the reasons for returning the stock to the stores are for poor quality, or a wrong item has been picked, or when the stores themselves have issued the wrong item?
I11: That's right. But that is really seldom, other people did something wrong.

IQ 2.1.8	What are the challenges with ERP with regard to resolving the reported calls by the staff members?

Me: Have you had any problems with SAP?

I11: Not with this, this issue, but SAP being down, yes. And that is quite often. It was down on Thursday when we wanted some materials to do the job on Sunday. If it was don't on the Wednesday, then the Thursday and the Friday morning. The network was also down, and everything else was down, we were running around, to get the materials for the job, but also that is not the norm, ok it does happen but is not the norm.

Me: So when the system is down do you have an offline process that you follow?

I11: Yes [it] is called emergency procedure, there is a book with we fill in that writes your issues, and you just do your reservations when the system comes up again.

Me: But with that also you said comes a problem of forgetting to update the system?

I11: Yes.

Me: Because I mean the job is done.

I11: Why must I worry?

Me: Do you get any system errors say when you try and create a work order? If so, what is the turn up time from ERP Support?

I11: They are reasonably quick, we do not have a major problem when it comes to them. We really don't have much of the errors. Once we create a work order is created the errors that we get is when we are trying to get the materials, that there is insufficient funds but the funds have been transferred, but you can draw the materials. There is some errors but it will be because someone or And it will not be fixed only the person that did the mistake can fix it.

IQ 2.1.7	What are the challenges with regard to policies and regulation in SCM?

Me: Do you feel that there are any externally policies and regulation that contribute towards stock-outs at COCT?

I11: Here by us, no, not here by us.

Me: Not necessarily here but any internal, say Procurement.

I11: Procurement is the biggest reason why there are stock-outs at the City of Cape Town.

Me: What about the issue of stock transfers that the people are able to make create reservations against any plant? Is there a policy that governs that? Oh what really should happen.

I11: As far as I know there is a policy because if we have the materials here and someone in Mowbray wants it, the stores man will call us and ask, are you going to use this materials, and will ask how many do they want, say 10, and how many do you have, and the store man says 10. Will tell him to keep 4 for us because [it] is emergency stock. Then they only give him 6 and that's what happens. But they will always contact us. Because you need to make sure that your costumer is your first priority. I5's people are very good at that kind of thing, the Bloemhof store, but not so much the Ndabeni side.

IQ 1.2.1	What are the common features or characteristics of materials that are commonly out of stock?

Me: Are there commonly out of stock materials? if yes, how is the rate of out of stock known?

I11: I don't know much about external policies that affect this, and I do not know what the stores policies are. As far as I know what the stores do here is what is required of them by I5, the area controller.

Me: Do you have any electrical need to comply, let's say by ECSA, which you can't get to meet, say because of something internal, like Procurement?

I11: Yes, that is a yes. Like I spoke before, the cleaning stuff. There are specific materials that we use, but Procurement will obtain different stuff. And it is because they are trying to use the different supplier, the description says this, but the supplier does not deliver it according to the description. And the store man must pick that

up, that it is not according to the description because he looks at it. Then he looks at it and sees that is not according to the description, then will come to us and say is this stuff right. And if it is not then we sent it back. It does happen and if the store man is not awake, then it becomes an item in store, and we can't use it.

Me: I know that this example you gave is job specific, but in terms of the equipment, do they always buy something that is compliant with accordance with the legal bodies, or say the industry standard?

I11: No, they will buy what is cheapest and sort of it is in the description, I am serious.

Me: So basically they will buy something similar to the correct standard?

I11: That is correct.

Me: Are there commonly out of stock materials? If so, how do you know the rate that they are out of stock of the materials that you use are there ones that are commonly out of stock?

I11: Yes. The fuses that we use inside our equipment are kept as each, but you can only use it as a set, and there is three in a set, so they will get 30 and to them 30 is a lot, but is only 10 sets, and that is something we argue about, and it even comes in a box, of three.

Me: So when you replace, it you can only use 3, and not the blown ones.

I11: I must use three. That is specific to our job. So if you have a fault and the fuse blow, you can't replace one because the fault current has run through all of them. The instruction says replace all tree to avoid problems then you have to replace all three. They supply it as each but we actually use it as a set. It packed inside a bot and inside a box there is three things, but they take them out as each.

Me: But are there any other materials that are commonly out of stock.

I11: Yes, there is a lot, a lot of them. That is why I said there is a lot of thing that come as a set but they see them as a 3 or 4, or as each inside the boxes, so if you want that set you have got to draw three. You can't draw one, you can only draw three.

