IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY

by

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MBA Subject Discipline Field: Operations and Technology

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DECLARATION

I, Pieter Mattheus, declare that the Field Study titled “Improving business sustainability at a Fast-Moving Consumer Goods company” submitted for the Masters in Business Administration at the UFS Business School, University of the Free State is my original and independent work and that I have not previously submitted the same work, either as a whole or in part, for a qualification at/in another University/faculty.

This study is a manifestation of my dedication to academic excellence, ethical scholarship, and the creation of knowledge. Every analysis, insight, and conclusion presented here has been crafted with integrity and rigour, without any undue influence or unauthorised assistance. Where other authors' ideas, data, or research have influenced my study, they are explicitly acknowledged and cited to respect the intellectual property of others.

By signing this declaration, I submit this study with sincerity, aware that its success lies in its authenticity, its purpose, and its potential to inspire others within the discipline.

I also hereby cede the copyright of this work to the University of the Free State.

Pieter Mattheus 9 November 2024

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ABSTRACT

The impact of environmental changes, technological advancements and ever-changing consumer demands form the contextual foundation of the study and underline the significance for companies within the Fast-Moving Consumer Goods (FMCG) industry to streamline operational efficiencies constantly.

The primary research objective was to establish how change management can facilitate company sustainability through the high adaptation of digital solutions at an FMCG company. A comprehensive literature study was done to understand Industry 4.0 impact and FMCG industry trends and the change management principles that can facilitate company sustainability by overcoming the challenges when implementing digital systems.

A qualitative research method was followed for this study with a sample size of 12 employees, skilled employees (SE) and manager employees (ME), from four business units at Company A, with first-hand experience of the challenges the current paper-based proof of delivery (POD) process delivers. Interviews, written feedback and rich pictures were used for the thematic analysis approach connecting the visual world and the spoken word allowing for a deep understanding of the current POD process (high touchpoint, and paper intense), highlighting the inefficiencies (delays, time, Order-to-Cash impact, frustration) and potential solutions to close the process gaps.

Thematic coding highlighted robots, laser guided vehicles (LGV), automation, integrated reporting solutions, and a change in communication as visible current trends of Industry 4.0 within the FMCG industry, validating that the digital developments are aligned with global industry trends. Risk considerations to mitigate potential resistance during digital change rollout, include a phased rollout approach with transparent communication, ensuring sufficient support structures and effective training interventions.

The novel systematic approach followed in this research study harnesses the power of rich picture drawings amplifying how this simple visual method can be exploited to capture and understand complex business processes and systems. In the highly demanding consumer-driven environment, the value this approach offers an FMCG company (on a digital transformation journey as part of a long-term sustainability focus), emanates from the ease it

can be incorporated into a company's problem-solving 'toolkit', at the same time help create urgency by facilitating self-generated employee insights and ideas (reducing resistance to new digital change). As the first point of contact during periods of change, the research findings include manager development and upskilling as a crucial strategic focus area to ensure future readiness. Training offerings must empower employees for the digital future and have the flexibility to be tailored to individual needs.

To be a future-fit FMCG company, the research findings show the need for an integrated digital ecosystem approach that provides uninterrupted communication to ensure real-time visibility of product movement to all stakeholders involved. Finally, this research study highlights the potential loopholes and inherent inefficiencies paper-based processes possess, bringing home the importance of actively identifying and reducing paper-based processes.

Keywords: FMCG, Digital Transformation, Change Management, Communication, Rich Picture

Table of Contents

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS AND ACRONYMS

3BL	Triple Bottom Line
AI	Artificial Intelligence
B2B	Business-To-Business
CLD	Causal Loop Diagram
CODP	Customer Order Decoupling Point
COI	Conflict Of Interest
CPPS	Cyber Physical Production Systems
DC	Distribution Center
DTO	Design-to-Order
EDI	Electronic Data Interchange
E2E	End-to-End
ERR	Epistemically Responsible Reuse
FMCG	Fast-Moving Consumer Goods
FOW	Future Of Work
GRA	Good Return Area
GTM	Grounded Theory Method
HRBP	Human Resource Business Partner
IoT	Internet of Things
IT	Information Technology
IT	Information Technology
JIT	Just-In-Time
KPI	Key Performance Indicator
LGV	Lazer Guided Vehicles
MS	Microsoft
MTO	Make-to-Order
O2C	Order-to-Cash
POD	Proof Of Delivery
ROI	Return On Investment
SAP	System Applications and Products
SCM	Supply Chain Management
SOP	Standard Operating Procedures
STO	Ship-to-Order

DEFINITIONS OF KEY CONCEPTS

Key Concept	Definition
Artificial intelligence	Machine learning algorithms are used for the optimisation and reduction of resource consumption using the amount of data available in companies (Vincenzo, Antonello, Francesca & Mauro, 2023:8).
Automation	Machinery that has sensing and control devices that enable it to operate automatically (Stevenson, 2021:253).
Balancing Process/Loop	Combined with reinforcing loops, balancing processes form the building blocks of dynamic systems. Balancing processes seek equilibrium: they try to bring things to a desired state and keep them there. They also limit and constrain change generated by reinforcing processes. A balancing loop in a CLD depicts a balancing process (Kim, 1999:19).
Blockchain	A trusted peer-to-peer network that validates transactions; this cryptologic data structure was designed to secure digital ledgers (Niemann & De Villiers, 2021:354).
Business-to-Business (B2B)	An eCommerce platform that facilitates business-to-business commerce. It improves supply chain visibility and standardisation to trading partners from a single access point, while translating information into forecast projections to manage demand and supply (Stevenson, 2021:671).
Causal Loop Diagram (CLD)	A systems thinking tool that capture how variables in a system are interrelated. A CLD takes the form of one or more closed loops that depict cause-and-effect linkages (Kim, 1999:19).
Cloud computing	A way to access large amounts of computational resources and supports many users in a reliable and decentralized manner; it also provides software cheaply (Ali, Ali & Badawy, 2015:41).
Company resilience	The ability of a business to recover from an event that negatively impacts the supply chain (Stevenson, 2021:661).
Customer Order Decoupling Point (CODP)	A supply chain stage that deals with a high level of uncertainty, derived from customer expectations, order requirements, delivery lead time, and changing product design and features. Product customization is considered in the forms of design-to-order (DTO), make-to-order (MTO); and ship-to-order (STO), as per Saghiri, Mohammadipour, and Mirzabeiki (2024:2).

Cyber security	With the computerising and interconnectivity of machinery, one becomes more susceptible to cyberattacks (Deloitte, 2023:1).
Design-to-Order (DTO)	The product design remains unknown until all details are agreed on with each customer (Saghiri et al., 2024:2).
Digital Intelligence	Intelligence is defined as the ability to successfully interact with the environment. This asserts that digital intelligence resulting from human interaction with a digital environment is profoundly needed in the workplace (Soomro et al., 2020:3597).
Digital transformation	Digitalisation helps to transform all the information that arrives in organisations into a uniform digital format, to process them electronically in the processes with the electronic documents and thus to increase efficiency and flexibility, save process costs, and run a faster time to market (Paschek, Mocan & Draghici, 2019:127).
Digitally ready	The level of readiness of a company's workforce to transition into digitised workflows that are enabled by software and technology. Being digitally ready a company needs to consider transitions of all three contexts: technological, organisational, and environmental (Soomro, Hizam-Hanafiah & Abdullah, 2020:3599).
Dirt-to-Dirt	See farm-to-fork definition
Electronic Data Interchange (EDI)	An intercompany communication of business documents in an electronic standard format that replaces paper-based documents such as purchase orders or invoices (Narayanan, Marucheck & Handfield, 2009:121).
Farm-to-Fork	The physical journey of foodstuffs in the supply chain. Also refers to the transformations and reframing of those foodstuffs that occur from production to consumption (Donaldson, 2022:230).
Geopolitical	Any politics or country relations that impact international or local operations (Deloitte, 2023:1).
Geospatial technologies	Geospatial technologies can be employed for several aspects of environmental, social, and economic sustainability. For example, satellite remote sensing combined with georeferenced data can estimate yields in smallholder production systems to understand how soil quality and fertiliser use affect productivity (Vincenzo et al., 2023:11).

Global logistics	The design and management of a system that directs and controls the flows of materials and goods into, through, and out of a firm, across national boundaries to achieve its corporate objectives at minimum cost (Niemann & De Villiers, 2021:318).
Industry 5.0	The term Industry 5.0 refers to people working with robots and smart machines. It is about robots helping humans work faster by leveraging advanced technologies such as big data analytics (Adel, 2022:42).
Information Technology (IT)	The use of hardware and software to transmit and/or retrieve information, and to achieve functional goals (Soomro, Hizam-Hanafiah & Abdullah, 2020:3599).
Internet of Things (IoT)	A new technology that is used to express a modern wireless telecommunication network. It can be defined as an intelligent and interoperability node interconnected in a dynamic global infrastructure network; it also seeks to implement the connectivity concept of anything from anywhere at any time (Ali et al., 2015:37).
Just-In-Time (JIT)	A lean system of highly coordinated processing system in which goods move through the system and services are performed, just as they are needed (Stevenson, 2021:611).
Make-to-Order (MTO)	The product configuration or features altered commonly (Saghiri et al., 2024:2).
Real-time communication	Any mode of telecommunications in which all users can exchange information instantly or with negligible latency or transmission delays. In this context, the term real-time is synonymous with live.
Reinforcing Process/Loop	Along with balancing loops, reinforcing loops form the building blocks of dynamic systems. Reinforcing processes compound change in one direction with even more change in that same direction. As such, they generate both growth and collapse. A reinforcing loop in a CLD depicts a reinforcing process. It is also known as vicious cycles or virtuous cycles (Kim, 1999:19).
Ship-to-Order (STO)	The shipment size, timing, and terms are subject to change (Saghiri et al., 2024.2).
Supply chain management (SCM)	The main goal of SCM is to move products effectively to where and when it is needed (Schug, 2017:62).
Supply chain resilience	The resilience of the supply chain to return to its natural (or better) functioning state; and it aims to delay, reduce the impact, and recover as quickly as possible post-disruption. Capabilities and enablers for supply chain resilience are flexibility, information sharing and visibility, redundancy, reduction of

	complexity, collaboration, agility, and velocity (Niemann & De Villiers, 2021:354).
System	A group of interacting, interrelated, or interdependent elements forming a complex whole, almost always concerning a specific purpose within a larger system (Kim, 1999:19).
Systems Thinking	A school of thought with the focus on recognising the interconnections between the parts of a system and synthesising them into a unified view of the whole (Kim, 1999:19).
Triple bottom line (3BL)	A company's focus not only on the economic value that they add but also on the environmental and social value that they add (or destroy). If all three parameters are focussed on it, it could provide long-term economic benefits and a competitive advantage for the company (Kumar, 2015:10).

CHAPTER 1 INTRODUCTION AND BACKGROUND TO THE STUDY

1.1. Introduction

The contextual foundation of the study is delivered in this chapter, underlining the significance for companies within the Fast-Moving Consumer Goods (FMCG) industry to constantly streamline operational efficiencies. The impact of environmental changes; technological advancements; and ever-changing consumer demands is explained in the next chapters, but the foundation is set in Chapter 1. The background to the study and Company A, as discussed, create context for the research approach and the development of the objectives, which aims to establish how change management can facilitate a smoother digital solution adaptation at an FMCG company.

1.2. Background to the study

One of the most important developments over the last three centuries, bringing change and opportunity never seen before in human history, is the evolving of the various industrial revolutions (Stearns, 2020:7). Xu, Lu and Vogel-Heuser (2021:530) describe the First and Second Industrial Revolutions as the key drivers behind transforming manual production approaches into highly productive and highly profitable production lines, by introducing steam and electricity, respectively. In expansion, the Third Industrial Revolution was earmarked by the introduction of field-level computers and communication technologies, making automated production possible; while the Fourth Industrial Revolution (or Industry 4.0) introduced cyber physical production systems (CPPS) that make production even more efficient and flexible, through real-time communication enabling intelligent decision making.

Going digital, with the new opportunities that cloud computing, blockchain and Internet of Things (IoT) have to offer, quickly became the new industry buzz word but the application of these developments is not always identified timeously (Seke, 2019:1). With the number of available options and a lack of understanding what benefits each of these innovations can deliver, linking it to a current company challenge can be a daunting process. Almost three centuries of technological development, which shaped the global supply chain as it is known today, could not prepare the world for the year 2020. The COVID-19 pandemic caused havoc to global supply chains (Gordon, 2021), and it also put a spotlight on the importance of being digitally ready as a company.

Being digitally ready can be defined as the state of digitalisation preparedness of an organisation. This is an important factor for any future-focussed company, serious about ensuring long-term company sustainability, as this allows the company to take advantage of market opportunities quickly and with minimum disruption (Soomro, Hizam-Hanafiah & Abdullah, 2020:3597). This explains the robust increase in the implementation of digital technology to help maximize productivity (while focussing on waste reduction) and provide a competitive edge within the market (Soomro et al., 2020:3599).

Geopolitical tensions also saw commodity prices skyrocket, causing inflationary pressures globally (Desalegn, Tangl & Fekete-Farkas, 2022:14455). As the cost of living soars, it comes as no surprise that consumers are more demanding than ever (Ali & Almeida, 2022). Their quest to find more value, at a smaller price tag, has spearheaded the need for companies to relook costly processes and eliminate waste (Mundra & Nidhi, 2021:540).

Consumers are not only looking for more value for money but are also more environmentally conscious, as confirmed by Ali et al. (2022), including environmental impact and sustainability as part of their purchasing criteria. The Brundtland Report (WCED, 1987:37) defines sustainability as development that meets consumer needs today, without future generations' needs being compromised; bringing the focus back to the current real-world problem of eliminating waste within the supply chain. Vincenzo, Antonello, Francesca and Mauro (2023:117) highlight the urgency on supply chain management (SCM) to enable, embrace and accelerate digital transformation adaptation crucial for a company's sustainable development. Creating a triple bottom line (3BL) index, Vincenzo et al. (2023:117) expanded on their findings by identifying blockchain, geospatial tech and IoT as the type of technologies with the highest sustainability rating for emerging 21st century business practice that encourage operational efficiencies, while delivering on cost reduction and waste elimination.

With improved productivity as a main driver, emerging practices during Industry 4.0 deliver the much-needed business environment where production systems can share information and create permanent connections (Varriale, Cammarano, Michelino & Caputo, 2023:5715) – enabling longer, uninterrupted production time with less human intervention, and shorter downtime. Twenty-four-hour production, seven days a week, delivers a competitive edge to withstand a sudden increase in customer demand with shorter supply recovery times.

Through digitising supply-chain management processes, faster recovery times are achieved as it improves the speed, accuracy, and flexibility of the supply-risk recovery process, enabling a company to mobilise swiftly to any crisis or environmental impact. Achieving greater visibility through a digitised supply chain, this visibility strengthens a company's risk-anticipating capabilities as product complexity develops, and facilitates coordination across the supply chain (Alicke, Azcue & Barriball, 2020:6). Willcocks, Hindle and Stanton (2024:4) substantiated that due to the intensification of work, skills shortages and productivity gaps, the majority of FMCG companies have started to automate, to some extent, no different than Company A, within the South African perspective. The fundamental focus is to foster a faster customer reaction time with less environmental impact (the latter aligned to the Brundtland Report recommendations).

Highlighting the link between Industry 5.0 and Industry 4.0 digital technologies, Varriale et al. (2023:5715) are of the view that Industry 5.0 not only uses Industry 4.0 technologies to enhance operational efficiency, but further requires a conscious consideration for environmental and societal impact to fulfil sustainability benchmarks, including the human-centric element. In combination, the presence of these elements develops considerable company resilience. Relating it to 3BL principles, the golden thread of preserving and minimising the environmental impact for the sake of future generations is evident. With the tremendous impact and benefits Industry 5.0 can produce, it comes as no surprise that FMCG companies around the world, like Company A, are racing to embrace and implement the available technologies to deliver on consumer expectations.

1.3. Background to Company A

With a global footprint, and over a 100 year presence in the FMCG industry, the South African head office of Company A is located in Johannesburg. With various distribution centres and factories across South Africa, the number of products over a variety of categories being supplied to the East and Southern African consumer makes daily operation management challenging. Efficiency drivers, to save operational costs by eliminating waste, are always high on the agenda and have become part of the company culture. Company A's customers, being distributors and major retailers within South Africa, have also relooked where they could make positive changes to ensure 100 percent on-shelf availability of all products they sell – the result being an increased requirement of Just-In-Time (JIT) deliveries.

A cost-saving at customer level, JIT deliveries reduce the level of inventory holding needed, as customers can replenish orders with short delivery lead times of three to five days as an industry standard. Lower inventory levels require less storage space and reduce working capital requirements as customers only purchase what they need when they need it. JIT stock deliveries and the effective use of the demand data created from customer orders (including basic elements like quantity and the product being sold) have a similar cost-saving effect for Company A, as it enables JIT production. The benefit of having limited, but accurate, stock on hand levels, Company A cannot only ensure a seamless supply to their customers for maximum on-shelf availability but also improve stock freshness by the constant rotation of products being produced, substantially reducing the risk of expiring product write-offs. Due to the high impact benefits for suppliers and customers, JIT application for customer deliveries has slowly become a FMCG non-negotiable industry norm to enable a more responsive supply chain (Khayer, Rahul & Chakraborty, 2023:620).

Over the last ten years, Company A has made various improvements, including the successful implementation of digital solutions to drive order placement efficiencies employing Electronic Data Interchange (EDI) and a customer Business-to-Business (B2B) portal. The successful rollout of EDI in 2012 gave customers the ability to control their order placement and created additional visibility of pending orders as shipping notifications can be created in real-time. This can only be achieved by mapping Company A's Systems, Applications & Products in Data Processing (SAP)™ with those of its customers (normally large retailers who can afford the SAP system). This solution could not be implemented at that point with customers who were not using SAP.

The importance of having a digital solution for order placement (for the remainder of Company A's customer base not on SAP) was highlighted during the severe lockdowns during the COVID-19 pandemic. This fast-tracked the implementation of a web-based B2B platform by Company A in 2021. Both solutions not only reduced order capture errors, but also resulted in higher fulfilment rates per order, while delivering on a quicker delivery time and elevated levels of customer satisfaction. The cost-saving benefit was substantial, not only by eliminating hours of human intervention to rework orders with errors but also by preventing order rejection at the customer level due to misaligned or missed delivery slots.

Company A consistently processes between 12 000 and 16 000 customer orders monthly. The orders are fulfilled at the relevant distribution centre (DC), which is the departure point for orders dispatched to customers across the country by making use of third-party carriers (transporters). The handover process between the DC and the transporter, the carrier for the customer's ordered goods, requires the invoice to be printed in threefold – this paper-based invoice also acts as proof of delivery (POD) when the customer signs for goods receipt. A copy of the POD remains with the customer, another copy is kept by the transporter, and the last copy the transporter needs to scan and upload to Company A's SAP cloud-based shared drive before returning the hard copy to Company A.

At Company A various internal standard operating procedures (SOPs) and internal software platforms, for example SAP, aid in managing the high order volumes to ensure on-time-delivery (see Figure 1.1) – ensuring maximum product supply, and as little as possible delivery lead time variance. As supply and on-time delivery are key elements for successful JIT deliveries, it comes as no surprise that this paper-based process has been flagged for improvement on numerous occasions by the DC team and transporters, dating back as far as 2018 – but to date no cost-effective, suitable solution has been identified.

The paper-based process between the DC of Company A and transporters becomes more complex when one notes the 60 available product lines that can be entered per order by a customer, while the hard copy invoice only allows a maximum of 24 product lines per page when printed. Confirming receipt of the delivery, the scanned and uploaded customer-signed POD is linked to the relevant order and stored in this cloud. During high volume periods like month-end this process may take up to two weeks, due to human resources staying the same, but the increase in order volumes at month-end creates a bottleneck with the time-consuming scanning process.

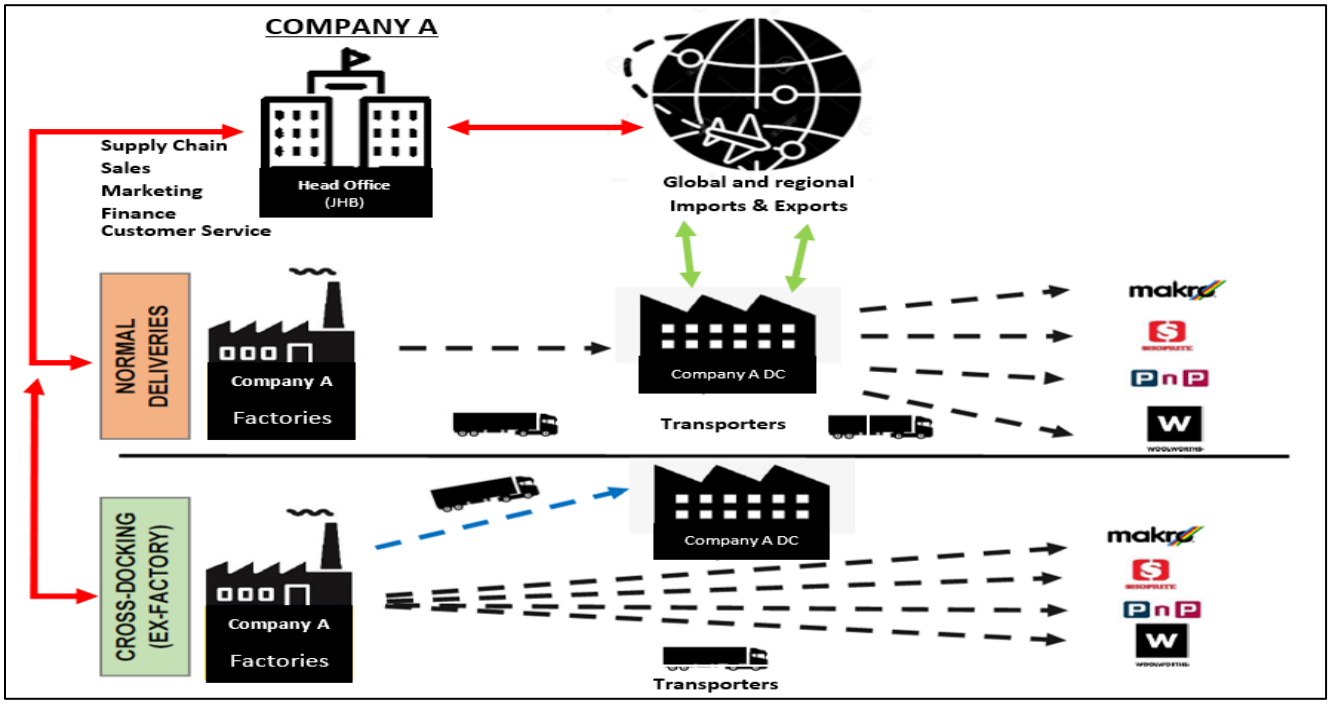


Figure 1.1: Company A – Supply Chain Flow

Source: Researcher's compilation (2024)

The uploaded scanned POD becomes crucial, not only for the DC, but also to the customer service and accounts department when backtracking on any delivery queries that arise. Illegible, badly scanned, and misplaced PODs cause another layer of complication hampering efficiency, again requiring manual human intervention to investigate and resolve. During the delivery, if any items are rejected at customer level, the process does not allow for real-time corrective amendments, requiring the transporter to return the items to the DC's goods return area (GRA) to complete the credit return process, by manually capturing the returned item line code information and the quantities. Again, these time-consuming, paper-based processes lead to high data capture errors within GRA; long query resolution turnaround times; and missed opportunities as outstanding product return credits are not processed timeously, inevitably resulting in non-delivery or delivery delays due to blocked customer accounts. Establishing the reasons why the demand and supply chain leadership did not address this specific paper-based process during the 2017 process efficiency assessment, two clear reasons for not pursuing and implementing a digital solution were highlighted, each of which is explained now, but which no longer apply.

Surprisingly, the first reason in 2017 was customer resistance to agree to the proposed digital solution, which included an electronic pad displaying product details, and that was used to capture the customer signature. The signed POD would be emailed to a customer-receiving area email, specified by the customer, and would be emailed to the transporter and Company A at the same time - instead of having to sign and scan a hard copy POD as was the process at the time. The concern was that an e-signing solution was not widely used at the time, some customers still worked with paper-based processes, and not all customer-receiving areas were set up with printing facilities, which would require investment and process changes at the customer level. Fast-forward a mere six years to 2024 and the resistance has not only dissipated, but all customer types are now seeking digital solutions from suppliers that will help drive operational efficiencies save costs by eliminating waste (i.e. printed hard copy PODs).

The second reason was due to the disproportionate price tag associated with the implementation, hosting, and rollout cost of the preferred digital solution identified, with the high risk of low customer adaptation. Other e-options were investigated but could not deliver on the functionalities required from Company A, which included centralised data and delivery documentation capabilities; early customer notification including new estimated time of arrival of delayed deliveries; a simplified returns process; and digital PODs.

With the investment needed to realise this process transformation now better understood by Company A, and continuous global technological innovations in supply chain management during the period 2017 to 2023, it is only a matter of time before Company A will implement a workable digital solution to address the POD process's efficiency gaps. Implementation of an e-process is now imminent and supported by Company A – a strategy to be adopted soon.

1.4. The researcher's role in the POD process of Company A

Exposure to the intricacies and challenges of fulfilling a national field operations manager role within Company A, the researcher takes the learnings of resolving process inefficiencies (and the impact it can have on day-to-day operations) and applies them to allow for a deep understanding of the complexities within the manual POD process. As a people manager, leading a team of sales and business support professionals, to ensure swift adaptability by team members to an ever-changing, competitive environment, is always a top-of-mind concern when serving our customers. Samiya (2023:11) asserts that for company success and sustainability,

adapting to digital transformation has become vital, and change management of such a transformation forms part of the key strategy to ensure seamless and flexible transformation. As with everything new, for effective digital transformation, Trenerry, Chng and Wang (2021:834) state that where team members display high levels of resilience within the workplace to change of this type, and where a company's culture nurtures adaptability and ownership, the transformation process has a higher success rate. Plotnikov (2022:82) emphasises the lack of technical competence as a major demotivation factor for employees, while a static culture that does not embrace such change will have a compounding negative effect on organisational performance.

Digital transformation has already proved to be successful in other parts of Company A, with the focus now shifting to the digitisation of Johannesburg DC. By applying knowledge from current literature on company sustainability, Industry 5.0 and 3BL, the point of this investigation is to identify the readiness of employees affected by the current paper-based POD process at Company A to embrace change by pre-emptively assessing possible pitfalls that will prevent high levels of adaptation, and finally, to recommend various change management strategies for consideration during the transformation process when future digital solutions are implemented. This leads to the following problem statement.

1.5. Problem statement

In line with Company A's ethos of continuous improvement, and the imminent readiness to digitalise the paper-based POD process, it is important to ensure that employees are at the same level of readiness to embrace these changes and to ensure smooth adoption of the new technology. Learnings taken from the previous digital solution implementation at Company A highlighted the importance of having a readiness focus, especially with employees who interact or are directly affected by the current POD process.

The global problem of waste due to inefficiencies contribute to landfills around the world. With the high levels of poverty within the South African context, the failure to eliminate food waste not only negatively affects the environment but can have detrimental social consequences leading to reputational damage. For this reason, digital transformation is more relevant than ever to drive efficiencies and promote positive environmental practices within the FMCG industry. Key strategies to ensure company agility and enhanced employee readiness to drive

high levels of adaptation of the digital changes required are crucial for a seamless and flexible transformation.

1.6. Study research questions

The importance of the research question cannot be overstated as it provides the roadmap of the knowledge that needs to be explored and guides the research design and literature review (Bryman & Bell, 2021:14). This research answers the following primary research question: *How can change management facilitate digital solution adaptation at a FMCG company to contribute to long-term company sustainability?*

The secondary research questions to be answered to elucidate the primary question are:

- What digitisation of paper-based processes has been implemented within Company A, and are these changes, based on literature review insights, in line with industry trends?
- What risks need to be considered to ensure high levels of adaptation and employee readiness when implementing a digital system?
- How can risks in changing from manual to digital be overcome to ensure company sustainability?

1.7. Study research objectives

The research objectives are an indication of what the researcher intends to achieve, and they guide the study approach by highlighting focussed details to be addressed in the report (Sutherland, 2016:99). The primary research objective is: *To establish how change management can facilitate company sustainability through the high adaptation of digital solutions at an FMCG company.*

From this primary objective, the following secondary objectives are:

- To review relevant literature in the context of the Industry 4.0 impact, industry trends, digitalisation, the link to company sustainability, and how change management can facilitate overcoming the challenges of moving from a paper-based to a digital system;
- To conduct qualitative research with stakeholders within Company A to understand the reason employees may have resistance to digitalisation, and their perceptions of how the change will affect them and their customers; and

- To describe recommendations in terms of strategies to be adopted to ensure employee readiness for high adaptation of a digital solution when the change from a manual process is implemented.

1.8. Research design

A research design aids in ensuring the correct framework for data collection, and how this data will be analysed, as highlighted by Bryman et al. (2021:99). An interpretative and inductive paradigm case study approach will be adopted, as this method is popular in business research and it favours a non-probability sample as units with unknown probabilities are included (Vehovar, Toepoel & Steinmetz, 2016:329), while applying a qualitative method to allow for detailed examination through employee interviews (Bryman, 2021:111). Semi-structured, open-ended interviews will be scheduled with purposively selected participants. The interview process will allow for a deeper understanding of each participant's current perception of digitalisation, and insights into the challenges foreseen in moving from paper to digital. The data collection process will involve one-on-one, semi-structured, open-ended interviews recorded with the consent of the participant. Questions will be composed from relevant themes identified from secondary literature (Chapter 2) within an interview schedule. A thematic analysis will be done to analyse the 15 participants' transcribed interviews within the researcher's business unit. Additionally, two of the key role players who oversaw the implementation of the B2B portal in 2021 will be asked to participate in answering the same interview schedule questions; thus, providing context on the historical challenges experienced during implementation, enabling strategy idea generation to mitigate possible challenges.

1.8.1. Literature review

In Chapter 2, a pragmatic investigation using desktop research will form an integral part of the secondary data presented. Academic literature and reliable sources will provide context and a deep understanding of the risks and opportunities of Industry 4.0, while looking at the FMCG industry and supply chain digital trends that are setting the current competitive industry tone. In an environment of constant change, employee readiness to successfully mitigate the changing landscape of work will be put under the microscope. Change management principles that can benefit a company undergoing digitisation of a key process will be studied to apply these

principles to assist with high digital adaptation delivering long-term company sustainability benefits.

1.9. Ethical considerations

Care was taken throughout the process to apply ethical principles, for example, to do no harm; obtain informed consent; avoid the invasion of privacy; and ensure that information is clear and transparent to avoid deception (Santos, 2021:160). ‘Company A’ will be used throughout the report to protect the identity of the FMCG company; no sensitive internal company strategy or data was considered for inclusion; and interview participation was voluntary with confidentiality assured throughout the data collection and analysis process (the results will also be shared). A key point to note is that the study will not commence until the University of the Free State’s (UFS) two-step ethics review process, which requires scientific review approval before ethical clearance and approval on RIMS, permits it to continue. Company A be approached to sign an agreement letter that the researcher is authorised to do the study.

Each participant must give informed consent that their contributions may be used for this research study. As these interviews will be conducted during working hours, permission from Company A to conduct these interviews and undertake this research, and the time allowed for interviews by the researcher, will be included in the authorisation letter. Recordings will be destroyed immediately after verbatim transcription, and all research information will be kept safe in e-folders with encrypted passwords. The anonymity of participants is assured by using pseudonyms in all reporting. The research and findings of the field study will be shared with Company A’s CEO on their request to ensure implementation consideration of viable recommendations.

1.10. Study limitations

The applicability of the research and findings, outside the context of this report, must take into consideration the following potential limitations:

- The research solely focuses on the FMCG industry, the manual POD process of Company A, and the digitalisation thereof.

- The study findings, although valuable to the researcher's business unit within Company A, might have limited application to other FMCG companies with different supply chain processes and procedures.

1.11. Structure of the dissertation

The dissertation consists of five chapters structured as follows:

Chapter 1: Introduction and background to the study

This chapter contains a succinct description and background to the research study, while highlighting the research objectives and methodologies applied to answer the research questions.

Chapter 2: Literature review

The chapter summarises a theoretical examination of literature by offering a comprehensive view to highlight the impact of Industry 4.0, supply chain trends, change management principles, and the risks that need to be considered for the long-term sustainability benefits for a company undergoing the digitisation of a key process with specific relevance to the FMCG industry.

Chapter 3: Research methodology

This chapter contains the considerations used for the research design; the applied methodology used; and the analysis employed in the study.

Chapter 4: Data collection and analysis

In this chapter the researcher presents each interview question as analysis and results from the qualitative research and identifies the reasons why employees have concerns and possible resistance to digitalisation. Their perceptions on how the change will affect them and their customers will provide valuable insights into how to best manage the digitisation process.

Chapter 5: Findings and recommendations

In this chapter, research conclusions are drawn from Chapter 4, and recommendations are made for implementable strategies to manage change effectively, contributing to long-term company sustainability.

1.12. Conclusion

The research methodology highlighted in this chapter is used as a roadmap to achieve operational efficiencies and risk management utilising interviews with employees on the supply chain digitalisation to solve a real-world problem at the DC of Company A.

In Chapter 2, the literature will be reviewed to better understand the concepts of how change management can contribute positively to company sustainability, in line with Senge's three-nested dependency sustainability model and the 3BL approach, and how to use these principles effectively for future digital transformation projects.

CHAPTER 2 LITERATURE REVIEW

2.1. Introduction

The FMCG industry services many customers, with a large variety of products, through a vast distribution network. Although Industry 4.0 spearheaded great technological advancements within supply chains, including digitalisation, the relentless environmental changes and ever-changing consumer demands require an even greater focus on supply chain agility (Deloitte, 2023:3). By investigating FMCG industry challenges, change management principles could be identified that could facilitate digital solution adaptation by a company such as Company A. In this chapter, a pragmatic approach is taken by consulting a wide range of reliable sources to expand on themes relevant to this research and aid the development of an appropriate research methodology in Chapter 3 to explore the research problem in terms of Company A, a food manufacturer.

2.2. The FMCG industry and digital transformation

Even though the food sector has made significant investments in food processing, the current FMCG focus is on automation to grow and scale the impact on supply chain and logistics activities because of positive profit benefits, when done correctly (Sharma, Gahlawat & Rahul, 2021:71). The supply chain scope of a company may stretch as far back as the farm where the raw material, to be used for production, is being grown. A supply chain, in essence, would be the network that guides a sequence of events that moves products from “farm-to-fork” (Donaldson, 2022:228) or “dirt-to-dirt” (Blanchard, 2021:6). The modern concept of a supply chain adding value to organisational performance, as is known today, was pioneered in the late 1950s by Jay Forrester (Forrester, 1958) who studied supply pipelines and the interrelations between producers, suppliers, and customers. Forrester coined the term ‘bullwhip effect’, which talks to the inventory level fluctuations in a company’s supply chain pipeline, fluctuations which become more aggressive the further away the end products are from the end-user (Blanchard, 2021:7). The relevance of Forrester’s theory, especially for an FMCG company like Company A, is that it highlights that the risk is greater of meeting the demand of end consumers (fork) at the furthest point, which is where the raw material is grown or sourced from (farm). To counter the bullwhip effect, an FMCG company should secure the source of raw material as much as possible to mitigate production risk and facilitate operational efficiencies during production and within supply chains to ensure the finished product is available on time when it is needed.

One of the most volatile components of a supply chain is that of consumer demand. To ensure the correct amount of inventory is available to fulfil customer demand, digital transformative supply chains gather data throughout the farm-to-fork process. When linked to key performance indicators (KPIs) it becomes an integral management tool of supply chain performance by making recorded information like raw material batches used, product production date, final product batch code, sales, and distribution information readily available for analysis. The effective analysis of these data points could aid in establishing demand and seasonality trends, which in turn could be used to forecast production requirements more accurately and identify supply chain inefficiencies (Schug, 2017:62). As any quality defect could have detrimental consequences for the consumer, Dani (2015:7) highlights the importance of food traceability within customer-driven chains, such as in Company A.

The need for consistency when manufacturing and processing food and beverage products is crucial to maintaining credibility; thus, the ability to track and trace products throughout the supply chain has become standard practice, regulated by legislation (Dani, 2015:8). The main legislation guiding a FMCG company within South Africa would be the following:

- The Agricultural Product Standards Act 119 of 1990 provides control over the sale and export of certain agricultural products and other related products.
- The Foodstuffs Cosmetics and Disinfectants Act 54 of 1972 deals with requirements relating to food composition, labelling, advertising, safety, and the enforcement of these requirements.
- The Consumer Protection Act 68 of 2008 creates a legal framework to foster a fair, accessible, and efficient marketplace by protecting consumers from unfair trade practices.
- The Basic Conditions of Employment Act 75 of 1997 gives effect to the right to fair labour practices.
- The Occupational Health and Safety Act 85 of 1993 provides for the health and safety of people at work.
- The Employment Equity Act 55 of 1998 provides a yardstick for employment equity and makes provision for any other related issue.

To enable a company to react over the entire supply chain to a consumer demand fluctuation or environmental variables, it is crucial for demand, distribution and sales information to be centralised (Schug, 2017:64), allowing for total supply chain crucial points visibility. Schug (2017:58) highlighted other variables not in the control of a company, which could cause instability, including oil and petrol prices, carrier capacity and availability, and access to seasonal or exotic ingredients. Geo-political issues, weather-related transportation disruptions, and natural disasters could have a global impact across many supply chains.

A Deloitte (2023:3) White Paper on supply chain resilience predicted greater and more frequent future disruptions and suggested that future-focused company strategies should include building resilience across the employees, operations, and brand. Saghiri, Mohammadipour and Mirzabeiki (2024:2) consolidated the multiple-dimensional definition of company agility as the elements that aid a company to swiftly handle changes in demand or supply requirements, as well as to alter the product and its specifications as responsiveness, visibility, flexibility, competency, collaboration, quickness, proactiveness, market sensitivity, customer focus, and velocity.

Deloitte (2023:3) suggests that a company would be considered to have a stronger ability to adapt quickly when agility focus is extended downstream ensuring supply chain partner collaboration is based on trust, while constantly synchronising the end-to-end supply network – both essential elements of an agile supply chain. Niemann and De Villiers (2021:354) describe the enablers for supply chain resilience as follows: flexibility to enable change to happen quickly, with little effort or cost; information sharing and the visibility of critical information; a reduction in business process complexity; collaboration and integration of information systems; being able to respond to the unexpected as a result of agility; and velocity, which refers to the agility-enhancing capabilities. Oliva, Couto and Santos (2019:1965) went a step further by summarising the elements into three key topographies for agile systems, which allow a company to handle changes in supply and demand swiftly, as follows:

- Dynamic flexibility to respond to the diversity of the changes.
- Dynamic speed to respond with quick action to the rapid pace of the changes.
- Dynamic sensing to detect changes in the supply and demand markets.

Consistent with the dynamic capabilities of flexibility, speed and sensing, which are expected from agile systems, companies must be hyper-aware of the technological developments and innovation around them, as well as what risk it might pose for future competitiveness. The next section discusses the impact of Industry 4.0 in this respect.

2.2.1. Impact of Industry 4.0

Industry 4.0 revolutionised manufacturing processes and operational systems by introducing digitalisation, artificial intelligence (AI), big data, and IoT. This led to the global transformation of the manufacturing industry (Tjahjono, Esplugues & Ares, 2017:1176). With the internet enabling always-on direct communication between machines, cyber-physical systems collect data from different source points and use the data to react to any major impactors in real-time (Tjahjono et al., 2017:1176).

IoT can be seen as a dynamic work network extension, which links the internet to smart devices, surrounded by an intelligent environment. Ali, Ali and Badawy (2015:38) define IoT as a network that supports a set of useful features, such as interoperability (the ability to create systems or devices that cooperate efficiently), self-configuration (a gamut of changes a system makes to itself in response to internal environment), self-adaptive (a closed-loop system with a feedback loop aiming to adjust itself to changes during its operation), and self-protection (securing IoT devices and the network these devices use to maintain the privacy of users and the confidentiality of data). Ali et al. (2015:39) explain an intelligent environment as one that contains the previously mentioned elements as a bare minimum, as this delivers an abundance of new application opportunities within the supply chain context.

Industry 4.0 enabled supply chain integration, speeding up information sharing, while delivering transparency throughout the supply needed for real-time decision-making. This brought significant performance improvements in SCM where a holistic approach could now be implemented to mitigate any change in customer demand or environmental impact more effectively with reduced or no human intervention (Fatorachian & Kazemi, 2021:64). Tjahjono et al. (2017:1177) highlight automated systems including AI, robots, and nanotechnologies as the main features of Industry 4.0 Implementing these exponential technologies increases company flexibility and the ability to customise based on customer needs while reducing costs throughout the supply chain. Customer customisation deals with high levels of uncertainty,

derived from customer expectations, order requirements, delivery lead time, and changing product design and features (Saghiri et al., 2024:2). This happens at the customer order decoupling point (CODP), which is the supply chain stage where product customization is considered in the forms of design-to-order (DTO), make-to-order (MTO), and ship-to-order (STO).

Digitalisation, as the main driver behind Industry 4.0, enables integrated, agile systems to respond to business environment uncertainty. However, with constantly changing consumer demands and the rise in customisation expectations, uncertainty is expected to increase in the future. Technology is still evolving, and this leads to the need to consider Industry 5.0 in the context of Company A.

2.2.2. Industry 5.0: looking to the future

Paschek, Mocan and Draghici (2019:128) characterise Industry 5.0 as the revolution that will blur the lines even further between the real world and the virtual world through increased collaboration between humans and smart systems, such as robots. Repetitive, monotonous tasks are done with the speed, consistency and accuracy of machines, while humans can focus on creative, efficiency-improving tasks. Unlike Industry 4.0, Industry 5.0 is more focused on worker welfare by developing a sustainable, human-centric and resilient business environment (Battini, Berti, Finco & Zennaro, 2022:108619), and eliminating human-machine conflict (Choi, Kumar, Yue & Chan, 2022:9). Nahavandi (2019:4371) describes Industry 5.0 as a world where the human brain and robots are connected, working in harmonious collaboration, rather than as competitors.

Emerging economy manufacturing industries, like those in South Africa, are more likely to face more challenges than developed economies and are classified as vulnerable consumer supply chain networks (Karmaker, Bari & Anam, 2023:108806). The perception of digitalisation within the South African context is one of scepticism, especially from the unskilled or semi-skilled workforce who consider digitalisation as machines replacing humans. With a high youth unemployment rate of 59.4% in quarter four of 2023, reported on Trading Economics (2024), and stringent labour laws, this becomes difficult to navigate. Even though Industry 5.0 provides more sustainable production and supply chain resiliency, infrastructure availability and cost might be barriers to entry. Not having a stable supply of electricity or advanced IT infrastructure

in South Africa makes the implementation of technological solutions extremely difficult and expensive; this thus becomes a pipedream for many smaller companies that cannot afford the cost of not only the innovation, but to also ensure additional investment to secure a reliable back-up energy supply to keep the systems running. However, these are not challenges associated only with South Africa, and it is important to take note of all potential pitfalls.

Masoomi, Sahebi, Ghobakhloo and Mosayebi (2023:104) listed the perceptions of low economic returns (perceiving the financial profit gain to be less than the investment that needs to be made) or return on investment (ROI), vast infrastructure investment (which becomes overwhelming for a company just starting its digital transformation journey), cyber security threats, lack of skilled workers, and employee readiness as supply chain development challenges. Adel (2022:11) confirmed these challenges, while adding privacy concerns and the fact that implementation is a time-consuming process as equally important challenges. With the availability of digital solutions there has been a global shift to integrate adaptation into company strategies, none more than in the FMCG supply chain where the biggest benefits can be harnessed.

2.2.3. Current FMCG supply chain trends

With the revolution of Industry 5.0, machines and humans work together to improve efficiencies (Adel, 2022:2) at production level and throughout the supply chain. Greater environmental control through connected sensors and customised software enables a real-time overview of the climate, energy consumption, and other important production elements. Referring to best-in-class company traits, Blanchard (2021:11) confirms a high level of demand visibility (which aids forecasting accuracy) and the ability to isolate high costs (or identify where technological investment is needed) as crucial success drivers for Industry 5.0 adaptation.

Production efficiency is driven by smart and connected industrial automation machines with machine learning capabilities, which increase business efficiency by autonomously adjusting processes within stated guidelines to avoid losses in organisational performance (Adel, 2022:5). Smart manufacturing allows designers to store the design files of manufacturing items in the cloud, protected by encrypted access control, but which allows access from various points for password holders (Adel, 2022:6).

With IoT, more importance is being placed on using sensors and connected devices without the need for human interaction or intervention, emphasizing time-sensitive product shelf life, food safety and quality assurance as key drivers to ensure an airtight logistics approach for food and beverage companies (Schug, 2017:58). Scalable, cloud-based supply chain solutions will enable food and beverage processors to gather, store and use data while ensuring data availability throughout the entire supply chain. With a vast amount of data needing to be stored, companies have realised that having a data management strategy is just as important as having the information itself (Schug, 2017:66). Industry 5.0, however, goes deeper than only providing solutions, but it also aims to eliminate waste throughout the process, with environmental impact awareness and sustainability at the forefront.

Meeting consumers' needs today without future generation's needs being compromised (Nieto et al., 2023:22) highlights the responsibility of a company to all its stakeholders, which includes shareholders, customers, employees, suppliers, and communities. This resonates with Peter Senge's three-nested dependency sustainability model (Figure 2.1). Senge, an American systems scientist, shared reflections after he attended the Circular Economy Conference in October 2015, where he highlighted the status quo where companies are using a "linear" growth model, which requires enormous amounts of resources (Senge, 2015:12); thus, relying on consumption to achieve growth instead of looking at efficiencies and waste elimination to drive up profit margins and drive down the product cost. With up to 80 percent of all products being discarded within six months of purchase, Senge highlighted the clear need for sustainable, systems thinking – a viewpoint he had already cemented in his book *The Fifth Discipline* (1994).

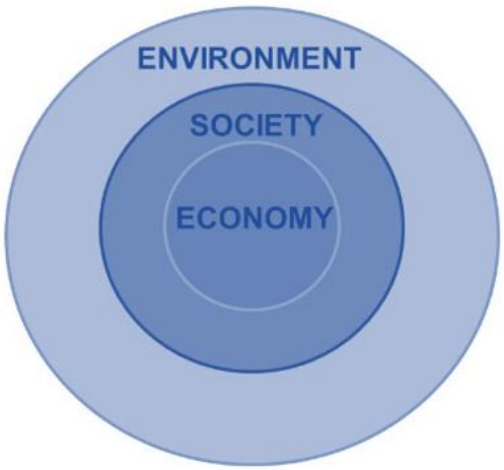


Figure 2.1: Peter Senge's Nested Dependency Model (Senge, 2015)

Internal supplier and customer collaboration are mentioned by Nieto et al. (2023:9) as a contributing factor to supply chain sustainability. Cross-functional process management and integration, collaborative planning and technical integration with suppliers, and transparent communication with customers all add value by reducing the scope for error and eliminating waste. Against this backdrop, it is important to note that companies are experiencing massive successes in various industries by reducing the use of paper by using digital technologies, which not only is good for efficiencies and profits but also aligns a company to become digitally ready while ensuring minimal impact to the environment it operates in.

2.3. Risks and challenges of digital transformation

Regarding Industry 5.0, Nahavandi (2019:4381) focuses our attention on the expectations of humans to add a series of high-value tasks to manufacturing policies, which include troubleshooting issues, quality control and inspection, supervising and maintaining automated systems, using decision-making skills to ensure smooth operations, doing complex and subjective tasks, subtle defects detection, product aesthetics assessment, and critical judgements, which machines may struggle with on their own. Senior stakeholders and members of society may find it difficult to adapt to the innovations of Industry 5.0, and due to its level of innovation, the need to prevent any serious issues between technology and society, through relevant legislation, is crucial. For instance, Nahavandi (2019:4381) posed the consideration of how ethical principles could be incorporated into autonomous systems, adding that these ethical behaviours should be subject to validation and verification.

For FMCG companies producing food and beverage products, Schug (2017:58) flags stringent government regulations to manage the risk of expiring stock due to forecast inaccuracies and adapting to changing consumer preferences as challenges that could impact supply chain efficiencies negatively, resulting in low-profit margins. Effective supply chains should not only be quick to respond to sudden shifts in demand (Blanchard, 2021:11), but they should also have the essential internal employee skills needed to future-proof the company. Adel (2022:9) concurs that due to the requirement of human workers to work with advanced robots, also called cobots (collaborative robots), it is imperative to develop problem-solving, analytical, and technical skills.

Adopting Industry 5.0 is expensive as it requires smart machines and highly skilled employees to increase productivity and efficiency (Adel, 2022:9). Not only are the advanced technologies expensive with extensive implementation timeframes, employee training costs for relevant skill development to ensure 'readiness' can add additional financial strain. Warnich, Carrell and Elber (2021:195) stated that, for the first time in history, four generations are sharing the workplace with each generation having a different set of behaviours, ideas, attitudes, expectations, and motivators. They also have different levels of computer and technical skills, which brings another layer of complexity.

Adapting digital technologies can be overwhelming and disruptive for some employees, and it is important to ensure high levels of employee engagement throughout the process, which will relate to an employee's sense of effective connection with their work activities. Engaged employees are more likely to be productive and higher performing (Smith, 2020); this creates the sense that they can deal well with the demands of the job (especially during times of rapid change). Markos and Sandhya (2010:90) are of the notion that engaged employees have an emotional attachment to their company and are highly involved in their jobs with great enthusiasm. Employee engagement has a significant effect on the performance of employees and team and co-worker relationships, and the total working environment, which all affect the bottom line of a company. Deloitte Insights (2015) highlighted five elements that drive engagement, as depicted in Figure 2.2.