Me: For all this specific materials or what are the outstanding features? You said that the unit of measure is an issue, what are the specific features with regard to other materials commonly out of stock materials?

I11: Quantities held is the general thing, because in my job or in my line of electrical you have to use certain amount of quantities, for a specific job, and this is laid down in my job description. Let take bolts as an example, I have to remove all the bolts, I have to remove all of them and put them into the bin and I have to put the new ones, then after 5 years, I do the same, [it] is a five year process. So I will go there and draw, let say 75 millimetre by 75millimiter bolts. I will draw 4 because that's how much of them goes on the thing. But then if there is 14 of those thing things we need, say the whole team is working on them, say 14 times 4 we have 66 bolts, it looks like a lot but is not a lot to us because I am only doing 4 units.

Me: Are this bolts manufactured in south Africa?

I11: Yes, the bolts are manufactured in south Africa, because they are stainless steel, but the fuses are from Germany.

Me: So if you are out of stock on that, how long does it take for them to get here?

I11: Months depending on the supplier, if they get it from the big supplier, it takes 2 weeks or just about a month but if is a small supplier then it takes months. It depends on what procurement sets in there.

IQ 1.2.2	What are the significant causes of stock-outs?

Me: What are the significant causes of stock-outs?

I11: [It] is the demand that is kept inside the plant and the period that it takes to replace the stock.

Me: So, basically are you saying that the stores are the major cause, because the MRP controllers are responsible for the stock replenishment?

I11: That is correct.

Me: So since you mentioned something also are they the second after stores?

I11: Yes, that is correct.

Me: What about suppliers, say in terms of late deliveries?

I11: Look, there is the delivery date in the PO, if the materials has gone past the delivery date, it should be the MRP controller who should find out. If is not delivered he should go back to procurement and tell them that, the vendor says they cannot supply, this other vendor can supply, there should be a process where buy we can put the suppliers and say this person cannot supply, let's call it blacklist, it should be something that says, since we can't blacklist anymore, we can put 'not according to standard'.

Me: There is something like that Supplier Management, keep cleaning the suppliers that do not comply. So stores, Procurement, late deliveries, what about quality, is quality the fourth one?

I11: Yes, but…

Me: Because sometimes someone can deliver a day later but at least the right quality, not like have to start the process form the beginning if the quality is incorrect. So between late deliveries and poor quality, which one is a concern to you?

We: Late deliveries, because we don't really have so much poor quality, they used to provide us with materials from India which had poor quality, but after our complaint to management, it was agreed that the purchase orders with this specification can only come from this people. So that improved the quality.

IQ 2.2.4	What should be monitored in order to manage the causes of stock-outs?

Me: In order to control the problem of stock-outs, what should be monitored in order to control this problem of stock-outs?

I11: It's a difficult one because you cannot bypass the system. the system works one way and that is how it works, and to change that you must actually change the system, I am not talking about, SAP I am talking about the system that the people use.

Me: Are you referring to the SOPs or practices?

I11: The practices, because if you solely rely on the system to tell you when you must replenish the materials, then there is going to be a problem, but if you, know your customers and you know what they use, because there is always a graph. Say February the people start working and there is an increase and December there is a drop, then it means that February we must double up on our amounts, and then it will taper off, because winter months, there is not a lot of maintenance done, we can't work when it is raining. But more demand starts from October, November, December, in February month when it is so hot nobody can work. In March, April, May June. If they follow that then they will know that they must have more materials in those months. When I am certain I can put it on the system, but then if you rely only on the system the system is not going to be straight up.

Me: Yes there is history.

I11: Yes, act on the history. The MRP controller must intervene.

Me: In terms of the policies, what is the adherence to that of the entire chain because if one person does not do their job the entire chain is broken?

I11: Yes, if all the links are working properly then the chain is strong but if one link is broken then the chain is bad. Well if it was working properly we would not have the problem with the materials, fuses and all those type of things like I told you, it is there and is operating but is not operating as it should.

Me: What is the major problem, is it compliance?

I11: The policies should be followed, and if they are not followed as I presume that at the moment they are not being followed, that is why we have the problems,

Me: Thank you very much, I11.

I11: It's a pleasure.

APPENDIX E: INTERVIEW TRANSCRIPTIONS CATEGORISATION

Refer to the DVD for appendices E1 to E5

APPENDIX F: SUMMARIES OF THE KEY CONCEPTS PER QUESTION

Refer to the DVD for appendix F

APPENDIX G: FINDINGS DRAWN FROM SUMMARIES (220)

Refer to the DVD for appendix G

APPENDIX H: SUMMARY OF FINDINGS (45)

Refer to the DVD for appendix H