Meaningful work	Hands-on management	Positive work environment	Growth opportunity	Trust in leadership
Autonomy	Clear, transparent goals	Flexible work environment	Training and support on the job	Mission and purpose
Select to fit	Coaching	Humanistic workplace	Facilitated talent mobility	Continuous investment in people
Small, empowered teams	Invest in management development	Culture of recognition	Self-directed, dynamic learning	Transparency and honesty
Time for slack	Modern performance management	Inclusive, diverse work environment	High-impact learning culture	Inspiration

Figure 2.2: The five elements that drive engagement (Deloitte Insights, 2015)

IoT and digitalisation ensure seamless communication of data point information by converting information into uniform digital format and enabling devices to read, analyse and share information throughout the supply chain. Unfortunately, approvals-based data from paper forms

and email trails, as exists in parts of Company A at present, means the company is unable to relay information effectively, and important data points on these paper-based processes are normally lost in the process (Schug, 2017:62) making traceability and implementing proactive preventative measures, in line with food safety regulations, virtually impossible. But with data also comes a risk and responsibility to ensure sensitive information is managed effectively and stored securely. Industry 5.0 employs nodes of the IoT to allow for interaction with various devices, and within that lies the security challenges faced to try and create trust in cyber ecosystems (Adel, 2022:9). To create the trusted high-security environment needed, Industry 5.0 makes use of information and communication technologies requiring high levels of authentication when accessing all linked communication technologies (internet, wireless networks, cellular phones, computers, software, video-enabled-conferencing, social networking and other media applications. Lastly, ensuring employee readiness for change implementation and adaptation is a challenge that needs attention and that is the focus of this research.

2.4. Change management: theories and models

Pîslă, Irimias and Muntean (2010:164) positioned change management as part of Economic Sciences, which transforms complexity and specialisation into actions and results by applying a set of abilities, techniques, and disciplines. Alhinaai (2023:11) describes change management as a key strategy, where change is seen as a positive development, converting fear of change as a risk into something that can be seen as an opportunity for improvement.

In an environment where change is ever-present, and with increased effectiveness as a goal, organisational change is the movement of a company away from the status quo towards the improved desired state (Motzer, Armellini & Pelletier, 2020:157). Lack of skills, knowledge or confidence, Cameron and Green (2019.58) highlighted as potential reasons why employees may resist change as it may lead to feelings of increased insecurity. Similarly, not understanding the reason, impact, or benefits of the change may also result in resistance. The technological advancements brought by Industry 4.0 and Industry 5.0 have created a constant environment of change; this could cause anxiety for managers.

Most company leaders find it difficult to develop and implement large-scale change, with up to 93 percent unable to meet the change goals at hand, which could lead to the loss of a competitive advantage due to missed opportunities and the wastage of limited financial

resources; it could also reduce employee engagement and productivity (Heckelman, 2017:13). Harrison, Fischer and Walpola (2021:86) affirm the difficulties managers face, adding that both leadership and management change is often unsuccessful, citing change fatigue, or a substantial lack of sufficient change management principles being applied. Emphasising the additional complexity that this creates, for change to be successful there must be authentic, committed leadership visible to everyone within the company for the full duration of the initiative (Harrison et al., 2021:91). Change management strategies need to be carefully considered to achieve a successful implementation of the planned change. According to Alhinaai (2023:12), most change management models encompass three main phases – preparing for the change, managing change implementation, and consolidating the change. Various change models are available to guide the process.

2.4.1. Kotter's Change Model

Kotter's eight-step change model remains a highly recommended point of reference for managing change from the perspective of managing the employees involved in the change. Guiding elements that need to be present to ensure successful organisational transformation are indicated by the model. Kotter (2007) recommends following the steps in sequence and allowing ample time for each step to ensure maximum results during change, as any critical mistake or omission at a step may slow change momentum and negate hard-won gains. Kotter's eight steps are listed in Table 2.1.

Table 2.1: Kotter's eight-step change model

Step 1	**Establishing a sense of urgency**. Exploring market and competitive realities will enable the identification of crises, potential crises, or major opportunities for discussion.
Step 2	**Forming a powerful guiding coalition**. To lead the change efforts, a group with enough power needs to be assembled who will encourage the group to work as a team.
Step 3	**Creating a vision**. This helps to guide the change efforts in the right direction, developing strategies for achieving that vision.
Step 4	**Communicating the vision**. Using all communication tools available to distribute the new vision and strategies, and cementing new behaviours by the example of the guiding coalition.
Step 5	**Empowering others to act on the vision**. Obstacles to change should be removed by changing structures and systems that undermine the vision. Encourage risk-taking and non-traditional ideas, activities, and actions.
Step 6	**Planning for and creating short-term wins**. Plan and create visible performance improvements; recognise and reward employees involved in improvements.
Step 7	**Consolidating improvements and producing still more change**. Systems, structures, and policies that do not fit the vision need to be changed by utilising increased credibility. Follow through by hiring, promoting, and developing employees who have shown they can implement the vision.
Step 8	**Institutionalising new approaches**. Highlight connections between new behaviours and corporate success. Ensure leadership development.

Source: Kotler (2007)

2.4.2. Prosci ADKAR Model

According to Thekkekara (2023:4), the literature indicates that ADKAR is a model widely applauded as the best-suited model for change management; it was developed and first published by Jeff Hiatt in 2003. The effectiveness of the model can be found in its participatory approach when dealing with change. Moreover, as in Figure 2.3, the model is used to make sense of and plan for change while focusing on the actions and outcomes required for change.

'ADKAR' is an acronym for the five stages of change (Thekkekara, 2023:4):

- Awareness entails ensuring every employee understands the need for change by answering the questions, 'why', 'what', and 'when'. To achieve this, effective communication is crucial.
- Desire requires employees to want to take part and implement change in their regular work.
- Knowledge is the next step and highlights the importance of providing knowledge on how the change will be achieved. Gap assessments between current knowledge and required knowledge to implement change will guide the amount of development and training needed to action the change.
- Ability is the potential to learn new skills for change implementation, but the company needs to ensure it provides sufficient resources and time to enhance the ability of its workforce.
- Reinforcement is all about sustaining the implemented change. Milestones celebrations, positive feedback (rewards and recognition), and sharing success stories are all methods of reinforcement change.

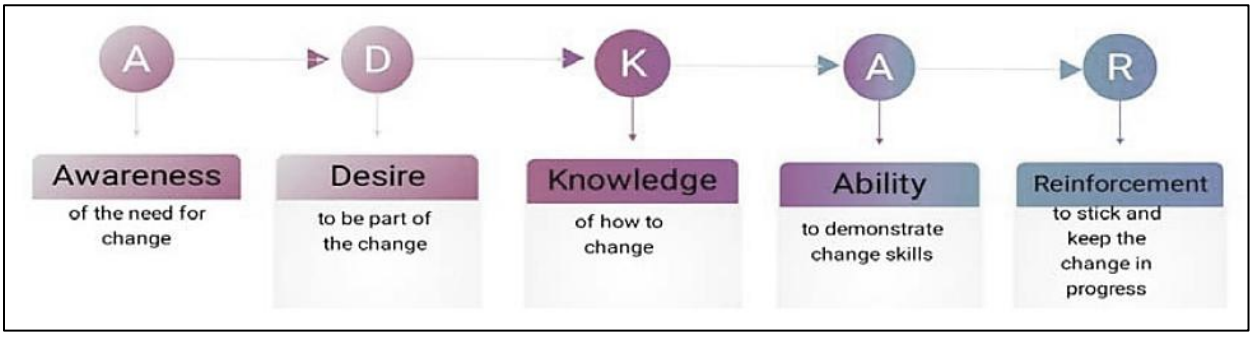


Figure 2.3: ADKAR Model five dimensions (Alhinaai, 2023)

2.4.3. Lewin's Three-Step Process Model

Another popular change model is that of Kurt Lewin, which balances the driving and restraining forces to manage company changes such as digital transformation, software implementation, and business process improvements (Malik, 2024). Burnes (2020:32) refers to Kurt Lewin's article “Changing as Three Steps: Unfreezing, Moving, and Freezing”, while Lewin (1947:34) himself explained his approach to successful behavioural change as consisting of three aspects: unfreezing, moving (change), and freezing again (later changed to refreezing) as shown in the visual in Figure 2.4.

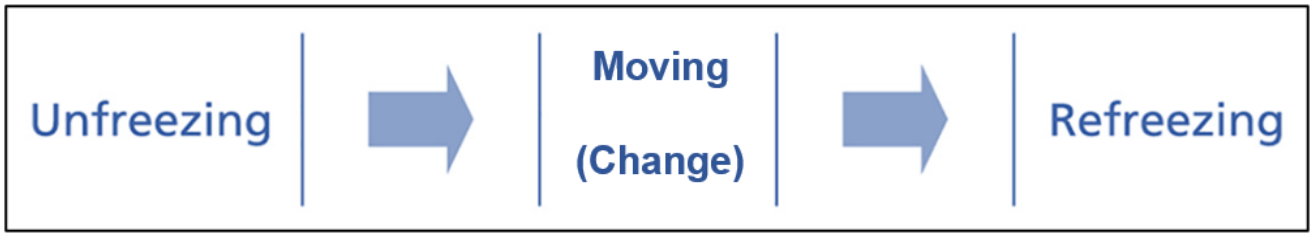


Figure 2.4: Lewin's Three-Step Process Model (Cummings & Worley, 2015)

This model also helps in assessing the forces that resist and those that take the transformation forward. The steps can be explained as follows (Gupta, 2018:18):

- Unfreeze: since most people resist change, this stage is crucial where “thawing” or “unfreezing” occurs and must be managed through adequate preparation and motivation.
- Change: it is also referred to as the transition stage – after change is initiated a reaction to the change is imminent, and must be dealt with adequately by ensuring leadership, support, communication and reassurance while the new way of working is being embraced.
- Refreeze: the change will become the new norm once successfully implemented and accepted; thus, the employees are “refrozen”, cementing the new way of work.

Lewin’s framework will facilitate the identification of the critical transformation barriers within the company at every stage of the change process, which will be applied to this research study approach.

2.4.4. Company cultural change

Heckelman, Unger and Garofano (2013:25-29) highlight five guiding principles for achieving cultural change within a company. As cultural change is seen as a large-scale change, following these principles will improve the probability of successful transformation as an outcome, as described by Heckelman et al. (2013:25):

- Change takes place more effectively when driven at three levels: organisational, team, and individual. The consistency in approach and reinforcement helps drive behavioural and cultural change.
- Change is adopted by connecting individual beliefs to organisational results. Individual beliefs and experiences guide actions, which in return deliver an outcome or results.
- Change requires a planned and disciplined implementation cascade. Repeated efforts are needed for behavioural change, with a cross-functional team driving implementation.
- Change is accelerated by equipping leaders to lead through the transition. Leaders need to be change champions while conveying the learning and displaying a convincing commitment to the new company strategy and vision.
- Change implementation calls for frequent and ongoing communication and calibration. Communication, measurement and the reporting of successes and progress are seen as critical components for lasting change success.

2.4.5. Systems Thinking

With the force Industry 4.0 opened new opportunities, and the new opportunities and risks Industry 5.0 brings, the pace of change in the world is set to increase more rapidly, which will affect environmental and social fluctuations, ease of communication, international trade, and political decisions. Environmental, geo-political, and industry components that used to be seen as separate are now truly interconnected and interdependent, which could produce highly complex and unpredictable outcomes. Systems thinking, born from the yearning of academics to better understand the root of complex behaviours while creating the capability to predict and influence them, is believed to be key in dealing with the complexity facing a globalised future in the coming decades (Arnold & Wade, 2015:669).

Systems thinking is not a new concept and Monat and Gannon (2015:13) refer to the contribution of Weinberg (1975) in his book *An Introduction to General Systems Thinking,* which

introduced useful systems thinking concepts of randomness versus complexity, while developing three systems thinking questions, still relevant today:

- Why do I see what I see?
- Why do things stay the same?
- Why do things change?

Senge (1994) provides a generic definition of systems thinking in his book *The Fifth Discipline.* Senge (1994) describes it as a discipline for seeing wholes (a framework for seeing interrelationships rather than things, and for seeing patterns of change rather than snapshots). Monat and Gannon (2015:14) describe Senge‘s book as pivotal, as for the first time systems thinking (the fifth discipline) is applied to management in organisations, integrating the other four disciplines of personal mastery, mental models, building a shared vision and team learning needed for a learning organisation. Management, using systems thinking tools, can identify the interconnectedness and interrelated nature of various entities that make up the whole system, allowing a ‘big picture’ view for leaders on areas that require attention and the focus to maximise performance. Senge (2015:12) later expanded the importance of systems thinking and the contribution it could bring to organisational sustainability, developing the nested dependency model (see Figure 2.1), indicating the interrelatedness of economy, society, and the environment.

Kim (1999:2) defines a system as a complex and unified whole that has a specific purpose, made up of groups where parts are interacting, interrelated or interdependent; and the author (1999:2) further interprets systems thinking as a way of seeing and talking about reality (perspective) that helps people better understand (and work) with systems, by making use of a range of tools that assist with visual capturing and communicating about a system. Reality is viewed from multiple levels of perspective, referred to as “The Iceberg” framework, with different levels of perspective reinforcing the current event-oriented world influenced by events (the tip of the iceberg or day-to-day occurrences encountered), patterns (accumulated memories of these events), and systemic structures developed as a result of mental models (beliefs and assumptions), which generate the patterns and events we observe (Kim, 1999:4).

Donella Meadows (2008:11) defines a system as a coherently organised, interconnected set of elements that achieve something; in addition, a system is more than just the sum of its parts as

it may display and demonstrate adaptive, dynamic, goal-seeking, self-preserving, and sometimes evolutionary behaviour (meaning completely new, never-before-imagined systems could arise out of an existing system). Monat and Gannon (2015:12) refer to Meadows' book *Thinking in Systems: A Primer* (2008) as a seminal work on systems thinking and they highlight the importance of the contribution, as Meadows expands on stock and flow diagrams, feedback loops, resilience in systems, and unintended consequences.

Arnold and Wade (2015:670) assert that all people in decision-making roles (regardless of the industry or scope) should have a firm grasp of systems thinking; describing systems thinking as a series of elements, all aimed at reducing complexity by modelling systems conceptually and identifying and understanding non-linear relationships within that system. Through a comprehensive literature review of respected system thinking experts, Arnold and Wade (2015:674) highlighted common elements in these academic definitions, which include interconnections, the understanding of dynamic behaviour, systems structure as a cause of that behaviour, and the view of seeing systems as wholes rather than parts (the comparison is illustrated in Figure 2.5).

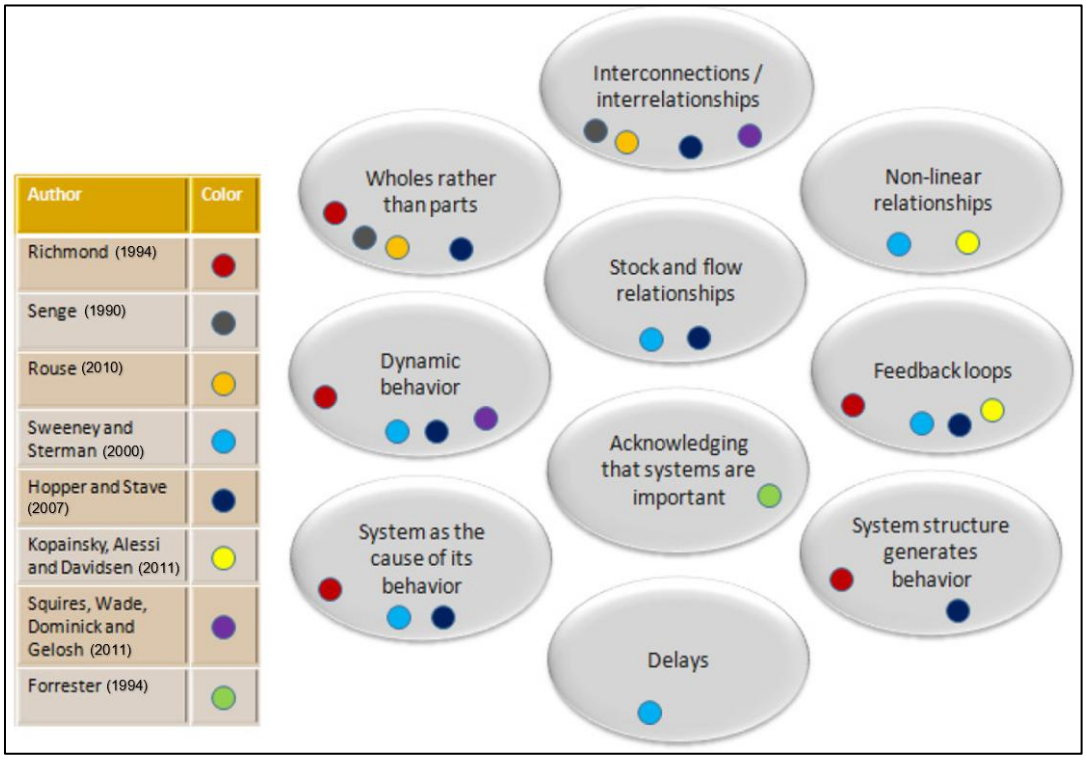


Figure 2.5: Comparison of systems thinking definitions (Arnold & Wade, 2015)

Armson (2017:20) is of the view that a systems thinking approach enables working out what to do, rather than being told what to do, in ‘messy’ situations. ‘Messes’ are different from difficulties, and the characteristics include unboundedness, interconnectedness, high levels of ambiguity, uncertainty, instability, constant evolving, and a large number of people who are involved (Armson, 2017:22). Engaging with messes requires a wider or big-picture view to be gained through holistically framing the mess (discovering improvements with no negative impact in other parts of the mess), by gaining multiple perspectives (the way someone categorises, codifies and makes sense of their experience), while ensuring active listening and applying a non-judgmental attitude (Armson, 2017:46).

A good way to holistically frame a mess and use the creative right-hand side of the brain, which deals with interconnections, patterns and non-verbal representations, is by drawing a rich picture (Armson, 2017:68). A rich picture is a representation of the situation, by using pictures and symbols and highlighting the elements, questions, observations, understandings and insights of the drawer; it can also be a shared effort by allowing multiple parties to participate, gaining additional perspectives on the mess (Armson, 2017:68). The participants in this study will be asked to draw a rich picture to establish if the perspectives derived from the illustrations can deliver any valuable insights in to why there might be some employee resistance to the digitalisation of the unautomated POD section of the claims process.

A good rich picture, full of activity, detail and interconnections of the messiness of the complex situation will help with theme identification. Themes provide a starting point and a way of thinking simply about the mess. Armson (2017:81) provides four rules for themes:

- No more than two or three words to name the theme.
- Do not name the problem.
- Make no judgments in naming themes.
- Pick themes that appear in several points of the situation.

Armson (2017:86) cautions that human characteristics, including things we are good at, can cause humans to become trapped. The word ‘trap’ is a revealing metaphor, expressed when options seem limited. Messes set traps, with every possible escape route creating additional complexity. Armson (2017:87) provides four significant thinking traps:

- Value rigidity of inappropriate values are attributed to facts or goals.

- Habit traps can blind and immobilise, and they include the victim trap, blame stories, and group think.
- History traps suggesting embedded ideas and assumptions, valid for different times, may trap thinking if unchallenged.
- Dilemmas is a decision only offering two unattractive options.

Systems thinking will be used in the study to identify and understand the interconnectedness of the employees' perceptions of digitalisation, and the barriers or resistance that sprout from those perceptions that might affect the adaptation of new digital solutions.

2.5. Digital readiness

Digital readiness is described as the degree to which a company can take advantage of the available Industry 4.0 technologies, and be digitally prepared (Hizam-Hanafiah, Soomro & Abdullah, 2020:2). To successfully master digital transformation, researchers and consultancy firms have developed a variety of digital readiness models in recent years. These models are also treated as a management tool for the realignment, reconfiguration, and renewal of a company's existing capacities and capabilities (Soomro et al., 2020:3599).

One of these readiness models, referred to by the acronym TOE, was developed by Tornatzky and Fleischer, and consists of Technological (how technological practices can add meaning), Organisational (the scope, company size, decision-making, managerial structure, and human resources), and Environmental (multiple stakeholders such as competitors, suppliers, customers, and government).

Soomro et al. (2020:3602) conducted a thematic analysis of the literature based on 119 dimensions in 22 readiness models. They identified four major themes (as depicted in Figure 2.6), based on the concept of digitalisation and encompassing micro and macro company environment perspectives:

- Digital agents and skills
- Digital tools and applications
- Digital systems and infrastructure
- Digital eco-system and culture

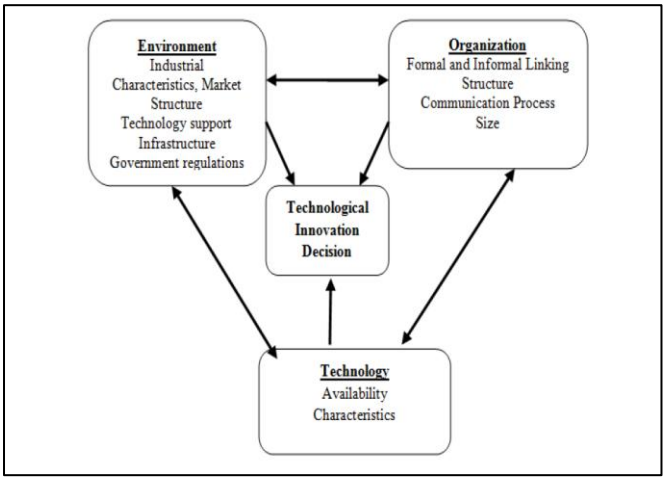


Figure 2.6: TOE Framework (Soomro et al., 2020)

Digital skills requirements will lead the Future of Work (FOW), which in terms of people development will mean the upskilling and re-skilling of the workforce. Digital intelligence (human interaction with a digital environment) is also gaining momentum with the advancements in digital readiness models, as illustrated in Figure 2.7 (Soomro et al., 2020:3597).

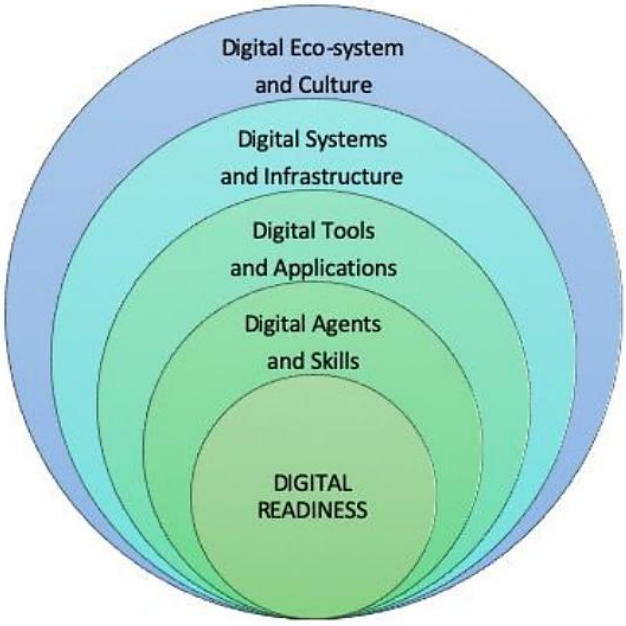


Figure 2.7: Critical success factors for assessing the digital readiness of organisations (Soomro et al., 2020)

2.6. Mitigating digitalisation risks

Leading industry reports predict that most companies will have increasing skills gaps in the years to come, with employers now seeking employees with a range of skills, such as critical thinking, and analytic and problem-solving skills, alongside self-management, adaptability, and resilience (McKinsey, 2021). As organisations digitally transform, employers will need to pay increasing attention to employee well-being, as factors such as workplace resilience and adaptability are likely to influence the success and speed of digital transformation (Trenerry et al., 2021:5). Trenerry et al. (2021:5) state that additional factors at individual level like skills and training, workplace resilience and adaptability, and work-related wellbeing will become just as important as the digital transformation the company is trying to achieve.

Leonardi, Huysman and Steinfield (2013:5) and Anders (2016:224) state that the level of team virtuality can be enhanced by implementing collaboration technologies, such as video conferencing software, for example, Microsoft (MS) Teams, Zoom or Skype, instant messaging (IM) platforms (e.g. WhatsApp), and project management software. The enhanced virtuality of work teams instils collaborative work practices, efficient knowledge sharing, and transparency of work processes (Anders, 2016:229). At group level, Trenerry et al. (2021:10) place high value on team communication and collaboration, as effective collaboration among co-workers is positively linked to high levels of innovative performance, while the use of technological tools to coordinate work tasks reaffirms the concept of team virtuality. Cortellazzo, Bruni and Zampieri (2019:1938) state that at organisational level, technological advancement poses new challenges and requires leaders to take up new responsibilities and simultaneously enhance leadership skills; while Dery, Sebastian and Van Der Meulen (2017:140) indicate that this develops responsive leaders who are confident and encourage experimentation with new technologies and provide opportunities and resources for continuous learning.

2.7. Sustainability – the three-nested dependency approach

“Do we have the right to burden our descendants with economic debt, social disorder, resource depletion, ecological degradation, and climate instability?”

“Is it legitimate for us to enjoy a high quality of life at their expense?”

“What are our responsibilities to future generations?”

These are the intergenerational justice questions posed by Thiele (2024:1) in his book appropriately titled *Sustainability* to kickstart a conversation that if a different approach to the current trends of diminishing biodiversity and the depletion of natural resources does not lead to improvements, future generations may be faced with a less hospitable planet. Sustainability, as per Caradonna (2022:12), contains four intellectual foundation features, namely:

- Human society, the economy, and the natural environment are all interconnected: the profound impact this school of thought had on the systems thinking approach application to sustainability is evident as it forms the foundation of the three-nested dependency sustainability model of Peter Senge (see Figure 2.1); thus, affirming that for a society to be considered sustainable, both environmental and socio-economic matters must be tackled. Another nested model, the 3BL, signals to stakeholders that the operating principles within the company are consistent with that of sustainable development considering social, economic, and environmental aspects.
- A society will respect ecological limits or face collapse: the premise that humans need to live within sustainable limits is now a basic mainstream assumption.
- A society that hopes to stick around long-term needs to plan wisely for the future: the ethical consciousness of sustainability highlights the need to plan for the future.
- Localise, decentralise: bring awareness to the orthodox practices of industrialism, highlighting that in its current form, with power nested in the hands of a few elites, high fossil fuel reliance and long transportation requirements, it is fuelling the global countermovement of ‘going small’ or ‘buying local’.

Definitions of sustainability may vary, but all include the promotion of growth, considering the sustainable development three pillars, and acknowledging the role of the environment, while creating conditions where the needs of future generations are not compromised by the current generation (Farley & Smith, 2020:12). The digital transformation brought on by Industry 4.0, and the trends seen within supply chains around the globe, while addressing efficiency concerns, created a digital skills gap needed for FOW. For a company to be truly sustainable and respond to environmental impulses, a high level of resilience is needed, including the ability to adapt quickly to digital systems (i.e. reducing long downtime while eliminating waste).

2.8. Conclusion

Industry 5.0 will integrate intelligent devices, intelligent systems, and intelligent automation with the physical world in cooperation with human intelligence. As autonomous robots integrate into human's place of work it is important to nurture trust and reliability between these two parties. By applying change management principles, companies can mitigate any deviations from the company vision and seamlessly integrate humans and machines within the workplace by ensuring employees' digital readiness, and the adaptation agility needed to ensure company sustainability.

In the next chapter the research design and the sampling strategy and study population will be explained while providing insights on ethical considerations, data gathering, and analysis.

CHAPTER 3 RESEARCH DESIGN

3.1. Introduction

In Chapter 2 the pragmatic consideration of reliable sources highlighted the change management principles, benefits, and challenges when moving from a paper-based to a digital system. Chapter 3 provides clarification on the research design and methodology applied. The sampling strategy, study population and selection process are explained, while data gathering, the analysis thereof, and the ethical considerations are also highlighted.

3.2. Research design

The research design selected provided a framework to collect, examine and analyse the data, enabling the researcher to answer the research questions at hand in line with the evaluation criteria of reliability, replicability, trustworthiness, and authenticity (Bryman et al., 2021:99). The framework assisted with the effective planning of the study to ensure that all elements of the investigation are addressed adequately, and it also aided the researcher to reach findings that address the challenges highlighted in the literature review. Saunders, Lewis and Thornhill (2019:136) point out that the research design is your plan on how you intend to address your research questions, and it will be influenced by the intended subject matter and the problem you would like to investigate. According to Pandey and Pandey (2021:18), the purpose of the research design is to maximise information for effective research, with minimum time, money and effort spent, while facilitating and providing direction for smooth scaling. The authors (2021:19) add that the research design provides the blueprint for one's research operations and guides the method used to collect data, and the techniques used to analyse the data.

The aim of dealing with a research topic is to discover something new or interesting, either on a topic never researched before, or exploring new ideas or hypotheses on an existing topic (Swedberg, 2020:17). Swedburg (2020) confirms that this is the quintessential definition of exploratory research in the Social Sciences, and in a sense it is the need to say something new on a topic through research (and not only to repeat what is already known). As a quantitative study would not produce the granularity needed to understand the problem at hand, this study employed a qualitative methodology to better understand the reasons for the resistance some employees experience to digitalisation at Company A. Table 3.1. highlights the key differences between quantitative and qualitative research:

Table 3.1: Key differences between qualitative and quantitative research

	QUALITATIVE RESEARCH	QUANTITATIVE RESEARCH
OBJECTIVE	To gain a contextualised understanding of behaviours, beliefs, and motivation	To quantify data and extrapolate results to a broader population
PURPOSE	To understand why? How? What is the process? What are the influences or context?	To measure, count, or quantify a problem. To answer: How much? How often? What proportion? Which variables are correlated?
DATA	Data are words (called textual data)	Data are numbers (called statistical data)
STUDY POPULATION	Small number of participants; selected purposively (non-probability sampling) ***Referred to as participants or interviewees***	Large sample size of representative cases ***Refer to as respondents or subjects***
DATA COLLECTION METHODS	In-depth interview, observations, group discussions	Population surveys, opinion polls, exit interviews
ANALYSIS	Analysis is interpretive	Analysis is statistical
OUTCOME	To develop an initial understanding, to identify and explain behaviour, beliefs or actions	To identify the prevalence, average, and patterns in data. To generalise to a broader population

Source: Hennink, Hutter and Bailey (2020)

Hennink, Hutter and Bailey (2020:10) define qualitative research as an umbrella term of techniques and philosophies that allow the examination of people's experiences, from the perspective of the study participants, by using research methods that include in-depth interviews, observations, content analysis, and discussion focus groups. This allows for the meaning and interpretation clarification that the participants give to behaviour, events, or objects (Hennick et al., 2020). These authors (2020) state that this is referred to as the interpretive approach, which was applied in this study, as it seeks to embrace and understand influences that will add additional context to the research issues.

3.3. Research paradigm adopted

According to Saunders et al. (2019:119), the categorisation function of Social Science paradigms is helpful as it can be used in management and business research to generate fresh insights into real-life issues and problems. The interpretive paradigm was used in this study,

and as noted by Saunders et al. (2019:121), this interpretivism philosophical position was an attempt for the researcher to make sense of the world. The epistemology (or researcher's view on the acceptability of knowledge) focuses on the subjective meanings and social phenomena (focuses on the situation and the reality behind these details); whereas the axiology indicates the research is value bound and the researcher is part of what is researched; hence, it cannot be separated and it will always be subjective.

3.4. Research method

Research methodology is defined by Bhattacharyya (2006:17) as scientific and systematic research problem-solving (how research should be undertaken), and that the approach will be prescribed by the topic or problem being investigated. Research methods, on the other hand, are the techniques and procedures the researcher employs to obtain and analyse data while conducting the research (Saunders et al., 2019:3). To simplify, research methodology deals with the research methods, while ensuring consideration is taken to ensure the logic behind the methods being selected and applied is valid.

The qualitative research method, as described by Saunders et al. (2019:151), can be seen as data other than words and includes any data collection technique (like interviews) or data analysis procedure (such as thematic analysis) that generates or uses non-numerical data. This can sometimes include the use of pictures and video clips; pictures were used in this study. Bryman et al. (2021:58) assert that qualitative research places emphasis on people and how they interpret the social world and reality around them, which is constantly evolving and shifting as people interpret it and create their unique perceptions. It is these perceptions that cannot be captured by standardised questionnaires, confirming that the appropriate method to investigate this research problem at Company A should be a qualitative one.

The emphasis on understanding the social world through examining participants' viewpoints is described as an interpretivist epistemological position, while an inductive approach was adopted in this study, which cemented the link between the theory and the research that was generated from this theory. The burning desire of this research study was to explore the participants' perceptions on the reasons why there might be resistance towards digitalising paper-based processes at Company A. Thus, semi-structured, open-ended, one-on-one interviews were selected as the qualitative primary data collection method.

Like unstructured in-depth interviews, open-ended, semi-structured interviews are referred to as non-standardised qualitative research interviews, as the researcher will have guidelines on the themes and questions that need to be covered but has the freedom to change the order or omit some questions depending on the respondents' replies and perception context, and to ensure a good flow throughout the interview process (Saunders et al., 2019:320). Similarly, additional questions may also be explored when they are in line with answering the research question(s) or attaining a research objective. Cassell and Symon (2004:11) add that a low degree of structure is imposed by the interviewer by utilising this method, with the focus on specific situations and actions that speak to the participants, and the world they experience.

3.4.1. Study themes

Researchers using qualitative thematic data analysis applying relevant themes from secondary research and interview transcripts or field notes to find patterns (Bryman et al*.,* 2021:83). Terry, Hayfield and Clarke (2017:17) describe thematic analysis as a data analysis method in the Social Sciences that aids in identifying themes in qualitative data. Riger and Sigurvinsdottir (2016:33), in turn, state that thematic analysis is concerned with searching for reoccurring ideas or themes in a set of data that has been collected, as organising information in themes is a core process of the qualitative research approach. A theme should not only capture an important relevance to the research question but should also emerge multiple times within each interview. Riger and Sigurvinsdottir (2016:34) highlight that codes are generated by the researcher that help organise and classify data, aiding the generation of qualitative data themes.

3.4.2. The purpose of an interview schedule

With the use of open-ended, semi-structured interviews, the prompts derived from the theoretical research evoke maximum focus on the key terms and concepts relevant to the research (Cassell et al*.,* 2004:79). Open-ended questions are used to allow participants to give answers in their own way (Saunders et al., 2019:374). Pandey and Panday (2021:62) indicate that an interview schedule helps to explore the research problem's context by formulating a list of simple, clear, and topic-relevant questions derived from related and pertinent themes identified in the literature reviewed.

The interview schedule provides the researcher with a roadmap during the interview, allowing the freedom to observe the perspective of the participant, as well as to bring in the human touch by being able to listen to understand (Pandey & Panday, 2021:63). As the researcher has a structured reference point in the questions of the interview schedule, energy can be spent instead on encouraging open discussion and creating trust to ensure that participants feel comfortable to share their perceptions freely and without fear. Table 3.2. links the research questions with the relevant literature reviewed, which aided in identifying the underlying theme.

In addition to providing a structured framework for interviews, an interview schedule also helps as a piloting tool, where the researcher can practice and time the session, giving valuable insights into the time needed per session (Cassell, 2015:44). As a structured reference point for the researcher, it facilitates the systematic collection of comparable data across different participants, and enhance the reliability and validity of the data collected, as interviewer bias is reduced.

Bearman (2019:1) describes writing semi-structured interview schedules as a basic building block for qualitative research and suggests considering which core event(s) illustrates phenomena of interest ensuring to optimise natural conversational flow, and like Cassell (2015:44) recommends a series of piloting practice runs to allow for refining the schedule.

The interview schedule during this study added tremendous value by listing the questions by section, with follow-up questions. This not only standardised the researchers' approach during the interview process, removing potential bias, but also added tremendous value during the data analysis stage, as the responses could be grouped into distinct sections, which helped to isolate linked data for effective analysis.

Table 3.2: Research questions and related themes from literature (Chapter 2)

Research question	The literature theme supporting this question	Authors of the theme
RQ1: What digitisation of paper-based processes has been implemented within Company A, and are these changes, based on the literature review's insights, in line with industry trends?	Theme: The role and impact of Industry 4.0 on current supply chain trends within the FMCG Industry Automated systems including AI, robots, and nanotechnologies as the main features of Industry 4.0 Implementing these exponential technologies increases company flexibility and the ability to customise while reducing costs. Production efficiency is driven by smart and connected industrial automation machines with machine learning capabilities. Smart manufacturing allows designers to store the design files of manufacturing items in the cloud, protected by encrypted access control, but it still allows access from various points for password holders.	Tjahjono et al. (2017) Section 2.2.1. Adel (2022) Section 2.2.3.
RQ2: What risks need to be considered to ensure high levels of adaptation and employee readiness when implementing a digital system?	Theme: Risk considerations to ensure digital readiness and adaptation Employees may resist change as it may lead to feelings of increased insecurity. Similarly, not understanding the reason, impact or benefits of the change may also result in resistance. The technological advancements brought by Industry 4.0 and Industry 5.0 have created a constant environment of change. Most company leaders find it difficult to develop and implement on a large scale, resulting in a reduction in employee engagement.	Heckelman (2017) Section 2.4.
RQ3: How can the risks in changing from manual to digital be overcome?	Theme: Mitigating change management risks Kotter's eight-step change model remains a highly recommended point of reference for managing change from the perspective of managing the employees involved in the change. Guiding elements ensure successful organisational transformation. ADKAR is a model widely applauded as a best-suited model for change management and it was developed by Jeff Hiatt in 2003. The effectiveness of the model can be described as its participatory approach when dealing with change. A Rich Picture is a representation of a situation by using pictures and symbols, and highlighting the elements, questions, observations, understandings, and insights of the drawer. It can also be a shared effort by allowing multiple parties to participate, gaining additional perspectives on the mess.	Kotter (2007) Section 2.4.1. Thekkekara (2023) Section 2.4.2. Armson (2017) Section 2.4.5.

Source: Researcher's compilation (2024)

In Table 3.3. the research questions were answered by developing an interview schedule that aided the researcher during the semi-structured interviews. Appendix B contains the interview schedule with three sections (Appendix D is an adapted version of Appendix B to accommodate written feedback from managers). Section A (questions A1 to A4) covers socio-demographic questions to establish whether there has been exposure to automation or digitalisation in the area of work, and the participant's job level and years of experience. Teams were selected from different business units to ensure a balanced view.

In Section B the participants were requested to draw a rich picture in advance to explain what 'digitalisation' means to each of them in terms of the non-automated POD section of Company A's claims management process, which enabled the researcher to apply a systems thinking approach during the post-interview analysis. The instructions were sent to the participants after ethical clearance was obtained from the UFS. The rich picture instructions included an explanation and tips (Appendix A) on drawing a rich picture, and the participants were asked to do this in preparation for the interview. Brailas (2020:4448) believes that a visual component to a qualitative interview adds extra value and does not reduce the importance of the verbal interview component, as both visual and word-based research methods offer multiplicity and complexity exploration. Pre-interview activities can support participants in identifying central ideas and elicit further verbal data by asking participants probing questions in reflection on what they have drawn (Ellis, Hetherington, Lovell & McConaghy, 2012:488). The visual part of the pre-interview approach can be used to build rapport and as a technique to evoke discussion during the interview process with a participant. As the drawing precedes the verbal interview, the research agenda is less limited, and the approach is less directive, as confirmed by Brailas (2020:4451).

Section C (questions C1 to C9) is the interview schedule with questions derived from the themes identified during the literature review. In preparation for the Skilled Employees (SE) interviews, the researcher created an RQ Presentation (Appendix E), which included slides covering the reason for the research and important reminders (voluntary participation and being able to opt out at any stage), and it also listed each question, C1 to C9, on an individual slide as a reference during the interview. Table 3.3. below contains the interview questions and how sections A, B, and C assisted in answering them:

Table 3.3: Research questions and their relationship to the interview schedule questions

Research question	Interview schedule questions that help answer the research question
RQ1: What digitisation of paper-based processes has been implemented within Company A, and are these changes, based on literature review insights, in line with industry trends?	**Question C1**: What technological changes have you seen in the last five years at Company A that have helped with the quality of work produced? **Question C2**: Can you highlight how, to date, paper-based processes within Company A have had an impact on completing your daily activities?
RQ2: What risks need to be considered to ensure high levels of adaptation and employee readiness when implementing a digital system?	**Question C3**: Explain what the most challenging aspects were during the automation process when looking back at any previous paper-based processes that have since been digitalised within Company A. **Question C4**: In the context of technological developments, can you mention any benefits these proposed advancements applied to the unautomated POD process may hold for you, Company A, or the community? **Question C5**: Do you have any fears or concerns about the implementation of a digital POD solution or technological advancements at Company A?
RQ3: How can risks in changing from manual to digital be overcome?	**Question C6**: What training programmes to manage technology change could be useful for staff awareness of how to deal with POD process change at Company A? **Question C7**: What would you look for in your immediate superior to help with managing change? **Question C8**: How can Company A communicate effectively about what a change will entail? **Question C9**: Do you have any recommendations or any initiatives Company A can take on board to help employees on this POD process digital transformation journey? **Section B**: Rich Picture to be drawn before the interview.

Source: Researcher's compilation (2024)

3.5. Study population

Acharya, Prakash and Saxena (2013:330) describe a sample as a subgroup population selected to be representative of the larger population, as it is impossible to study the whole population. Moreover, power relationships in business and management research must be addressed, as stated by Saunders et al. (2019:187), because due to the nature of the relationship (the researcher being a manager and conducting research with colleagues including subordinates) it might raise ethical questions. The greatest potential for coercion or undue influence, as highlighted by Resnik (2016:12), could occur when an employee (a

respondent) and a direct line manager or supervisor (the researcher) interact, as it might create pressure for the employee to enrol or remain in the study.

Data collection can be negatively impacted due to any status difference, but because of the ability to formulate questions, including probing ones (which may cause discomfort or stress), all researchers are always in a position of some ‘power’, even though it might be for a short time (Saunders et al., 2019:187). Resnik (2016:12) recommends mitigating any undue influence to choose to take part in the research by using an independent party to invite, aid with recruitment, and monitor the informed consent process (where a manager or supervisor enrols subordinate employees in research). In this study, and as part of the ethical considerations, the researcher restricted any direct report line employees from participating in the research. Armson (2017:110) states that from a systems thinker approach the researcher must keep notes of their own direct and indirect stake in the situation that must be identified (role, what is to gain, what is to be lost, ideology or identity), while identifying judgements and feelings about the situation, which will help to remove thinking traps, such as bias.

As conflict of interest (COI) in research has become an unavoidable aspect, it has encouraged open and transparent discussions on the topic. When an individual's secondary interests impede or influence judgements regarding the individual's primary interests, Boyd and Bero (2006:2) state that in such a scenario a COI exists. Young (2009:412) simplified the definition of COI as an individual’s personal interests conflicting with their professional obligations and emphasised that interests may not only be monetary gain but could also include progress toward personal or company goals, or professional advancement. In the research fraternity, the key to avoiding conflict of interest is public disclosure, but Boyd and Bero (2006:5) argue that disclosure does not eliminate bias that can damage objectivity at multiple stages in the research process. With the human mind’s primal power to influence judgement and the automatic nature to nurture self-interest, serious COI could be avoided if the researcher deals with biases that might lead to preference for their ideas (Young, 2009:413). The researcher took the following considerations and steps to address any COI or researcher bias during the various stages of the research, as contained in Table 3.4:

Table 3.4: Considerations and steps to address identified COI

COI Description	Measures taken to reduce or eliminate COI
Sources of funding	The researcher highlighted that Company A was not paying for the research (nor the researcher's studies), and the research was part of a self-funded MBA.
Personal relationships (known to participants) and fulfil a managerial role (power inequality)	The researcher withdrew from the participant recruitment process, and the business unit HRBP was used during the recruitment process (on behalf of the researcher) to avoid coercion or undue influence to participate. The researcher did not include any direct reports (skilled employees) in the research population for interviews and again made use of the HRBP to engage with managers to obtain their written feedback. The interview schedule guided the researcher and aided in ensuring consistency in questioning. Follow-up questions were also standardised. The researcher implemented research interview best practices and ensured a consistent, calm, and engaging persona with all participants.
Personal interests include the researcher obtaining an MBA degree	The researcher constantly updated their knowledge base on the importance, ethical considerations, and legal aspects of COIs in research. Personal reflection of the researcher's experiences, learnings, observation, and COI strengths and weaknesses through comprehensive, rich research notes and journaling. Throughout the research, the applicability to the workplace and the value the research could add was a guiding force.
Institutional affiliation as the researcher has been working for Company A for 13 years	Clarity in all communication that the research was not initiated by Company A and ensured compliance with Company A's code of ethical business practice (submitted as supporting documentation on RIMS for the UFS GHREC Committee visibility) and company culture, with clear research boundaries.
Public stance related to the research topic is known as the researcher has been involved in a prior digital transformation project	Progress and outcomes were monitored and accurate, and transparent records of activities, data, results and any COIs were kept.
Informed consent	In the spirit of full disclosure and transparency, COI would be included in a voluntary 'Conflict of interest disclosure' section on the participant informed consent form and affirming personal responsibility for disclosure accuracy.
Research design	The research plan was modified to accommodate ethical considerations (no direct involvement in recruitment, direct reports removed, and managers will submit feedback in writing). Followed advice from experts on COI in research, like the UFS Scientific Review and Ethics Committee.
Data analysis	Transcriptions and written managers' feedback was used for thematic data analysis. Personal bias towards a specific outcome was mitigated by utilising available qualitative software (MAXQDA).

Source: Researcher's compilation (2024)

For this study, the target population was purposefully selected individuals within Company A who shared common traits of being with the company for longer than one year, and two levels of employment; and skilled employees (SE) which included everyone up until team leader or supervisory level, and management employees (ME). The participants' department selection was also purposeful, and the four targeted departmental teams were chosen for either being directly involved in the delivery process where the POD originates from (DC and transport), or be the likely party to request a signed POD to resolve a customer claim query (sales and customer service), or be the party supplying the POD or processing the claim (DC, sales and accounts) for returned products, as part of their everyday function. These individuals were purposefully selected, not just for their knowledge and direct involvement in the reverse logistics process, but also their first-hand experience of the challenges the current paper-based processes deliver, which include being time-consuming and requiring involvement from various internal stakeholders, and the customer account status might be affected resulting in a delivery delay (adding another layer of complexity with a new query and additional internal role players needing to become involved). Senior management was excluded from the selection to keep the insights gained from people at ground level.

Another ethical consideration by the researcher was to ensure the recruitment occurred indirectly by using an independent party (not directly involved in the research) from Company A's human resources (HRBP) to assist with the process. Furthermore, the HRBP would also be looking at any potential company risks that might arise from the research and provide ethical checks and balances. It turned out to be invaluable to have another person's insights and thoughts on topics, countering any bias traps. As the researcher is in a managerial position, no direct reports were considered to participate. The research design was adapted to ensure ethical research methods were applied by accommodating the participation of managers, not by interviews, but by written responses to the interview schedule questions. A separate interview schedule was compiled for this purpose with additional writing space, not to give the impression an answer needs to be only three or four lines long (Appendix D), and the managers' written responses were returned to the HRBP. To ensure the HRBP was equipped with the relevant knowledge to ensure the process aligned with ethical research principles, the researcher provided training on these principles, expectations, and the importance of participant confidentiality and data integrity. A confidentiality and data protection agreement was signed by the HRBP as per Appendix F document guidelines.

The researcher supplied a list of the participants, an email template (Appendix G), the POPIA informed consent form (Appendix H), and a PowerPoint show (Appendix C) to ensure all aspects needed for the participants to make an informed decision during recruitment, before opting in, were covered. Being mindful of having a balanced collective perspective, it was important to zone in on stakeholders directly impacted by paper-based processes between the warehouse and transport. As the selection of the individuals in the sample was purposeful, it can be classified as non-probability sampling. This is depicted in Table 3.5:

Table 3.5: Four purposely selected teams from Company A, with direct involvement in the reverse logistics process arising from the unautomated POD process

Team	Area	Role	Employment Category	Length of employment	Number of participants
Team 1	**Sales**	The sales team oversees all customer-facing and sales-related functions. They service and maintain a good relationship with customers, and interact with the majority of the different business units within Company A.	Skilled Skilled Management	2 - 5 years ≥ 6 years ≥ 5 years	1 2 3
Team 2	**Customer Service**	A customer service representative (CSR) is a frontline employee who interacts with customers to address their questions, concerns, and complaints. They are normally the first point of contact when something goes wrong with an account or order.	Skilled Management	2 - 5 years ≥ 5 years	1 1
Team 3	**Accounts**	Responsible for customer account health, by ensuring appropriate payment is received for goods bought or services rendered.	Skilled Skilled	2 - 5 years ≥ 6 years	1 1
Team 4	**DC and Transport**	Responsible for receiving products from different locations and factories. Ensures organising them and storing products safely before the transporter ship delivers the product to the end destination. Also responsible for receiving any stock returns.	Skilled Management	≥ 6 years ≥ 5 years	1 1
				TOTAL	**12**

Source: Researcher's compilation (2024)

3.6. Sampling

Sampling reduces the cost, time, and manpower to conduct research (Acharya, Prakash & Saxena, 2013:330). The importance of sample selection, supported by Vollstedt and Rezat (2019:87), is to enable theory development until theoretical saturation (achieved when new data no longer contribute to category elaboration). With theory development as a key driver, purposefully selected stakeholders are selected based on their likely ability to contribute to data category differentiation, elaboration, consolidation and validation, enabling category consolidation based on properties, different dimensions, and the interrelations they may possess (Vollstedt & Rezat, 2019:87). The researcher conducted semi-structured interviews with seven skilled employees (SE) and received written feedback from five managers employees (ME) to gain insights and perspectives based on their current experience and industry knowledge. Leading with open-ended questions, the researcher aimed to obtain an in-depth understanding of the impact of change management; by leveraging expertise insights from these stakeholders at Company A.

Hennink and Kaiser (2022:4) conducted a systematic review to synthesize empirical studies that assess saturation in qualitative data. These were all credible sources, mostly journal articles, published between 2006 and 2020, with 87 percent published since 2014. The results were that for qualitative research to achieve saturation, a sample size of 9 to 17 homogenous population will often suffice – an argument used to validate the researcher's approach to invite a targeted sample size of 15 for this study. The final sample size achieved was 12 participants (within the valid sample size saturation of 11 to 14), but an additional ten invitations had to be sent, changing the final team area and employment level demographics of the final 12 participants, resulting in a response rate of 48% (12) who chose to take part in the research (from a total of 25 invitations sent).

3.7. Data collection

A researcher uses data-gathering tools or techniques not only to collect data but each tool also acts as a data collection evaluation. These data-collection tools may include questionnaires, interviews, schedules, observation techniques, and rating scales (Pandey et al., 2021:57). Saunders et al. (2019:256) assert that there are primary (new data gathered from the study participants) and secondary data-collection methods. These authors (2019) reject claims that secondary data is less valuable than primary data. On the contrary, it was highlighted that

secondary data had been collected, including raw data and published summaries, which provided a treasure trove of information for any research study (Saunders et al., 2019:256).

The University of the Free State (UFS) requires two-step compliance before any primary data collection may begin. The first step was the Scientific Review Committee's permission for the researcher to submit Chapters 1 to 3, together with the data collection instrument, on the Research Information Management System (RIMS). The RIMS approval by the General Human Research Ethics Committee (GHREC), step 2 or the ethical clearance process, was where the researcher's prepared documentation was reviewed and the final green light was given that enabled the researcher to proceed with the primary data gathering for the study,

Clearance from Company A's CEO was obtained, authorising the researcher to conduct the research. The fundamentals of a successful qualitative study, in this instance, depended on the researcher's ability to approach the 12 selected participants and to allow 30 to 45 minutes per participant to conduct the interviews. The risk to the study if permission was not granted, was not taken lightly. To mitigate this risk, the researcher sent a UFS preliminary permission request to conduct research to the CEO of Company A, which was approved before RIMS submission. After the ethical clearance approval, the researcher was able to formally engage with Company A on the scope of the research study, providing more context. Using the UFS's request for permission to conduct research guidelines, the letter was the formal invitation to the CEO of Company A to participate in the researcher's study. The letter explained the purpose of the study and the reason the company was selected, while also including the ethics approval number. The nature of the participation was clarified, and in line with full transparency, both benefits and risks were highlighted. The data collection method, confidentiality, anonymity, and data storage security all formed part of the document agenda points, and a copy of the interview schedule was included. The researcher ensured availability to answer any questions throughout the process and secured written permission from Company A before proceeding to primary data collection.

Data collection with the purposefully selected participants started with an email inviting participants to take part in the study. The invitation email contained a study information leaflet explaining the reason for being selected and the informed consent form that needed to be signed and returned if the participant wanted to opt in to take part in the study. To ensure the

informed consent was POPIA compliant, the UFS research study information leaflet and consent form guidelines (Appendix H) were applied.

The participants could make an informed choice about whether to opt in to join the study or opt out immediately (no further communication was sent to these individuals from this point onwards). Choosing to take part in the study required a signed informed consent form, which again explained the purpose and scope of the study, that participants were allowed to opt out of the study at any given time, and again, in line with full transparency, the potential benefits and the anticipated inconveniences of taking part in the study were highlighted. The nature of the participation was explained, and MS Teams was flagged as the communication tool that would be used for the semi-structured interviews with SE (highlighting that sessions would be recorded).

To assist the HRBP and to ensure standardisation of the approach, the researcher prepared written content for the invitation email to participate (Appendix G), follow-up emails, and quick reference Q&A scripted responses (Appendix I) should any questions arise during engagement with potential participants during the recruitment follow up. This standardised approach not only empowered the HRBP to respond to participants' potential questions but also aided with checks and balances to ensure that no undue pressure to participate was put on any participant; a cut-off after two engagement attempts (the initial invitation and one follow-up) was agreed on if no response was received to either attempt. This was loaded in a secured, access-controlled OneDrive folder, with the HRBP training presentation, and additional folders were created to load and securely store the informed consent forms when they started to come in. This was a time saver and significantly reduced the time needed for execution – a welcome initiative from an HRBP who has only minutes a day to spare due to a full calendar and work commitment pressures.

Great care and effort were taken throughout the process to protect participant anonymity and therefore only audio recordings were the output of each interview. It was explained that the data gathered was from the perspective of the participant, and the element of confidentiality was a golden thread of trust throughout the process, which gave the participants the assurance that they could talk openly and freely. The participants were only referred to as ‘participant’ during the interviews, and during transcription, participant names were removed and pseudonym codes were assigned starting with either SE (Skilled Employee) or ME (Manager Employee), a

naming convention that continued throughout the analysis, interpretation, and the reporting of the findings. The assurance was given that the one-on-one discussions, and any data derived from transcripts, written feedback or recordings, would be treated with the highest level of confidentiality (including the way the data was stored and finally destroyed). MS Teams transcript functionality was used to create the verbatim recording transcriptions, which allowed the researcher to be fully engaged during the interview process. The transcriptions and written responses from managers allowed the researcher to go back and review the data, which was rich in information, and highlight the repetition of trends and themes.

The researcher's commitment during this study was to ensure voluntary participation. Each communication and document sent by the HRBP and the researcher reminded the participant that they could opt out at any stage. Turning the 'researchers commitment slide' into an 'important reminder slide' ensured continuity of the look-and-feel of the important information, affirming that the same rules applied throughout the total process (thus, what you saw in the invitation as commitments from the researcher were applied during the interview process). The average reminder count flagging the option to opt out from the research was seven per participant.

3.8. Data analysis method

Qualitative data refers to all non-numeric data or data that have not been quantified. Saunders et al. (2019:482) state that the nature of the qualitative data collected has direct implications on the way this non-standard and complex data is analysed and that the data would most likely need to be condensed, grouped, summarised, and categorised to ensure the narrative supports meaningful analysis. Qualitative research, using the Grounded Theory Method (GTM), sets out to discover theory from systematically obtained data. Williams and Moser (2019:45) stress the importance of rigour during the data collection and organisation process, as it should be clear, repeatable, and enable data analysis. To aid with the organisation and categorisation by being able to identify interdependent relationships among data, coding can facilitate the researcher in grouping and analysing data relative to 'what they do', 'how they do it', and 'why they do it' (Williams & Moser, 2019:46).

An open, axial and selective coding strategy of collected data creates an ever-evolving cyclical data loop where the researcher must constantly compare data and apply data reduction and

consolidation techniques (as depicted in Figure 3.1), which is key for developing a deeper theoretical meaning of the subject matter at hand (Williams & Moser, 2019:47). The non-linear directionality of coding not only qualifies essential themes for identification but also helps with the codifying and interpretation of the research study's focus. The researcher visualises this approach as putting data through a data qualifying 'sifting funnel' to pragmatically help identify essential themes, which in this study was helpful, and therefore this method was followed.

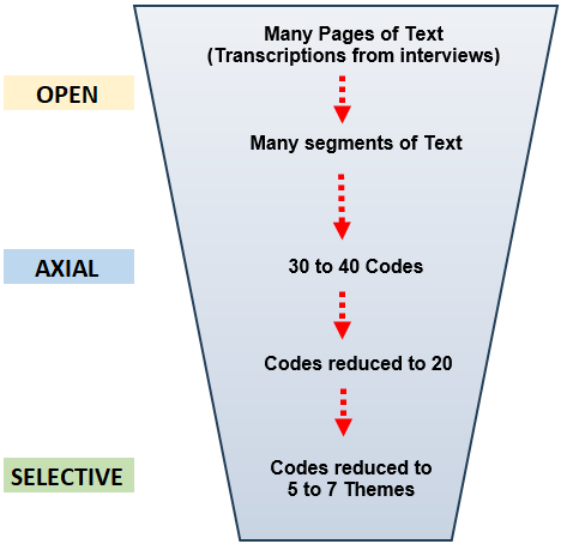


Figure 3.1: The data funnel – an overview of the open, axial, and selective coding process (Williams & Moser, 2019)

Vollstedt and Rezat (2019:86) explicate the three different coding paradigms as follows:

- Open coding focuses on the conceptualisation and categorisation of phenomena by posing sensitising questions while constantly comparing data and codes.
- Axial coding investigates the relationships between concepts and categories developed in the open coding process by using the data coding paradigm that focuses on (and relates to) context, actions, interactions, and causal and intervening conditions (Vollstedt & Rezat, 2019:87).
- During selective coding, results from axial coding are further elaborated on, integrated, and validated. The goal is to integrate developed categories and the elaborated mutually related context into one cohesive theory (Vollstedt & Rezat, 2019:89).

The main purpose of data analysis is to establish a thematic golden thread (Pandey & Panday, 2021:71). As mentioned previously, the researcher used a thematic analysis method in this

study, ensuring relevant themes were identified to assist with the data analysis process. The researcher, while transcribing, highlighted words and phrases (which is the traditional way of creating code, but is very time-consuming), to ensure full immersion in the data and to see if natural trends or themes emerge.

Various available qualitative software was investigated, and the researcher decided to make use of MAXQDA. The software name ‘MAXQDA’ acknowledges the German sociologist Max Weber (‘MAX’) and ends with the abbreviation ‘QDA’ indicating the focus on qualitative data analysis. The selection was based on the software being enabled with correlation analysis, visual statistics image creation like Word Clouds, affordability (as of October 2024, the cost for a six-month MAXQDA Analytics Pro student license was R1152,15), and ANOVA capabilities. ANOVA, or the ‘analysis of variance’, was invented by Ronald Fisher (Fisher, 1925) in the 1920s, and helps identify statistical differences between the means of three or more independent variables, which helps with understanding the connection (closeness) to your dependent variable (Rouder, Schnuerch & Haaf, 2023:51).

System behaviour is usually determined by the presence of reinforcing and balancing processes, as highlighted by Monat and Gannon (2015:21), and the first step in attempting to understand system behaviour is by drawing causal loop diagrams from the themes the rich picture delivered, which will facilitate the identification of cause-and-effect, interrelationships among all system components. By making use of systemigrams (or ‘systemic diagrams’), a system problem is expressed as structured text onto a storyboard-type diagram describing principal system concepts, the actors, events, patterns and processes, to communicate the chief message of the text (Monat & Gannon, 2015:23). For this research, however, a rich picture was utilised to help understand the current POD process and applied thematic analysis principles by grouping similar pictures (in visual or meaning),

3.9. Trustworthiness

Bryman (2021:62) mentions authenticity as the key success factor criteria for a qualitative research valuation; while credibility, transferability, dependability and confirmability are grouped under trustworthiness. Bryman et al. (2021:63) define the terms as follows:

- Credibility will be established if the researcher applies known good practice principles, and the research findings are shared with the participants after the interviews are

conducted (as this will confirm if the researcher's interpretation of the data was correct). For this study, the researcher ensured that the commitment to share the findings was already highlighted in the participants' informed consent form. A debriefing MS Teams session was scheduled with the participants, post-analysis and findings.

- Transferability refers to the contextual uniqueness of qualitative research and thus sees to what extent the study findings can be applied to similar circumstances. To ensure transferability the researcher ensured rich background descriptions of Company A and the FMCG industry, the study population, the sampling (ensuring saturation), the data collection and analysis methods, and highlighted the limitations of the study.
- Dependability occurs when complete records (researcher notes, interview transcripts, written feedback, and data analysis) are kept, meaning the researcher applied an 'auditing' approach. The researcher made use of an interview schedule, which ensured data collection methods were applied consistently, while applying a systematic and transparent data analysis approach promoted consistency and reduced potential interpretation bias of the findings. All communication, notes, transcripts, written feedback, rich pictures, and recordings were stored as an audit trail in password-encrypted folders.
- Confirmability focuses on the researcher's ability to not allow personal values to influence the research, and to act in good faith throughout the research process. For this reason, the researcher kept a reflexive journal to ensure that personal feelings, sensitive topics, potential ethical considerations that might occur, or any issue that might affect the data collection or analysis were recorded. Different theoretical perspectives were investigated during the literature review and the research design to ensure that theoretical triangulation was achieved.

3.10. Risk mitigation

Taquette and Borges da Matta Souza (2022:1) refer to qualitative research as a dynamic process filled with potentially unpredictable events and they highlight the important role of the researcher to not only foresee possible obstacles of hindrances, but also try to prevent them. Whitney and Evered (2022:5) expanded on the researcher's obligation, indicating that the researcher should promote 'justice' by ensuring the equitable distribution of the benefits and burdens of the research.

As interviews are most frequently used in qualitative research, the researcher can reduce the risk of unexpected damage by ensuring confidentiality throughout the process, being familiar with how to handle the discomfort certain themes may create, and restoring consent to continue with the research if any discomfort is witnessed (Taquette & Borges da Matta Souza, 2022:1). Whitney and Evered (2022:2) confirm that a researcher has an ethical obligation to be able to attend to the needs of research participants' distinct and individualised emotional reactions.

DuBois, Mozersky and Parsons (2023:1) assert that even though qualitative data sharing within the research community could harvest important benefits, the absence of considering enforceable standards, expertise, and resources may risk violating participant confidentiality. Data sharing and reuse are becoming the norm in quantitative research, as per Kirilova and Pagé (2021:1996), and they define epistemically responsible reuse (ERR) as the secondary use of qualitative data that aims to understand original data as much as possible within the context without making any claims beyond the scope of what is justifiably inferred from the data (Kirilova & Pagé, 2021:1999). Tamminen, Bundon and Smith (2021:865) confirm the benefits of qualitative research to the research community, as it increases surrounding research methods and results transparency, while it also creates opportunities for collaboration between research teams (which allows access to data for teaching and learning purposes).

In the context of research ethics, Whitney and Evered (2022:5) refer to beneficence as how participating in research can benefit participants, while unconditionally protecting and promoting participant welfare and safety. Orr, Durepos and Jones (2021:3) assert that research with human participants, as an international standard, requires ethical approval to mitigate the risk of harm. There must always be a balance between the benefits and the potential risks of research being conducted.

For this study, the risk category was classified as low-risk, and the researcher considered the risk factors that might be foreseen for participant involvement, which included:

- Identifying, minimising and addressing risks of research-related distress is a qualitative researcher's ethical obligation (Whitney & Evered, 2022:1). Taquette and Borges da Matta Souza (2022:9) highlighted that where a researcher has a double function (being a professional and a researcher), the researcher should act with reflexivity by clarifying the role of the interviewer. The researcher ensured that the purposefully selected

participants were effectively screened, and an objective view was taken with selection, based on job function and years within Company A (no potential high-risk participants were identified).

- In consideration of the human connection and boundaries, relational ethics prescribe applying mutual respect and being aware of diverse social and historical experiences' contexts (Tamminen et al., 2021:871). As the researcher was looking for different perspectives within Company A during the interview process, personal and cultural differences were seen as a strength (in line with the confirmability commitment by the researcher to keep a reflective journal).
- Taquette and Borges da Matta Souza (2022:3) warn of using participants who occupy uncommon or unique positions, or key positions (like leadership positions) within a small sample size, as their input might be easily identifiable during data analysis and findings. To avoid a breach of confidentiality, the researcher ensured a broad representation of potential participants within Company A (within various business units), the use of pseudonyms (SE and ME) during data collection and analysis, and destroying any audio recording after the six-month research audit requirement.
- As there was no economic benefit for the researcher or participants, there was no risk of economic harm. There was also no payment for participating in the research.
- As Company A is a well-known, global FMCG Company, reputational harm was mitigated by using Company A (a pseudonym) throughout the study. No confidential or sensitive company data was required to fulfil the study objectives, a fact that was reiterated in both the company and participant communication, the informed consent form, and was again highlighted during the interviews.
- The projected time needed to conduct an interview was between 30 and 45 minutes, which equated to a total of eight hours and 15 minutes to conclude the 15 interviews. To ensure transparency, the loss of work time was highlighted in both the request for approval to conduct research, as well as the participants' informed consent documents.
- The researcher should take an objective observation stance, and suspend subjectivity, to ensure impartiality (Taquette & Borges da Matta Souza, 2022:7). As the participants in this study are colleagues of the researcher within Company A, role clarification during the interview process was done and any corporate signature details were removed and replaced with the researcher's UFS student information, which affirmed that the research

was conducted independently from Company A and that it was confidential, and that the sharing of the research findings negated any negative impact on professional relationships.

- The request approval to conduct research and the informed consent forms provided the scope of the research and the relevant justification for the research and also highlighted the research risks, benefits, and potential consequences. Open and transparent communication throughout the research process helped mitigate any expectation misalignments.

3.11. Ethical considerations

Research ethics has important implications throughout a research study, and researchers face ethical issues as early as the topic decision and the research design. Pietilä, Nurmi and Halkoaho (2020:49) assert that the ethical principles of autonomy, non-maleficence, beneficence, and justice are all geared to protect the participants in qualitative research. It is crucial to ensure ethical issues are already addressed at the research design stage as this will ensure smooth execution and data collection.

Revisiting ethical considerations throughout the research process reminded the researcher of the inherent risks and the responsibility to not break the trust relationship of the participants. The ethical considerations for this study, in line with the considerations recommended by Bryman et al. (2021:163), were the following:

- The preliminary request for permission to conduct research within Company A was approved and signed off by the researcher's academic supervisor before communicating with the CEO. As gatekeeper approval is crucial for the success of this study, the researcher's intentions were made clear with this open and transparent request, not only indicating the anticipated group of participants but also explaining the ethical process approval the study must go through. The researcher was of the view that this might inspire a sense of trust in the process from the start.
- The UFS's two-step approval process of Scientific Review Committee approval and ethical clearance approval was adhered to, and no engagement was pursued with participants, nor Company A, until these permissions were received.

- Permission and consent were obtained from Company A's legal team, which gave the authorisation to approach selected research participants. The request to use the business unit's HRBP to assist with the recruitment process was also approved.
- Informed participants' consent was given freely and based on full information about participation rights and the use of data. This was obtained before the interviews were conducted ensuring the purpose of the study was understood by the participants. The University of the Free State's POPIA participant informed consent form was signed by each participant who chosen to participate in the study.
- Voluntary participation was key. The researcher aimed to reiterate voluntary participation and the ability to opt out at any stage of the process as many times as possible and also ensured that the "important reminders slide" was visible during each interview. If the researcher noted at any stage that the participant was displaying any signs of excessive strain or anxiety, the interview would have been stopped immediately.
- Anonymity was maintained throughout the data collection process (interviews and written feedback) and no participant's name nor job title appeared on any documents, as pseudonyms were used, and only job levels were noted. MS Teams recordings will be destroyed after the research audit requirement period expires.
- Bias was countered by ensuring verbatim transcriptions of discussion data collected during the interview process, removing any emotion from the words spoken by turning it into a 'mechanical process' where words and phrases were identified during data analysis. The researcher kept a reflexive journal to ensure personal feelings and perspectives were noted down, which helped identify any personal biases of the researcher.
- For this study to add value and contribute to theory development, trustworthiness factors like ensuring research findings were shared with participants (credibility), complete records were kept (dependability), and rich descriptions were noted throughout the study (transferability) were considered.
- The guidance provided on the nature of the power relationships during this research, as highlighted by Saunders et al. (2019:187) and Resnik (2016:12), to avoid any potential for coercion or undue influence, led to the researcher not including any direct report and the researcher sourced the assistance of the department HRBP within Company A to facilitate with the indirect invitation and recruitment process until acceptance to

participate in the research was received from each participant (there was no direct communication from the researcher during this period). The importance of the informed consent process was shared with the HRBP, and as an independent party, their role included monitoring the process. Appendix C contains the PowerPoint show supplied to the HRBP that was used with the informed consent form and email template (Appendix G) as the recruitment invitation.

- Managers did not participate in interviews but were requested to answer in writing. Their written feedback was sent to the HRBP, who loaded it with the rich pictures on the OneDrive secure folder.
- Researchers should be acutely aware of the ethical obligation to weigh the risk of work against societal benefit. The risks the researcher considered in this study included the research topic and design and the potential impact it may have on Company A. Interview questions were developed to not require any sensitive company data from the participants, but only their perspective on the topic at hand. Considering Company A's culture of experimentation and continuous improvement, and the mutual benefits of potential process improvement in the unautomated part of the returns process, there was no to low risk for the participants, Company A, and the researcher.
- To ensure research credibility, the researcher's commitment to share the research findings will be kept, and an email communication inviting participants (and the HRBP) to book one of 23 (15-minute) research findings feedback slots will be sent as per the template created in anticipation of sessions (see Appendix J).

The ethical considerations during this research study transcended mere procedural compliance defending participants' rights, dignity and privacy by creating the crucial foundational elements to ensure research credibility. The ethical rigor applied was captured in the researcher's notes where journal entries show constant reflections when considering ethical questions, and served as a check-and-balance to identify any potential inherent bias that might impact the research process during recruitment, data collection, analysis, interpretation or findings. Lastly, upholding the highest standards of research integrity helped ensure that the insights derived have a positive, sustainable impact on the broader business community, society and future scholars by ensuring no harm to participants, or Company A, during this research study.

3.12. Conclusion

The research methodology discussed in this chapter highlighted the importance of effective research design, while ensuring that the ethical considerations are adhered to. This highlighted the responsibility of the researcher to apply these principles from the data collection phase right through to the findings (which will be discussed in Chapter 4) and beyond.

CHAPTER 4 DATA ANALYSIS AND INTERPRETATION

4.1. Introduction

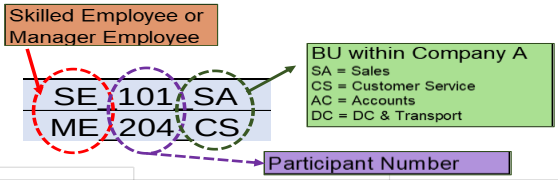
In this chapter, the key findings will be presented from the data collected from purposefully selected participants on the research topic, “Improving business sustainability at a Fast-Moving Consumer Goods company”. The first theme in this chapter will be to provide an overview of the participants’ work profiles, followed by the thematic and coding approach followed during this research study, and finally an analysis and research topic’s findings. The participants were all active employees at Company A, and qualitative techniques (interviews and written feedback) were used to collect data.

4.2. Analysis and interpretation of participant profiles

Chapter 3 supplied a comprehensive overview of the target sample (see Table 4.1), composed of purposefully selected individuals from Company A, to take part in this research study. The qualifying criteria were being employed with Company A in either sales, accounts, customer service, or DC and transport for longer than a year. The knowledge and direct involvement in the reverse logistics process was an essential skill of this sample and would allow for profound insights that could guide the recommendations on how to address the challenges the current paper-based POD process produces.

Table 4.1: Participant profile

TEAM	BU	Years with Company A	SE or ME	Participant Code
Team 1	SALES	2-5 Years	Skilled Employee	SE_101_SA
Team 1	SALES	> 5 Years	Skilled Employee	SE_102_SA
Team 1	SALES	> 5 Years	Skilled Employee	SE_103_SA
Team 2	CUSTOMER SERVICE	2-5 Years	Skilled Employee	SE_104_CS
Team 3	ACCOUNTS	> 5 Years	Skilled Employee	SE_105_AC
Team 3	ACCOUNTS	2-5 Years	Skilled Employee	SE_106_AC
Team 4	DC/TRANSPORT	> 5 Years	Skilled Employee	SE_107_DC
			TOTAL SE PARTICIPANTS	7
Team 1	SALES	> 5 Years	Manager Employee	ME_201_SA
Team 1	SALES	> 5 Years	Manager Employee	ME_202_SA
Team 1	SALES	> 5 Years	Manager Employee	ME_203_SA
Team 2	CUSTOMER SERVICE	> 5 Years	Manager Employee	ME_204_CS
Team 4	DC/TRANSPORT	> 5 Years	Manager Employee	ME_205_DC
			TOTAL ME PARTICIPANTS	5
Participant Code - Turorial			TOTAL PARTICIPANTS	12



Data Saturation Achieved

Repeated themes were identified from the 12 participants in the study confirming that saturation was reached

Source: Researcher’s compilation (2024)

A great benefit of having 75% (9) of the participants with five years or longer work experience within Company A was their ability to recall pre-COVID-19 days when some current automated processes were still paper-based to compare this to the advantages that could be attained by changing the remainder of the paper-based processes, including that of the current POD process, to processes that are automated. Their insights on the benefits (and potential challenges) could be invaluable content captured in this research to ensure a rich understanding of what to consider when digital solutions are implemented.

4.3. Thematic analysis approach

Taking guidance from the literature review, the thematic analysis approach was followed in this research study. The approach is a method in the Social Sciences to help with the identification of themes in qualitative data (Terry et al., 2017:17), or to search for re-occurring ideas (Riger & Sigurvinsdottir, 2016:33), or patterns (Bryman et al., 2021:83) from the set of SE interview schedule transcripts (7) taken verbatim from audio recordings by the researcher, and ME written feedback (5) received from the participants. As this forms part of the core process of any qualitative research approach, the researcher's notes (submitted as supporting documentation on RIMS for the UFS GHREC Committee visibility), where information had already been organised or grouped, were used as a starting point and found to be a great source of inspiration. As a secondary source, the researcher's notes added great value as it helped identify patterns and relevant themes before coding started on the SE interview transcripts and the ME written feedback. This formed a strong foundation to work from with robust themes regarding the inefficiencies the current paper-based POD process entails and the impact of these inefficiencies on daily tasks. It also helped identify improvement areas with recommendations for achieving successful digital solution implementation.

The researcher's notes contained information-rich journal entries of personal reflections on the researcher's experiences, learnings, observations, and COI strengths and weaknesses. It was a valuable tracker to capture the researcher's personal growth, as the ethical consideration reflections and the gradual knowledge base growth in the research topic were evident when compared with earlier entries. Research dependability and conformability require complete records to be kept for trustworthiness, and the considerations captured provide full research visibility.

A visual representation of the thematic analysis was first undertaken with the rich picture drawings from the participants, grouping similar themes and images (Figures 4.1 to 4.7). With the rich insights gained and prominent themes developing from the visual analysis, the redacted (participant's name, company name, product or system information all removed) transcriptions and written feedback were loaded on MAXQDA individually, as it can activate all documents, or select only one document, allowing for quick pivot ability during the analysis stage. The Rich Picture (Table 4.2a.), RQ 1 (Table 4.2b.), RQ 2 (Table 4.2c.), and RQ3 (Table 4.2d.) formed the main code headings to ensure feedback was grouped under each main idea, while the interview question numbers C1 to C9 were used as sub-code headings to allow a deeper understanding of each theme at hand emerging from the transcribed participant responses. Each question (C1 to C9) was extensively coded (a total of 2362 words and phrases were highlighted by the researcher during the coding process), which helped form a basic theme, and finally, a refined theme capturing the meaning of the code was created. The refined theme provided a good platform from which to generate impactful recommendations and considerations, which could help Company A through the digital journey allowing for fast adaptation.

Table 4.2a: Code, basic theme, and refined theme development for the Rich Pictures

Participants' Rich Pictures		
Codes	Basic Theme	Refined Theme
- Customer (113), POD (60), Stock (48), Process (47), Delivery (41) / Truck (35) / Driver (22) / Deliver (22) / Transporter (19) **= (139)**, Time (36), Back (32), See (32), Digital (30), Receive (30), Sales (27), Credit (25), Paper (25), Reason (20) / Code (14), Invoice (19), Claim (18), Delay (18), People (18), Human (14), Issue (14), Service (14)	The different elements of the current paper-based POD process. Elements of the current reverse logistics process all needing to align to deliver a simple credit note (for a claim submitted for goods returned). It also supplies a good high level overview of the different challenges the current process entail, while also looking at potential solutions.	Process that are touch-points heavy, and paper intense create complexity
- Paper (12), POD (6), Truck (8), Reason Code (3) - Customer (6), Human (3), Driver (4), Employees (4), Many Hands (2) - Cabinet (5), Manual (3), Shred (3), Time (3), Delay (3), Long (2), Waste (2), Human Error (2), Frustration (2)	The current paper-based POD process cause delays and frustration	Paper-based processes are inefficient
- Customer (14), Digital (6), Cost (5) / Reduce (4), Pass Credit (4), Communication (5), Fast-Track (3), Expectation (3), Agility (2) Eliminate - Time (10), Process (9) / Manual (4), Paper (6), POD (6) / Dirty (2), Many Hands (5), Avoid Delays (3), Manual (4) Impact on Business - Customer (22), Credit (11), Delay (10) / Time (6), Truck (9), Pay/Payment (9), Paper (7), Receive (7), Result (7), Month (6), Shred (6), Stock (6), Invoice (5), Transporter (5), Account (4), Amount (4), Error (4), Complaint (3)	Customer-centric, and future focussed companies need to evolve	Benefits of digitalisation
- Customer (12), Delivery (11) / Driver (6), Digital (9) / Sign (5), POD (7), Notification (5), Alert (4), Automatically Generate (4), Credit Notes (3), Device (3), Handheld (2), Cloud (2), Connected (2)	Checks and balances can be done digitally by the parties involved during the delivery process	Customer and Driver is key to success

Table 4.2b: Code, basic theme, and refined theme development for RQ 1

RQ 1: What digitalisation has occurred?		
C1 Technological Changes		
Codes	Basic Theme	Refined Theme
- Customer (13), Use (10), Stock (8), Platform (6) / Digital Process (2) / Online (2), Automated Equipment (5), Track and Trace (4) / Location and movement (4), B2B (3), Mobile Devices (3), Paperless (3), DocuSign (2), Online (2)	Technological changes deliver on increased productivity, and efficiencies	Digitalisation accelerating in FMCG Industry
- Customer (22), Help (13), See (12), Know (10), System (10) / Robotic (2), Time (10), Paper (8), Team (8), Business (7), Increase (6), Efficiency (5), Platform (5) / Digital (4), Conveyer Belt (4), Ensure (4), Improve (4), Capacity (3)	With digital improvement comes a better work environment, and additional capacity as manual processes are removed	Industry 4.0 benefits in action
- Teams (8), Terms (7), Call (6), Meet (5) / Virtual, Pallet (5), Customer (4), Book (3), Collaborate (3), Factory (3), Meeting (3), Microsoft (3), Quality (3), Standards (3), Technology (3), Adapt (2), Device (2)	The way people engage, communicate and collaborate is evolving and opening new opportunities	Communication 2.0
C2 Impact of Paper-Based Processes		
Codes	Basic Theme	Refined Theme
- Delays (10), Time (9) / Process (5) / Consuming (4), Customer (7), Pay (7), Activities (6) / Daily (4), Frustration (5), Paper (5), Documents (4), Impact (4), Manual (4), Privacy (4), Find (3), File (3), Long (3)	Paper-based processes causes delays, have a profound impact on job performance, and over all employee job satisfaction	Job satisfaction impactors

Table 4.2c: Code, basic theme, and refined theme development for RQ2

RQ 2: What risks need to be considered to ensure high adaptation?		
C3 Most Challenging Aspects during Automation/Digitalisation		
Codes	Basic Theme	Refined Theme
- Human (6), Process (6), Automation (5), Change (5), Employee (5), Know (5), New (5), Used (5), Customer (3), Difficult (3), Learn (3), Overwhelmed (3), People (3), Skill (3), Bad (2), Eliminate (2), Lose (2), Loss (2)	Elements of concern include not understanding the reasons for the change, current skillset and job losses and are drivers of resistance	Uncertainty causes resistance
- Process (7), New (6), Work (5), Company (4), Use (4), Customer (4), Future (3), Management (3), Train (3), Change (2), Cost (2), Expectations (2), Grow (2), Impact (2), Invest (2), Mindset (2)	Involving all stakeholders throughout the process, sharing benefits and managing expectations with help with mindset change and higher adaptation of new technology	Adaptation and employee readiness
C4 Benefits linked to automated POD system		
Codes	Basic Theme	Refined Theme
- Customer (17), Time (15), POD (12), Good (10), Business (8) / Company (7), Community (7), Delivery (7), Happy (7), Eliminate (5), Claim (4), Credit (4), Hands (4), Benefit (3), Great (3), Help (3)	Efficiency, increased productivity, improved employee morale, improved cash collection, and the improved visibility will all contribute to better customer experience, and benefit the community and environment	POD digitalisation benefits
- Company (5), Jobs (3), Become (2), Big (2), Impact (2), Market (2), Role (2), Sustainability (2)	Red flags that need to be considered when rolling out automation projects	There will always be challenges, plan for them
C5 Fears and Concerns		
Codes	Basic Theme	Refined Theme
- People (6), Process (6), Don't (5), Employee (5), New (5), Right (5), Change (4), Especially (4), Human (4), Robot (4), Take (4), Adapt (3), Concern (3)	Resistance to change may be spearheaded by fears of job loss or redundancy of function, while exposure to new technology (and lack of skill set) highlight the importance of sharing benefits to all stakeholders	Technology advancement fears
- Fear (9), Say (9), Implement (7), People (6), Benefits (4), Change (4), Employees (4), Mean (4), New (4), System (4), Think (4), Mindset (3), Process (3), Step (3), Time (3), Train (3) Understand (3)	Giving employees a voice and the opportunity to upskill themselves to fit into the long-term plans of the company (and transparent communication on impact and benefits) will increase willingness to adapt	Considerations to be included during planning and implementation

Table 4.2d: Code, basic theme, and refined theme development for RQ3

RQ 3: How can risks and challenges be overcome ?		
C6 Training Programmes		
Codes	Basic Theme	Refined Theme
- Programmes (10) / Training (9), Skill (3), App (2), Development (2), Digital (2), Major (2), Picture (2), Technology (2)	Pro-active, relevant, digital (Technical/AI/Robotics/Apps) skills development programmes, coupled with exposure to the digital world in real-life work scenarios.	Training and development roadmap
- Training (11), New (9), Know (8), Person (8), Programmes (8), Benefit (6), How (5), Important (5), People (5) / Staff (3), POD (5), Think (5), Show (4), System (4), Technical (4), Implementation (3) Job (3), Reference (3), Survey (3), Understand (3)	Tailored internal and external training, with the opportunity to interact hands on with new system will help with awareness and adaptation	Training expectations
- Know (5), Implement (4), Check-in (3), People (3), Platform (3), Reference (3), Say (3), System (3), Essential (2), Job (2), Guide (2), Manager (2)	Open transparent communication throughout the change process, but during implementation, the efforts need to be increased	Change process transparency
C7 Immediate Line Manager		
Codes	Basic Theme	Refined Theme
- Change (17), Support (8), Know (7), Manager (7), Team (7), Expect (6), Communication (5), New (5), Process (5), Explain (4), Help (4), Role (4), Train (4), Address (3), Benefit (3), Clear (3), Customer (3), Department (3), Employee (3), Identify (3), Implement (3), Potential (3), Transparency (3), Understand (3)	During times of rapid change, employees will look to their direct line manager to help, guide, motivate and develop them to ensure the new process can be implemented	Direct line manager crucial for success
- Change(5), Confidence (4), Try (3), Attitude (4), Think (4), Employee (3) / People(3), Communication (3), Help (2), Insight (2), Overwhelmed (2), Support (2), Training (2),	Direct line manager needs to possess specific personality traits to create a learning environment where employees will feel comfortable asking for help	Personality traits
C8 Company A's Communication Strategy		
Codes	Basic Theme	Refined Theme
- Change (15), Communicate (15), Show (10), Know (8), Time (5), Effectively (4), People (4) / Employee (3), Value (4), Challenge (3), Effective (3),	Transparent communication throughout the phases of a new digital process rollout (by using various channels of communication), will ensure constant engagement opportunities with all stakeholders and will help with smoother rollout.	Transparent communication creates trust
- Email (10), Communication (6), Internal (5), Meetings(5), Plan (5), Discussion (4), Review (4), Customer (3) Monthly (3), Weekly (3), Direct (2), Forum (2), Newsletter (2), Session (2), Strategy (2), Team (2)	Use various channels of communicate, but also evoke stakeholder feedback during Q&A, surveys and other existing meetings - these recommendations add great value and can be incorporated into the implementation plans	Communication + Feedback = Alignment
C9 Initiatives & Recommendations		
Codes	Basic Theme	Refined Theme
- Customer (24), Know (24), Think (17), Say (15), How (13), Employee (13), Process (12), Digital (11) / Digitalisation (4), Help (8), People (8), Train (8), Implementation (7), Benefits (6), Adapt (5)	Consolidation of recommendations and initiatives Company A can take on board to including communication strategy, upskilling and training initiatives, and creating an environment of continuous learning	Company culture

Source: Researcher's compilation (2024)

4.4. Analysis and interpretation of participants' Rich Pictures

Adding a rich picture to the research as part of the data collection process was felt by the researcher to have added tremendous value as a thematic analysis tool (Appendix K). The visual rich picture elements gave great insight into the current process challenges, and the inefficiencies paper-based processes are creating. Additional value came as a surprise, as not all the participants chose to portray themselves within the picture, but rather took an observer stance to assess the process in its totality, allowing a peek into the futuristic view of the POD automation as imaged by the participant as to what is needed to improve the current process. Similarly, even though a golden thread highlighted the difficulty in "where to start?" (a theme that was present from all the participants), the feedback from SE participants was

overwhelmingly positive when asked about their experience in drawing a rich picture as pre-work, responding with, “It was exciting, really exciting” and “practical” (SE 101 SA), “Great tool” (SE 102 SA), “I enjoyed it. I am laughing the whole time” (SE 103 SA), “It was a great experience” (SE 106 AC), and “It was very interesting” (SE 107 DC).

An interesting observation regarding the 12 participants, as displayed in Figure 4.1, the page layout of choice for 11 participants was Landscape, while one participant chose to go with Portrait. The significance of the participant using the Portrait page layout is that it was also the only participant who did not draw pictures as per the instructions, but rather gave a technical process flow overview of a new process that would address current gaps. Although this gives great insights into areas where automation and digitalisation need to take place, the lack of visual elements takes away from the visual impact, and the immediate stories and themes you could take from it. One participant used pink paper, another a writing block with lines, some sketched the picture then scanned it, while others took a photograph of the finished picture with their cellular phone, highlighting how easy it is to use simple elements (like an A4 page and a cellular phone) to be creative and gain profound insights. To ensure the elements on the pink page did not stand out unnecessarily (due to the page colour), during the next step where visual consolidation was done, the images were converted to black and white. Again, following a qualitative thematic research approach to try to identify patterns and themes, elements were extracted from each rich picture and grouped to gain insights from the visually drawn elements.

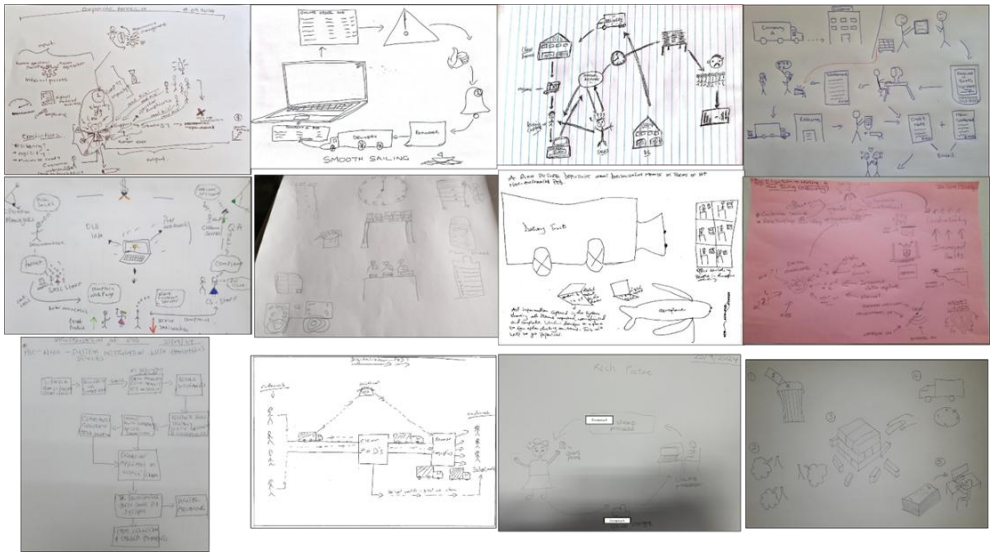


Figure 4.1: The consolidated Rich Pictures of the 12 participants

Source: Researcher’s compilation of 12 participants’ Rich Pictures (2024)

Consolidating elements of the current process showed a magnitude of moving parts, with many touchpoints that react independently from each other but need to work together to reach the final goal. The visual in Figure 4.2, collated by the researcher with a few selected image elements, already gives an excellent overview of the End-to-End (E2E) process showing the intricacies of the total process and the added complexity that the current paper-based process (stack of papers) brings to the table. To ensure no future discomfort is created for the participants (eliminating fears of ability or creativity of the pictures submitted), the rich pictures will not be identified by the participant code to maintain participant trust (confidentiality) and overall research integrity. Generalised terms however will be used to create context on why specific elements were used. However, the researcher notes contain the participant code for all participant picture entries. The steps followed to obtain a quick visual overview (and unfiltered immediate insights) of current process elements were as follows:

- The current process forming the centre of the figure, indicates the current reverse logistics process as depicted by a skilled employee working in the DC (close to the process), while a collection of other elements taken from a diverse selection of elements, either give insight into the current process or the challenges it poses.
- The left of the picture was developed using various participant image snippets showing the elements at the customer delivery point (and the pressures between the different internal role players to get the order delivered, some of the things that could go wrong, and the frustrations it can cause).
- The right-hand side of the picture depicts the challenges, and O2C process elements to ensure timely payment is received from the customer. Extracts from participants' rich pictures, where there were strong visual elements of these elements, were selected.

Ensuring a diverse representation of the participants' visuals, at least one image snippet from each rich picture was included, using the main message (or predominant theme) of the rich picture the researcher selected. At each step, the interaction between the different BUs (sales, customer service, accounts, DC, and transport) was portrayed by taking elements to represent each area within the three main steps portrayed in this consolidated rich picture. Although giving a good E2E framework, Figure 4.2 was not sufficient to create effective themes as it lacked the granularity of sub-themes. The researcher again grouped repeating elements by similarity in image or meaning, allowing for sub-themes to naturally emerge from what was visible starting

with the elements that appeared the most. The following very prominent rich picture elements are in Figure 4.3:

- The human element consisting of customers, employees, and other role players like transporters comes through very strongly bringing with it a layer of unpredictability. It also shows the importance of humans in the process, and the number of different parties who could potentially be affected by the current or future process.
- Even though customers were part of the human element images, it was grouped separately to include buildings (customer business), which shows the participants' awareness of the potential impact of the current process and confirms the customer-centric view held. It also flagged the importance of having the customer as part of the solution, as they are a crucial central point for everything that is being done.
- Being an FMCG company and needing to ensure on-shelf availability, it came as no surprise to see the number of trucks in the drawings, highlighting the important role the transporters play in the process – the other key role-players that are needed for a viable solution to be successfully implemented.

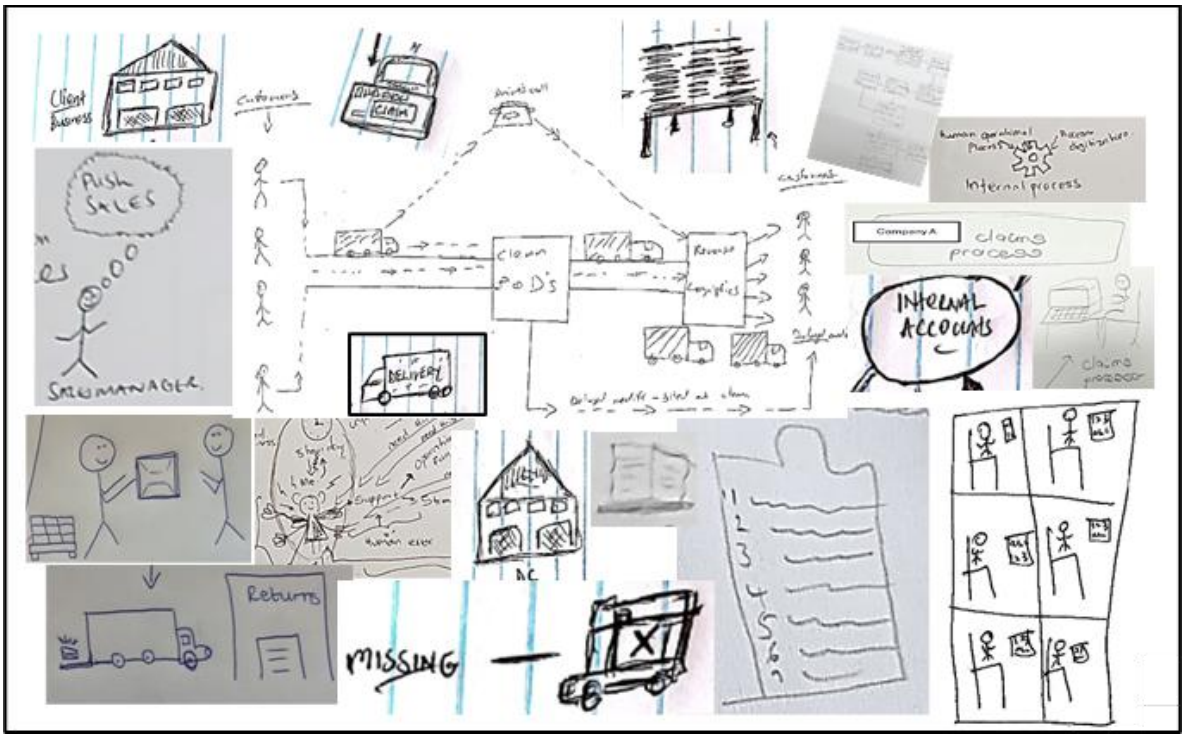


Figure 4.2: Rich Picture elements of the current paper-based POD process

Source: Researcher's compilation (2024)

It is clear from just the three picture groupings in Figure 4.3 that whatever the solution is, it would need to appeal to and include all parties and it would require effective collaboration to ensure the successful implementation. The process being paper-based makes it even more complex, as each variable (humans, emotions, tools of the trade, and even during the transportation of goods) could impact (or react independently) the process due to the number of people involved.

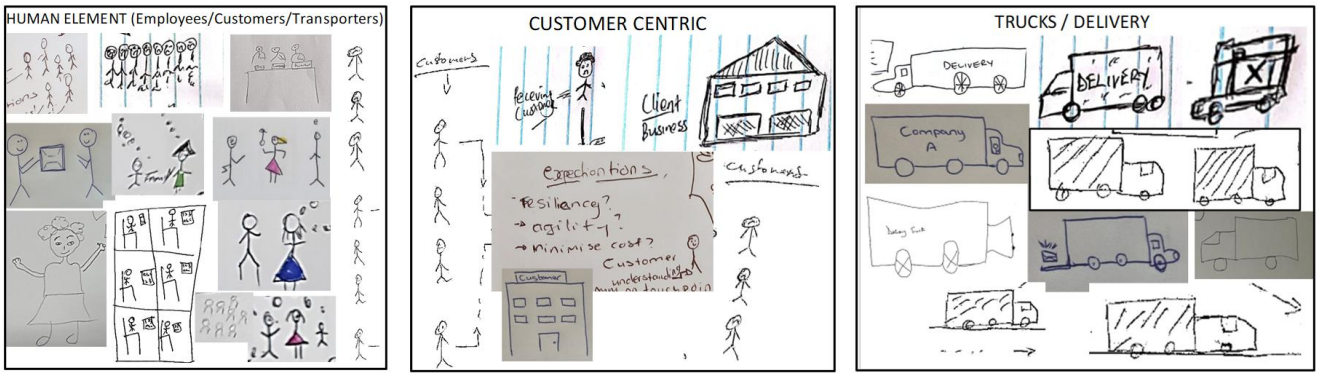


Figure 4.3: Rich Picture - repeating themes (humans, customers, and trucks)
Source: Researcher's compilation (2024)

The elements of the current paper-based POD process are visible by the repetition of elements in Figure 4.4 for example, tables with heaps of papers on them, people sorting paperwork, dustbins, shredders, and cabinets. The impact of the process is also clearly visible with the number of clocks (four), an hourglass, and trucks standing still due to being "delayed", which speaks to the time the process takes, and the delays it could cause. The delays have a ripple effect as individuals have an eight-hour day, causing a "gap" in "capacity" to get everything done.

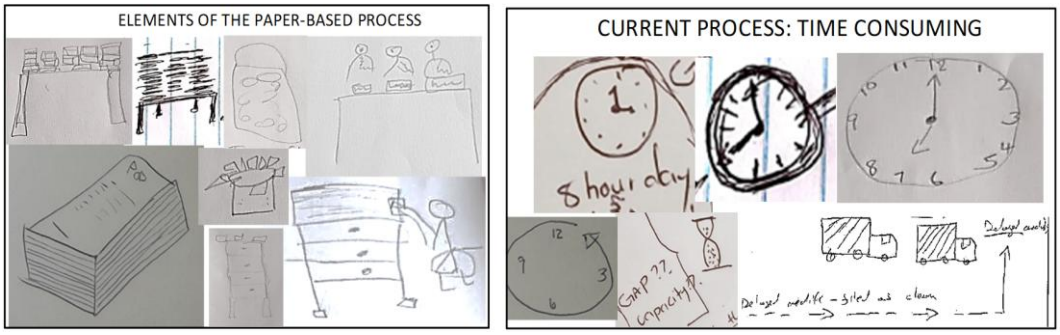


Figure 4.4: Rich Picture - repeating themes (paper-based process and time)
Source: Researcher's compilation (2024)

The gap in capacity to get through a day's work due to delays in the process can make many emotions come to the forefront, shown in Figure 4.5, with confusion (“????”), unhappiness shown by sad faces, and the feeling of being overwhelmed (‘many hands’ needed and a ‘broken heart’) all show the devasting impact the paper-based POD process has on human emotions. The participants also found creative ways to express exactly how they feel respectfully by including symbols like “##?!”, “#???!”, #!!@”, and even phrases of frustration “#?%$@*”. Between the negative emotions, there are hearts (showing happiness or love), as symbols of the appreciation the customer shows when things work out and there is alignment.

Figure 4.5: Rich Picture - repeating themes (emotions)
Source: Researcher’s compilation (2024)

Understanding the parties involved, the impact the current paper-based process has, and the frustration it causes, it was important to see if the participants added elements showing the reason the process should be improved. The grouping of the picture elements, in Figure 4.6, highlights the following elements as reasons to improve the current process: impacting growth, productivity and profitability (“$” and “money”); reduction of the complexity and “data overload”; addressing the lack of cohesion and ensure data integrity; service and delivery complaint reduction; compliance; and impact on the environment and waste reduction (“money in a dustbin”). The customer plays a role in the solution and having a great story to tell as a “Digital Modified Business” indicates Company A should take the lead in the FMCG industry when it comes to digitalisation. Digitalisation fears were not excluded, and a system crash, cyber security (threat of being hacked), connectivity downtime, being performance managed due to

poor performance with new technology, and job losses all were captured in the rich pictures very successfully.

Figure 4.6: Rich Picture - repeating themes (why improve? and fears)
Source: Researcher's compilation (2024)

What about solutions? When it came to recommendations for improving the current process, Figure 4.7 shows there was no shortage of images giving good insights, including communication, cloud storage, reminders, alerts, and the ability to track real-time. Devices included "laptops" (online ordering or receiving PODs electronically), handheld devices, and scanners to enable a real-time signature, claim creation, and POD updating (claim verified and signed by the driver and customer). Interestingly, the human element is part of the solution (customers, employees, and transporters), but there needs to be the will ("brain") to change.

As a qualitative research tool, rich pictures were a visual goldmine, and the ease of grouping elements of various pictures for theme creation and analysis makes it an excellent way to obtain rich insights into current inefficient processes. In this case, not only did it help put the E2E process into perspective, highlighting unpredictable variables, consequences and even solutions, it also brought a deeper understanding. Visually seeing real challenges, fears, and emotions captured by freehand-drawn images was very helpful but trying to understand the underlying non-verbal insights (or the reaction it evokes when observing the images), can turn a goldmine into a diamond field.

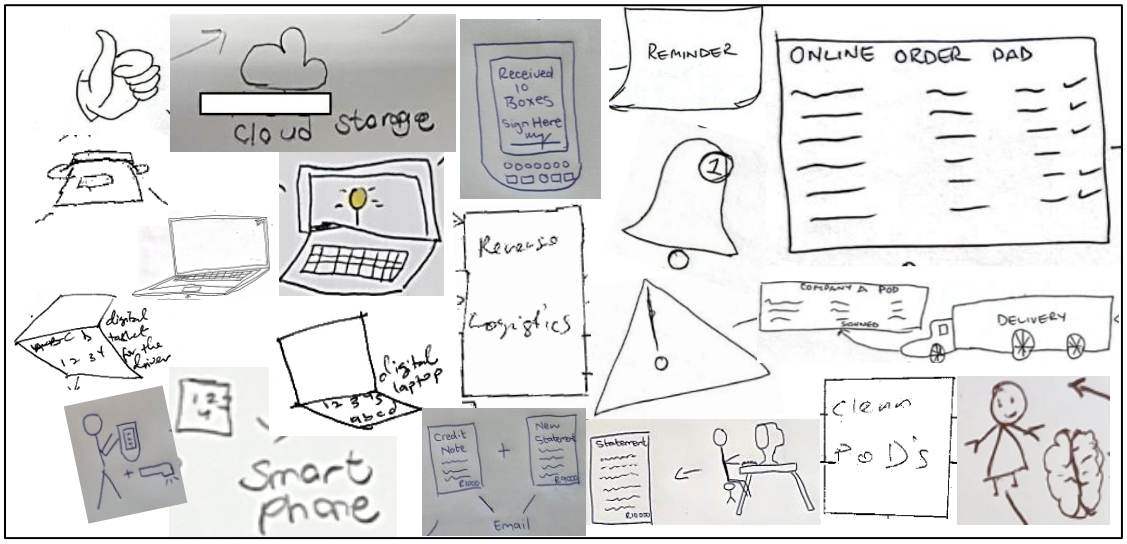


Figure 4.7: Rich Picture - repeating themes (recommendations)
Source: Researcher's compilation (2024)

Section B of the interview schedule allowed for input on and an explanation of the participant's rich picture, and it is this discussion transcription for SEs (skilled employees) and written feedback for MEs (manager employees) that was used to verify the initial visual rich picture analysis and findings by coding the data. In the coding process for the transcription and written feedback received, using the insights from the rich picture visual analysis, the same themes identified were used to cluster codes under the current process impact, the benefits of digitalisation, and recommendations for improving the current paper-based POD process. Identifying codes under each theme (organised as in Table 4.2.) formed the basis to define and describe the theme in more detail with the ability to drill down specific codes.

The current paper-based POD process, as shown in Figure 4.8, is a long manual, labour-intensive (sorting and filing) paper-based process, with many touch points (a nice quote was "passes many hands" from SE 107 DC). It is not only human-error prone but is also time-consuming, causing massive delays and frustration for employees, transporters, and customers. There are parts of the process that have been digitalised, and the efficiency of using this online portal to request stock returns (already delivered) was mentioned as a success story. The process becomes more complex when there is a partial rejection of the delivery by the customer (be it due to an incorrect product, or damaged stock), as this process requires a reason code to be allocated before the return will be accepted and is still purely paper-based removing the visibility digital solutions provide the sales, DC, and accounts teams.

"Lack of cohesion" (SE 102 SA) and "tedious exercise" (SE 103 SA), while a skilled employee from customer service (SE 104 CS) focussed on how time-consuming the current process is by talking about the "cabinet full of PODs… PODs and invoices on top", and "there's a big watch of time showing how long" are phrases used by the participants to describe the current process. The destruction of key documents by shredding again causes long delays, and the discarding of documents in bins with sensitive information are both potential risks that need to be mitigated with urgency and are the main reasons for the challenges experienced by the reverse logistic team that prevent them from processing credits in a timeous manner (missing information leads to lack of coordination). Quotes like, "They don't shred them, they just throw them in the bin" (SE 104 CS), confirm the visual analysis findings that paper-based processes are inefficient, costly, and can affect employee morale.

Figure 4.8: Word Cloud of current paper-based POD process
Source: Researcher's compilation (MAXQDA, 2024)

Coding on the question of "why improve the current process?", the customer took centre stage by the participants, followed by the need to embrace the digital evolution. Going digital would reduce the number of touchpoints, eliminating delays and inefficiencies within the current paper-based process (time is a crucial factor due to the product's time sensitivity or shelf life). "Dirty PODs" (nomenclature coined by the participants and reiterated by SE 107 DC, ME 104 CS, and ME 205 DC) are PODs that were not handed in as a "clean POD" that contained a variance (awaiting credit processing), were not declared on the day of delivery, and went through "many hands" (SE 107 DC) creating delays. This delays credit processing by up to a month or more, which results in an incorrect statement being sent out, resulting in an unhappy customer who only makes partial payment or even delays the payment in full.

Clear digitalisation benefits of pleasing customers and fulfilling expectations, cost-reduction due to timesaving, and removing manual paperwork would ensure a “clean POD” consistently. Future focussed, customer-centric companies, like Company A, should embrace digitalisation's benefits, which would improve competitiveness and overall agility. This created a clear link with the recommendations and improvements put on the table, alluding to the need for an integrated digital ecosystem that provides effective, integrated, uninterrupted communication and reduces the overall touchpoints to enhance the total Order-to-Cash (O2C) cycle.

Effectively utilising the parties present at the point of delivery, the customer and the driver, must both act as verification mediums, verifying stock, agreeing to any changes (returns), making amendments on a handheld device, and digitally signing as confirmation of accuracy. “So all those verifications, they must happen there, the best logistics” (SE 107 DC) touches on logistical best practices. A credit note will automatically generate and keep parties informed through various notifications and alerts. Storage on the cloud for easy accessibility would ensure all areas are connected and have visibility throughout the credit return process.

Another interesting observation was the descriptive words used to navigate the pictures, showing the conversion of verbal information from rich picture visuals. “So I will start at the bottom and work my way up” and “on my right of my picture going upwards” (SE 101), “we can start from the centre” (SE 102), “now when you look at the left side” (SE 106), and “what we see on the far left” are all phrases used to steer the reader through the different elements, so that they could ensure that the recipient of the information clearly understood the meaning.

The conclusion is that a rich picture is an excellent qualitative research tool to help generate rich themes to understand or identify areas of improvement, as it captures the complexity of the process being drawn and delivers on highlighting important elements (visible by repetition), which becomes a good source of code. A rich picture as pre-work allowed the participants to think of, and reflect on, the current paper-based POD process, and see for themselves where the inefficiencies stemmed from. Through both the visual and coded analysis, the same themes kept appearing that highlighted the inefficiencies of paper-based processes, provided more than sufficient evidence of the potential benefits of digitalisation, and earmarked customers and transporters as key parties that needed to buy into the new proposed process, for high adaptation. The human element remained throughout the phases before, during, and after the rollout of the proposed digitalised POD solution.

The process also provides a good understanding of the causality of paper-based processes, frustration, inefficiencies, low job satisfaction, and waste or “money in the bin”. Similarly, the positive causal loop relationship between automation, digitalisation, increased efficiency, productivity, better business results, and benefits to the environment and society at large are indisputable. But all these elements are inter-connected, move, and respond to impulses independently, increasing complexity. Understanding the causal loop between elements will allow for more effective recommendations, forming a strong foundation to work from during the planning and implementation of digital solutions.

4.5. Analysis and interpretation: the role and impact of Industry 4.0 on current supply chain trends within the FMCG Industry

The subsections that follow explore the visible digitalisation trends within the FMCG industry and the benefits they possess. The change in communication in the FMCG corporate environment is also investigated, while the impact of paper-based processes on daily tasks, which ultimately impact job satisfaction, will form the final discussion.

4.5.1. FMCG technological changes

Question C1 (What technological changes have you seen in the last five years at Company A that have helped with the quality of work produced?) aimed to first establish what digital trends are visible within the FMCG industry, and as Figure 4.9 reflects, that there was no shortage of digital changes witnessed, as all the participants unanimously indicated that they work in an area where digitalisation has been implemented. A very telling word is “use”, reflecting the current reality for the participants, who are immersed in the digital world, and they are ‘using’ it, confirmed by phrases like: “we use automated equipment on sites” (SE 101 SA), “online platform Company A uses” (ME 205 DC), and SE 104 CS adding value with both phrases, “we using Digital Platforms” and “so now we’re working in Digital Platforms”. Word Clouds are used throughout this research analysis and interpretation phase as it offers a quick understanding of the participants’ views on the theme at hand, as it not only summarises audience viewpoints but can also aid as a check of a participant’s understanding of the topic at hand.

The MAXQDA Word Cloud functionality was applied by ensuring all transcriptions and written feedback documents were activated when selecting a specific code to investigate. Any words

appearing that did not correlate to the theme (or general words like “I”, “are”, “my”, “was” and “am”) could be added to the ‘exclude word from code list’ to ensure a more accurate depiction of the intended code to shine through.

Figure 4.9: Word Cloud of technological changes witnessed
Source: Researcher’s compilation (MAXQDA, 2024)

Various digital changes have been witnessed in the last five years, with the service to customers being a big driving force behind the reasons to go digital. It also confirms again, like in the rich pictures, the crucial part the customer plays in a successful adaptation process. Another clue of digitalisation is a fully automated DC, from a conveyor belt receiving to pallet placing by LGVs (Lazer Guided Vehicles) with stock track-and-trace; thus, truck capacity went up by 35% per day at the DC. Other areas in the business have made use of other online platforms (like B2B and DocuSign) to go paperless and eliminate long, error-prone, manual ordering processes to the delight of customers and employees alike. The use of Cloud-based storage, integrated into an online portal, harnessed the power of the one gadget everyone has, the cellular phone – seamless access and visibility of processes relating to orders and deliveries, and stock upliftment requests in the palm of your hand. Automated integrated reporting solutions, like PowerBI, allow teams to react quicker in the trade, and get communication through quicker to customers or the company; thus, everyone is connected and has real-time information accessible by various mobile devices, online portals, and even apps.

The fast-tracked digital process aids in clearing claims faster, managing teams more effectively by taking manual processes out of their hands, resulting in increased efficiency and additional

capacity and allowing online document signing. Both the digital elements and benefits, as highlighted during the literature review, align with the views of Tjahjono et al. (2017) and Adel (2022). The opportunity to remove waste (delays and paper) not only benefits the customer but also removes frustrations and is better for the environment.

The way people communicate has also evolved over the last five years. Communication efficiencies between factories and DCs have increased in terms of quality of output and speed of alignment when it comes to pallet configuration communication. By using internal communication channels, including email and cellular phones, collaboration has increased with an increased focus on the urgency of getting a task completed. Teams was another game changer, as it allowed for remote working, easy online communication, and meeting set-up with colleagues or customers (even if departments are situated in another country) aiding in resolving issues and processing claims quickly. A skilled employee from sales highlights the impact digitalisation has had in the sales environment by saying, “Everything is on devices, no” and “A meeting is on devices” (SE 103 SA), confirming communication has evolved and has enabled cross-functional team efficiencies and provided the tools where speed to market is of the essence. This is especially important for a FMCG company to allow for JIT deliveries with time-sensitive products.

Paper-based processes have slowly but surely been disappearing at Company A, with the great strides evident in the passion expressed by the participants when they spoke about the digital improvements. With the visible digital trends, FMCG companies are using digital solutions to drive down costs and complexity, increase productivity, and increase customer and employee satisfaction, while reducing the impact on the environment at the same time. With the speed means of communication have changed in five years, the drive for efficiencies through innovative technologies, and the new opportunities it brings, digitisation within the FMCG industry and Company A must accelerate to stay agile.

4.5.2. The impact of paper-based processes

Question C2 (Can you highlight how, to date, paper-based processes within Company A have an impact on completing your daily activities?) captured the essence of the impact unautomated paper-based processes have on daily tasks with the two words “Time” and “Delay” (see Figure 4.10). “Privacy, with this privacy of this, it is hard to maintain cause visibility of your opposition”

(SE 101 SA), “It delays it cause frustration” (SE 102 SA), “late payments” (SE 104 CS), “time consuming” and “storage” (SE 105 AC), and “The signature is not even visible” are some of the phrases used when describing the impact of paper-based processes. Another interesting insight is into customer behaviour of holding back 50% to 90% of the amount due, using the unresolved claim as leverage is seen here: “You gonna hold 90% of the money that you owe me because I owe you 10%?” (SE 104 CS).

Figure 4.10: Word Cloud of the impact of paper-based processes
Source: Researcher’s compilation (MAXQDA, 2024)

Manual processes (print, file, and then eventually having to find it again in cabinets) take up substantial time from employees' other jobs functions, and the inefficiencies cause massive delays with task completion and decision-making (especially when important documents are lost, or shredded, which is then a ‘Dirty POD’), affecting employee morale. Another major risk factor highlighted was that of privacy, as paper-based documents have sensitive company and customer information like the customer address, pricing, signatures, and sometimes even the contact details of the receiving parties involved. Thirdly, the impact of timely payment from customers with pending claim disputes has an impact on O2C cash collection.

Further opportunities to improve current paper-based processes included QR Code scanning stickers (small paper stickers that are much more environmentally friendly than a 3-fold paper invoice) coupled with a handheld device with the ability to take photographs of stock when it is delivered (showing no damages) and capture electronic signatures, with real-time corrections capabilities. The important aspect is to use the efficiency of the parties at the delivery to align, confirm and sign, and an immediate credit note is created. The new accounts process (which is 100% paper-based) can be converted into an online portal. This would increase the

confidentiality of information, activated by biometrics (like facial, retina, or fingerprint) – again, the importance of using the parties involved (in this case, sales and the customer), to comply with the necessary checks and balances. Thus, the physical certified copies of customer documentation never leave the hands of the customer. The feeling of disempowerment, not being able to be in control of the speed of output you deliver to exceed performance expectations, causes frustration and unhappiness. The impact on the level of employee job satisfaction and overall team morale is inevitable, if workable digital solutions are not sought to free up capacity.

4.6. Analysis and interpretation: risk considerations to ensure digital readiness and adaptation

The following subsections look at change management challenges, like employee readiness, and how they influence the adaptation of technological solutions. By investigating digitalisation fears and benefits, the sections aim to get a roadmap of considerations to be included during the planning and implementation of digital solutions.

4.6.1. Change management challenges

Question C3 (Explain what the most challenging aspects were during the automation process when looking back at any previous paper-based processes that have since been digitalised within Company A) delivered three broad-spectrum digital transformation challenges when the participants were asked to think of previous paper-based processes that have since been digitalised. The impact on sales and deliveries with unplanned connection outages, technical glitches, or equipment malfunctioning was overwhelmingly flagged as an operational challenge during the automation implementation stage.

Asked about the reasons for resistance, the participants overwhelmingly flagged the human element (see Figure 4.11) citing the extensive stakeholder alignment, the training required before implementation, and the constant communication needed throughout the implementation process. This not only emphasises the need for the new process to be user-friendly and able to be accessed from various devices or platforms, but also the need to look at possible future improvement to have an integrative system approach. “Used to a 30-year-old process” (ME 204 CS) directly speaks to the challenge of breaking old habits or long-standing

processes, which can also result in resistance to learning new skills, confirmed by the phrase, "… can imagine on someone who really used to just driving a forklift is not used to operating conveyor belt".

Figure 4.11: Word Cloud of the reasons for resistance and slow adaptation
Source: Researcher's compilation (MAXQDA, 2024)

The impact on job security was flagged as a real concern, with phrases such as "loss of employment" and "we feel that everything is moving towards digitalisation and technology is taking over our earnings", both from participant SE 101 SA, while a skilled employee from customer service (SE 104 CS) added three phrases that evoked reflection from the researcher to fully understand the gravity of what was being said with "good for business. It's bad for the employee", "you trying to fix me as the problem", and "some of us would think you are cutting a person, not the process". Lack of digital knowledge and skill levels affect employee preparedness, and extensive training and change management initiatives need to be considered to breach this gap.

When employees feel overwhelmed during a transition period, it could lead to stress-related illnesses and absenteeism. Open, transparent communication throughout the process is crucial, as uncertainty will cause resistance, which is in line with the views of Heckelman (2017) that employee engagement will go down when there are feelings of insecurity. Participant recommendations to counter adaptation challenges were to take a slow-phased approach and involve all stakeholders throughout the process (including a trial run with role players), which

would help with the mindset change needed for higher adaptation. Share the benefits of the digital change constantly and manage expectations by having open and transparent communication; easy reference cards; continuous training; and coaching would ensure high adaptation of the new digital process.

The participants' general opinion was that people are willing and able to adapt to automation quickly if they are allowed to upskill themselves through various training and support programmes. However, this would only be effective if there was a strong commitment from the management and leadership teams to the automation vision. Moreover, employees' concerns should be mitigated by relaying the benefits and being open and transparent about the impact on the human element and how it fits into the long-term company strategy.

4.6.2. Digitalisation and automation benefits

Question C4 (In the context of technological developments, can you mention any benefits these proposed advancements applied to the unautomated POD process may hold for you, Company A, or the community?) aimed to consolidate the benefits linked to automation, and again participants' quotes brought some of the themes to life: "eliminate delivery cost number 1" and "eliminate workload", both comments from a skilled employee in sales (SE 101 SA), and "Social responsibility around our community" (SE 102 SA), "so much time will be saved" (SE 103 SA), "no need to claim cause visibility you already got" (SE 104 CS), "reduce manual errors" (SE 105 AC), "it will motivate me" (SE 106 AC), and "get competitive edge" (ME 201 SA). The benefits of digitalisation are well-known to the participants, and when applied to real-life scenarios that employees can relate to, the automation benefits sell themselves. Again, the time-saving factor was a strong theme, highlighting that digitalising manual paper-based processes would reduce errors, increase transparency, increase productivity (increased profits), and help with faster cash collection – all these elements reduce stress and create a positive working environment where employees can feel empowered and motivated.

The reduction in paper usage did not go unnoticed and environmental footprint reduction was flagged as a great motivator for possible future job creation. Potential challenges flagged included resistance created from the potential loss of employment, which could cause an increase in staff turnover, employee or team morale problems, and company downtime due to industrial action. Putting this into perspective, "automated results in job losses then ultimately

it will impact the community" and "country that already has such a high unemployment rate" (ME 203 SA), are typical questions that will come up during initial engagement sessions.

In the findings it is important to note the risk considered in question C3, and ensuring employee readiness for high adaptation should outweigh the benefits of automation before considering implementation. Without the investment in upskilling and change management processes in place, automation benefits become watered down, as employees will not feel empowered and sufficiently skilled to handle the change.

4.6.3. Going digital: fears and concerns

Question C5 (Do you have any fears or concerns about the implementation of a digital POD solution or technological advancements at Company A?) aimed to capture fears and concerns, and during the data analysis, 75% (9) of the participants leaned towards the 'no fears' sentiment using descriptions like "No, not fear or no concerns" (SE 103 SA), "I don't have fears" (SE 107 DC), "None, really" (ME 203 SA), "No" (ME 204 CS), "No" (ME 205 DC), while 17% (2) raised concerns regarding job security and role redundancy implications, and 8% (1) had "concerns about the implementation" (SE 105 AC). The managers were more inclined to respond with "no", as they had been exposed to automation initiatives directly and had probably benefited from the efficiencies that were created within their processes and teams. This exposure might be a factor as to why the buy-in and readiness coming through in responses was much more pronounced.

Recommendations to mitigate fears and concerns include ensuring transparent communication to all stakeholders, honesty when it comes to job or role impact, giving employees a voice and the opportunity to upskill themselves to fit into the long-term strategy, and reiterating the human element that is still needed in digital processes. This will build trust and increase the willingness to adapt.

4.7. Analysis and interpretation: mitigating risks and challenges

The subsections that follow cover training strategy elements, which will help meet employees' training expectations. The different change management elements, like the important role of the line manager during times of digital solution implementation and effective communication strategies throughout the change process, are unpacked and discussed.

4.7.1. Training strategy aligned with rapid technological advancements

Question C6 (What training programmes to manage technology change could be useful for staff awareness of how to deal with POD process change at Company A?) drilled down to look at training initiatives that would enable workforce readiness to excel in execution during implementation and drive adaptation. Overwhelmingly the sentiment was that the current training offerings do not allow upskilling for the digital future, and training offerings should be expanded to include “proactive programs, not reactive” (SE 102 SA), “digital training” (SE 101 SA), “technical training” (SE 105 AC), and “AI” (SE 106 AC). Company leadership needs to create a succinct, clear training roadmap that would give the structure needed to all levels of employees, confirming the company’s commitment to the digitalisation vision.

A key component of effective training is the ability to be “tailored to fit the audience” (ME 201 SA), as mentioned by a manager in sales, while internal training opportunities and external "skills development from a university” (SE 102 SA) was mentioned as broad-spectrum types of training interventions expected by the participants. With training content available in video tutorials, interactive simulations and self-paced modules, the employee would feel empowered to go back and refer to content and refresh their memory or important automation aspects. It would also prevent employees who are familiar with the content to sit in a training session again – a reminder that the aim is to save time, not fill it up with excessive training modules. “On the job” (SE 102 SA) training focussing on technical skills like “operating the robotics” (SE 102 SA) is crucial for building confidence, but for this to be effective, real-life work scenarios simulations should be included. An important factor with this type of training is for the trainer to be an expert in the field and he/she should be confident about the material being shared. Awareness drives regarding the technological advancements within the FMCG industry should be done with the entire company, which would create a deeper understanding of the “why” it was key to embrace and fast-track digitalisation, always highlighting the benefits throughout the different phases of implementation.

Ongoing face-to-face feedback by Senior Leadership during regular Town Hall meetings would not only allow for status updates but would also allow for questions from employees – a major element for building trust in the process. Giving employees other regular platforms to engage (for instance, using existing monthly check-ins or general meetings) and keeping an updated capability matrix would help managers cultivate up-to-date skill sets and eliminate uncertainty.

In addition, surveys are an effective tool to receive quick feedback from employees throughout the process.

4.7.2. The line manager as a support structure

Focussing on the immediate line manager, Question C7 (What would you look for in your immediate line manager to help manage change?) captured employees' expectations during times of change. As employees look to their direct line manager to help them navigate through the change process; "support" was overwhelmingly mentioned as the main reason for consulting their manager. The support might be in the form of guidance, motivation, or training to close skill gaps to ensure the new process is implemented according to expectations. The manager should be familiar with the new process benefits and have the digital and technical knowledge to effectively help the team succeed during implementation. Clear, transparent communication and the creation of a learning environment within the team setting, conducive to continuous improvement, is seen as a healthy foundation for a strong trust relationship.

Personality traits a direct line manager should possess include the ability to share the vision and drive change effectively to achieve that vision, a problem solver, confidence, be people-centric (empathy), and an effective communicator with high levels of emotional intelligence (EQ), which would help during times employees feel overwhelmed and need additional emotional or mental support. Phrases used include "cross-functional" (SE 102 SA), "fresh eyes a different perspective" (SE 103 SA), "attitude" (SE 104 CS) and "open-minded" (SE 107 DC), all speaking to traits that could build trust and show employees that the learning environment created is not just a tick box exercise but is lived out from the top down. The direct line manager plays a crucial role in the successful rollout of digital solutions and ensuring high adaptation; however, it also stresses the importance of training for managers to equip them to deliver on the expectations mentioned. The team will not be strong if the line manager does not possess the skills and capabilities to deal with the challenges in a rapidly changing digital environment.

4.7.3. Strong communication strategy during times of change

Question C8 (How can Company A communicate effectively about what change to the unautomated POD section will entail?) invited viewpoints to understand the communication expectations during periods of change, and what communication channels would be most

effective. Expectations of a good communication strategy were captured by phrases like, “All stakeholders” (SE 102 SA), “we need to know first” (SE 103 SA), “questions and answers” (SE 105 AC), “identify various challenges” (SE 106 AC), “visible with people” (SE 107 DC), and “well in advance” (ME 204 CS), and these were great starting points.

The overwhelming sentiment was that communication should be proactive in the sense that awareness highlighting the need for the change (the urgency behind it) and the benefits should happen well in advance before implementation. Ensuring internal employees are made aware first, before any customer or other stakeholders, and visible leadership during face-to-face Town Hall discussions where employees could engage and ask questions were important points raised, as neglecting to do so would create distrust in the process and increase resistance. Transparent communication of progress (and challenges) throughout the phases of a new digital process rollout should be a standard feature, but updates should increase during the implementation stage to ensure all stakeholders are informed of progress.

The communication strategy should be a phased approach, which provides constant benefit reminders and project updates and should incorporate various channels of communication (Figure 4.12). The use of emails was the most articulated channel of communication mentioned, with full schedules (“overwork”) and time constraints mentioned as the main reasons behind the recommendation. Using internal meetings, forums and newsletters were also raised as viable options to keep stakeholders informed. Post-meeting Q&A sessions and utilising surveys add value by getting real-time employee feedback and recommendations that might help with a smooth transition or higher adaptation. Where transparent communication builds trust, a strong communication strategy that incorporates platforms that evoke feedback to give insights and recommendations has the added benefit of rapid alignment for a smoother, more effective implementation (with higher adaptation as a benefit).

Figure 4.12: Word Cloud of channels of communication during periods of change

Source: Researcher's compilation (MAXQDA, 2024)

4.7.4. Additional recommendations, initiatives and insights

Question C9 (Do you have any recommendations, or any initiatives Company A can take on board to help employees on this POD process digital transformation journey?) solicited additional initiatives or recommendations from the participants that could aid in a smooth rollout of digital solutions. Being a leader in the FMCG industry when it comes to automation, and not a follower, requires high awareness at all times of what is happening in the market and developments in technology. "I will suggest that they eliminate 'the cabinet'" (SE 104 CS), and "we need to upgrade more of the IT and the digital skills" (SE 106 AC) indicate that the approach needs to be gradual by implementing small digital changes first to allow employees the time to adapt. Keeping employees part of the process, from the idea stage to implementation, could be brought to life by involving employees in pilot testing exercises, which would create anticipation and excitement. Sharing digital trends and allowing employees to test and experiment with new ideas by creating a culture of continuous learning would improve agility and competitiveness for long-term sustainability.

Validating the feedback received from the participants to questions C6 to C9 to see if it aligns with the literature review, the researcher listed the elements from Kotter's 8-step change model (Kotter, 2007) and the ADKAR model (Thekkekara, 2023), and asked the question "Was the change model step or dimension present in the research data questions C6 to C9?". The answer was a resounding "Yes", as Figure 4.13 shows that all elements in both change models

were present, with the conclusion that the findings in this study are aligned with popular change models.

Present?	Kotter's 8 Steps Change Model	Present?	The 5 Dimensions of the ADKAR Model
✓	1. Creating a sense of urgency	✓	A. Awareness: Of the need for change
✓	2. Putting together a guiding coalition	✓	D. Desire: To participate and support the change
✓	3. Developing vision and strategies	✓	K. Knowledge: On how to change
✓	4. Communicating the change vision	✓	A. Ability: To implement required skills and behaviours
✓	5. Remove barriers to action	✓	R. Reinforcement: To sustain the change
✓	6. Accomplish short-term wins		
✓	7. Build on the change		
✓	8. Make change stick		

Figure 4.13: Research findings compared to change models (RQ C6 to C9)

Source: Researcher's compilation (2024)

4.8. Conclusion

The thematic analysis was applied to two different realms, the visual world and the spoken word, each offering insights and understanding. To understand the current process, 12 rich pictures drawn by participants brought rich insights into the E2E O2C process and a sincere understanding regarding the impact on operations and the frustrations evoked due to the delays caused by touch point intense paper-based processes. Codes were developed into themes to shed light on the impact Industry 4.0 is having on the current supply chain, with repeated examples of digitalisation emerging (robots, automation, communication), in line with current global FMCG industry trends. Risk considerations to ensure digital readiness and adaptation looked at the reasons for potential resistance during digital change rollout to consider. Clear transparent communication was a strong theme throughout the analysis process and various training interventions and change management strategy elements were methodically identified and verified with literature from Chapter 2. The study conclusion is presented in the next chapter and recommendations will be based on the analysis findings in this chapter.

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CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

In this chapter, the focus transitions from validating the codes and themes developed with the literature and theoretical models to an amalgamation of key findings into the conclusion. The insights gained from these findings are transformed into concrete, actionable recommendations. As the research study draws to a close, it is important to revisit the study objective and the three core research questions to reignite the core contribution sought by conducting the research study, which is captured in the research summary. The recommendations are generated to ensure maximum value is added for a future-focused FMCG industry where sustainability is a focal point. Research strengths and limitations, future research foci, and the overview of the researcher's reflections and additional notes will bring the study to a close with a succinct summary of the recommendations.

5.2. Research summary

As a wave of silence fell on the globe in March 2020, companies within the FMCG industry where digital transformation has already started realised if they were to meet ever-changing consumer demands and stay competitive within a cash-strapped consumer market, the need to accelerate the implementation of digital solutions for enhanced operational efficiencies and environmental impact reduction necessitated a strategy change that could be adopted very rapidly. This study highlighted the current visible Industry 4.0 technological trends within the FMCG industry, including robots (LGV), automation, AI, big data analytics, and the digitalisation of paper-based processes by making use of B2B platforms, as an example.

The way FMCG companies operate has been transformed by these innovations, but opportunities still exist to make an even bigger impact on the environment by fast-tracking the digitalisation of the remaining paper-based processes to deliver E2E process visibility, bring additional efficiency, and deliver additional employee capacity by claiming back the most precious commodity in any FMCG company, time, as an undisputable benefit. The benefits of Industry 4.0 technologies, however, do not supersede the importance of the successful adoption of these digital solutions and the effective change management principles that are needed in rapidly changing environments.

Humans will be the ones having to adapt and implement the digital solutions, and effective change management could help a company navigate the different perspectives, address skill gaps, and assist with high adaptation to integrate new tools and processes seamlessly within the scope of their current daily work function. It is for this reason that in this research study the primary objective was to establish how change management could facilitate digital solution adaptation at an FMCG company, and how increased employee readiness could contribute positively to the long-term sustainability of the company. To help answer this objective, the secondary research questions were developed aimed at providing insights on the following:

- Identifying the digitisation of paper-based processes that have been implemented within Company A, and comparing if these changes, based on literature review insights, were in line with industry trends.
- Understanding the risks that need considering ensuring high levels of adaptation and employee readiness when a digital system is implemented.
- Developing a workable action plan through recommendations on how risks could be overcome to ensure company sustainability when changing from manual to digital.

To achieve these objectives, while creating a golden thread from the literature review insights gained, the research methodology factors were considered to ensure maximum research impact, and the transparent theme creation during the data analysis phase was purposeful to ensure research authenticity and trustworthiness. A brief overview of each chapter serves as a confirmation of the achievement of the objectives.

Chapter 2: This chapter provided great background on the FMCG industry, how Industry 4.0 had spearheaded great technological advancements within the industry, and the challenges it brought with it. Looking to the future, Industry 5.0 is a more worker-human-centric (concerned with human welfare) approach to creating a resilient business environment for sustainability. To establish how change management could guide high adaptation of new technology, different theories and models were consulted, including Kotter's change model and the Prosci ADKAR model. To ensure long-term company sustainability, as per the three-nested dependency approach, tools like rich pictures (Systems Thinking) were investigated to identify the value they could bring to the research process, while the critical success factors identified to ensure digital readiness for the FOW (TOE framework) also provided considerations to be taken to heart when developing the recommendations.

Chapter 3: The research design framework used to aid effective study planning was discussed in this chapter, including the qualitative research method and the thematic analysis approach. This ensured all elements and challenges highlighted during the investigation phase of the literature review were addressed adequately. The study population, the data gathering tools used, the ethical considerations complied with throughout the process, and the methods of data analysis were all discussed in detail to ensure the authenticity and trustworthiness of the research study.

Chapter 4: The participant profile and how the gathered information was analysed using coding to create themes of the impact of paper-based processes, the challenges the challenges brought, digital readiness considerations, and insights on how to mitigate adaptation and resistance challenges was the starting point of the chapter. The thematic approach was taken with both the rich pictures and the participants' interview transcriptions (SE) and written feedback (ME) to answer the research questions, which assisted with the development of robust, future-focused recommendations.

5.3. Study conclusions and recommendations

In conclusion, the fusion of critical insights gained during this study from the deep understanding of various views and theoretical frameworks obtained from the literature review guided actionable strategies for consideration for successful change management during digital solutions implementation.

5.3.1. Conclusion

In this study, the use of thematic analysis connected the visual world (the rich pictures) and the spoken word (the transcriptions and written feedback) with each other, allowing for the maximum benefit that each had to offer to bring insights and understanding. The rich pictures not only turned out to be an icebreaker that made participants ease into the interview, but also an impressive thematic analysis tool. The rich pictures allowed for a deep current POD process understanding (high touchpoint, and paper intense), highlighting the inefficiencies (delays, time, O2C impact, frustration) and potential solutions to close the process gaps.

From the redacted participant transcriptions and written feedback, codes were developed into themes highlighting robots, LGV, automation, integrated reporting solutions, and a change in

the way we communicate as visible signs of Industry 4.0 impact on the FMCG supply chains, also validating that the digital developments visible are in line with current global FMCG industry trends. To ensure digital readiness and seamless adaptation, risk considerations to mitigate potential resistance during digital change rollout, including transparent communication, support and training interventions, are to be considered.

Linking academic knowledge with real-life FMCG industry application would enable Company A to incorporate the recommendations that follow into future change management approaches to yield the maximum value of these findings for a competitive advantage and continued sustainable growth.

5.3.2. Recommendation 1: Rich Pictures

To capture and understand complex business processes and systems, incorporate drawing a rich picture as a practical, visual problem-solving method into the company's 'toolkit'. This creative and playful approach will greatly help the leadership team gain a sincere, deeper understanding of current processes, identify areas for optimisation and the stakeholders involved, and even help recognise employee readiness. Giving employees a rich picture to draw as pre-work before the engagement helps focus the individual to think about the topic in advance and allows for initial unfiltered perceptions to be captured without any influence. When individuals refer to the rich picture they have drawn, they are clearer about 'what' they want to say and they can drill down ideas when asked about specific elements. The unfiltered insights add tremendous value during the engagement and thematic analysis phase, allowing for 'rich recommendations' to be developed. In this study, the value of drawing rich pictures is overwhelmingly visible (see Figure 5.1) when looking at the amount of code derived from participants' feedback on the topic of rich picture explanations compared to RQ1, RQ2, and RQ3.

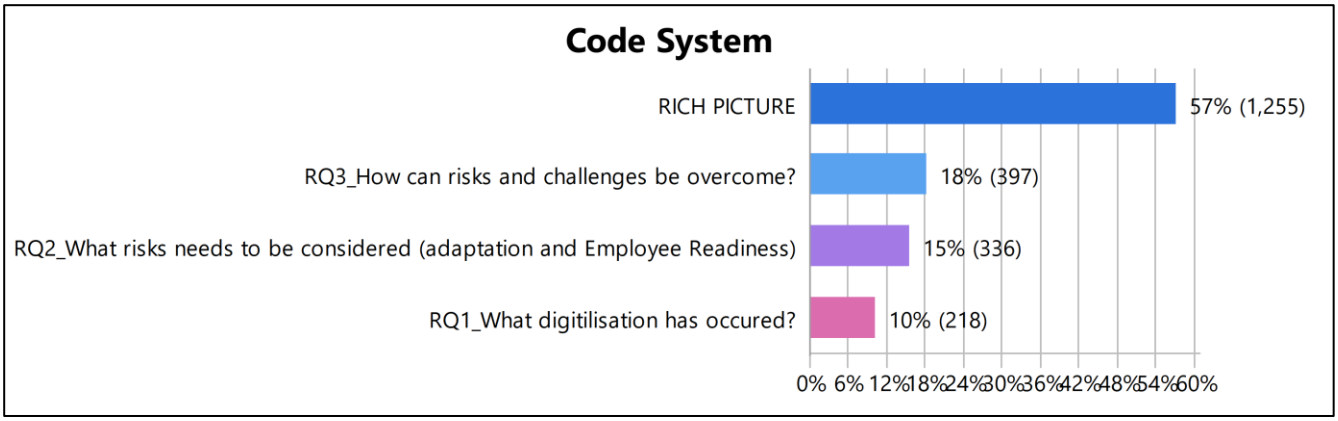
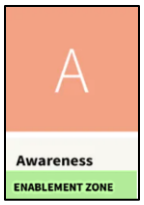


Figure 5.1: Rich Picture code compared to code for RQ1, RQ2, and RQ3

Source: Researcher's compilation (2024)

The insights gained with various change models highlighted the need to keep things simple in a 'data overload' environment. In the application for this study, the recommendations that follow have been grouped using the ADKAR change model as a reference, not only for ease of recommendation reference under each dimension, but also to build a rich, step-by-step approach that can easily be absorbed into Company A's change management strategy.



5.3.3. Recommendation 2: Industry 5.0 to the rescue

With all the benefits that Industry 4.0 has to offer, the general perception of humans being replaced is an unfortunate stigma that has developed; a consensus finding in this study confirmed the viewpoint that digitalisation is seen as being human unfriendly. This viewpoint is an unintended consequence in terms of employment security, which is visible to employees as they witness headcount reductions and increases in responsibility, which may be a big factor that could lead to resistance (unwillingness to change), resulting in low adaptation. Change the narrative by focusing on Industry 5.0, where instead of replacing humans, the message of increased collaboration between humans and smart systems is a more positive story to tell. The benefits of removing repetitive, monotonous tasks, now done with speed and accuracy by machines create the capacity for humans to focus on creative, efficiency-improving tasks.

Unlike Industry 4.0, Industry 5.0 is more focused on worker welfare by developing a sustainable, human-centric and resilient business environment (Battini et al., 2022:108619), and eliminating human-machine conflicts (Choi et al., 2022:9) – a world where the human brain and robots are connected, working in harmonious collaboration rather than as competitors (Nahavandi, 2019:4371). In an emerging economy like that of South Africa, with a high youth unemployment rate, embracing Industry 5.0 principles by Company A would not only transform the public perception of the company culture (setting the pace for digital innovation, while being human-centric) while providing a more sustainable production, with supply chain resiliency, but will also send a strong signal to current employees and attract the correct future talent of the skill set required in the near future if you would like a career with Company A.

5.3.4. Recommendation 3: Set the scene with awareness communication

A phased approach is needed to ensure a rich story is being told to the employees so that a deep understanding of all the elements of the proposed change can not only be understood, but perspective is given for the 'why', which will create the urgency. The following approach will be useful in driving awareness of the proposed digitalisation of the current paper-based POD process:

- Share industry trends: Make use of Town Hall meetings (face-to-face) during initial discussions. Digitalisation trends within the industry should be shared at every opportunity, including developments at competitors' level, sharing the reasons for the accelerated pace of digital solution adaptation within the FMCG industry.
- Changing customer habits, supply chain constraints, legislative pressures, and socio-economic factors all highlight the reason to go digital, which speaks directly to the efficiencies and cost-saving benefits of Industry 4.0 Remove the stigma by focussing on the environmental benefits of Industry 4.0, like environmental footprint impact reduction (directly addressing the need to reduce paper-based processes, as they are inefficient), reduction of waste (timesaving, eliminating errors, providing visibility throughout the E2E process), and improved job satisfaction through increased performance (eliminating stressful time-consuming manual processes that cause delays and frustration). Drive home the time-sensitivity of FMCG products (their shelf life) and the fact that delays caused by paper-based processes could add to waste when products expire.

- The customer took centre stage, not only as a reason for implementing digital solutions but also as a crucial stakeholder that could ‘make or break’ the successful implementation. Early involvement of this role player in the process highlights how going digital would reduce the number of touchpoints, eliminating delays and inefficiencies within the current paper-based POD process.
- Highlight the changes in the way people engaged, communicated and collaborated (Teams, DocuSign, Power BI) within Company A over the last five years and ask individuals to reflect on how digital developments in this area have evolved efficiencies of daily tasks, and the new opportunities it has brought; hence, real-life on-the-spot impact assessment.
- Reignite the sense of purpose, reminding employees of the company’s rich history, the positive strides made to protect the environment, and social responsibility initiatives.
- Always allow for Q&A time after each discussion, and ensure timely feedback to real concerns raised, as the trust foundation needed for success is created during this period. Uncertainty causes resistance, so always keep the channel of communication a two-way engagement that allows for input and feedback.
- Surveys are an effective tool to obtain quick feedback from employees throughout the process.

5.3.5. Recommendation 4: Let employees create the desire

The human element in the form of customers, employees, drivers, and transporters was a main theme that emerged through most of the code. The rich pictures allowed participants in this study to gain insights into the impact of paper-based processes and the type of inefficiencies they deliver, and to generate solutions to address these inefficiencies. A similar intervention would be to invite employees to scenario planning engagement sessions, providing them with an additional platform to be part of the solution-generation process. Not only would it allow employees to look beyond the five-year future view of the company by looking at current trends and projecting them 10 or 20 years into the future, but it would also create the urgency and desire to implement digital solutions through the self-generated insight this process delivers. If

ideas are self-generated, employees will feel empowered and part of the solutions. This will reduce resistance to new digital processes when they are to be implemented and increase adaptation.

5.3.6. Recommendation 5: Visibility stops bad behaviour

The customer and the transporter (driver) are not two recurring elements observed in the majority of the themes by pure accident, as it stresses the areas in the current process where inefficiency is most likely to be present, while confirming the need for both to be included as part of the new process champions. A sense from the participants in this study that the customer would be most resistant to the proposed digitalisation of the current POD process raised the question “why”. Another theme emerged of partial payment due to outstanding stock return claims owing to rejected stock (the wrong product) or stock that was damaged during transit or offloading. The incentive for the customer was captured perfectly in, “You gonna hold 90% of the money that you owe me because I owe you 10%?” (SE 104). If the customer benefits from the inefficiencies in the current process (withholding payments seems acceptable), they will resist implementation and refuse adaptation of the digital process. The real resistance is to the visibility the new digital process will bring to the O2C process, removing ‘dirty PODs’ from the equation. It is crucial to eliminate any incentive for pending claims, apply best practices with all accounts with credit terms, and only make partial payments.

It is indisputable that there is a need for an integrated digital ecosystem, providing uninterrupted communication flow (while reducing the touchpoints) by effectively using the driver (employed by Company A) to act as a verification medium initiator (take a photograph before offloading, make real-time return amendments on a handheld device, and digitally sign with receiving customer as confirmation of accuracy of final digital POD). As all the verifications happen at the delivery point, credit note generation will be automated (keeping all parties informed, employing various notifications and alerts, and stored on the cloud for easy accessibility) with a real-time, up-to-date statement always as a result. This is the information accessibility and visibility throughout the credit return process that is currently lacking – a loophole that is being exploited.

5.3.7. Recommendation 6: Line manager readiness

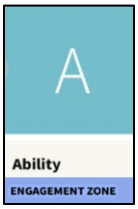
Focusing on manager readiness first before employee upskilling is purposeful as the direct line manager plays a pivotal role in the successful rollout with high adaptation of digital solutions. The new digital era brings unchartered challenges and providing managers with the tools needed to navigate the FOW, including leadership development, EQ, coaching skills and change management training, will develop skills and capabilities to deal with the challenges in a rapidly changing digital environment to deliver on company and employee expectations.

The manager of today must be digitally savvy and have the digital and the technical knowledge to effectively help team members succeed during digital transformation drives. The manager must further be a champion for the new process and be familiar with the benefits, but should also be able to guide, motivate or train employees who require additional assistance during implementation. Creating a learning environment, conducive to continuous improvement, is seen as a healthy foundation for a strong trust relationship between the manager and the employee. Personality traits of direct line managers that resonate with employees today include confidence, strong communication skills with the ability to share the vision and drive change effectively, and creative problem-solving with high levels of EQ. Moreover, direct line managers should be able to pick up red flags and guide employees who are experiencing mental stress by providing additional emotional support.

5.3.8. Recommendation 7: ‘Upskill’ the training offering

High adaptation forms a positive reinforcing causal loop with employee readiness. The overwhelming sentiment among the participants in this study was that the current training offerings are not geared to empower employees for the digital future. A transparent long-term strategic view would give employees the opportunity to address skill gaps timeously and incorporate proactive training that addresses future skills, including digital, technical, programming, robotics, and AI-related skills development courses. A crucial element of a successful training programme would be to what extent a succinct, clear training roadmap flags the future skill needs of employees, confirming the company’s commitment to the digitalisation vision that people are part of the solution. Key components of effective training that would

enable workforce readiness would be the ability to be tailored to fit the audience with the ability to harness internal and external training opportunities from tertiary institutions such as universities. Digital solutions should also be embraced in the presentation of the training by including video tutorials, interactive simulations, and self-paced modules. For more technical aspects, on-the-job training and real-life work scenario simulations, presented by experts in the respective fields, aid with building confidence in working with the new digital solution. Keeping an updated capability matrix would also help managers ensure an up-to-date skill set, ensuring employee readiness and a talent pool that could be utilised for future digital rollouts.



5.3.9. Recommendation 8: Identify hidden talent through testing

Include stakeholders, from all levels within the company, to take part in projects and pilot testing of new digital processes before implementation. Not only will the exposure be good for upskilling, but it will significantly improve employee readiness and increase adaptation by removing the unknown (uncertainty creates fear). Use this opportunity to identify employees with hidden talents and leverage this expertise (which also encourages engagement and promotes idea sharing), as this would also help with a talent pipeline filled with high-potential employees who show promise. In addition, developing a project dashboard is an easy way to create visibility of current and future digitalisation projects within Company A. Furthermore, request volunteers, but make the selection process like an interview, with a space on how the employee's skill set can add value and a space to upload a one-minute introduction video the employee could record on their cellular phone. Making it interesting and using a digital platform during this process would create familiarity in using technology in all aspects of daily life.

5.3.10. Recommendation 9: "Get rid of the cabinet"

Transparent communication creates trust, but communication that allows for constant stakeholder feedback creates alignment. During this study additional recommendations to "Get

rid of the cabinet" (which has become a term synonymous with removing paper-based processes by digitalisation) included the need to communicate the necessity for change and its benefits transparently by using a multi-channel approach (email, existing weekly and monthly meeting, newsletters, and internal communication channels like a television in the reception and canteen) to share progress updates on successes and challenges; provide post-launch support to employees to facilitate the transition to the new digital POD process; and continuously identify and reduce paper-based processes to cement continuous change within the company culture.

5.4. Research strengths and limitations

Adding rich pictures provided rich code and themes, which were very useful in understanding the current process through and through. The visual drawings, which brought a creative element into the thematic approach, was very successful and a great source of inspiration. However, not having a ME representation from the accounts department left a gap in perspective from a managerial point of view in that department.

5.5. Researcher reflections and additional notes

Keeping comprehensive researcher notes allowed for reflective journal entries (to engage deeply with the subject matter and help track ethical checks) throughout the research journey. These entries provide a tangible source of reference for the researcher's thought process, an understanding of natural themes that developed, and tremendous personal growth, not just in the knowledge gained, but also in resilience and agility.

- Keeping a comprehensive journal helped capture the researcher's methodical approach, reflections, and ethical considerations during the research study. This provided a great platform to capture personal learnings and monitor ethical checks and balances, and it became a source of inspiration for the structured content in Chapters 4 and 5.
- Include as part of the Rich Picture instructions, a recommendation to turn the page to Landscape. This page layout seemed to be more conducive for creativity.
- Check in with yourself. Use the strong foundation created and the reflections done in the first semester of the MBA in the Leadership and Personal Development courses. Revisit

the reasons for embarking on this journey and the personal values that energised you. Breathe.

- The participants work in an FMCG company, where the motto is “work first” with limited time available for anything else, which needs to be respected. Learning from this research is to ensure invitations are not sent out over month-end (a notoriously busy period within the FMCG industry, which might yield a low response rate) but to rather time them for the first week of a month, with interviews scheduled for the third week. To not overwhelm potential participants, use the flag functionality as a reminder on participant emails sent. This will limit interaction, as not to irritate, without losing touch with the potential participant.
- Have a plan but be willing to pivot. Remember the participants are human, and not faceless numbers to reach data saturation.
- The research’s new perspective gained on the complexity of the supply chain flow is seen in Figure 5.2. Not only did Figure 1.1. not include reverse logistics, but Figure 4.2 showed the complexity of only a small part of the supply chain flow (i.e. reverse logistics).

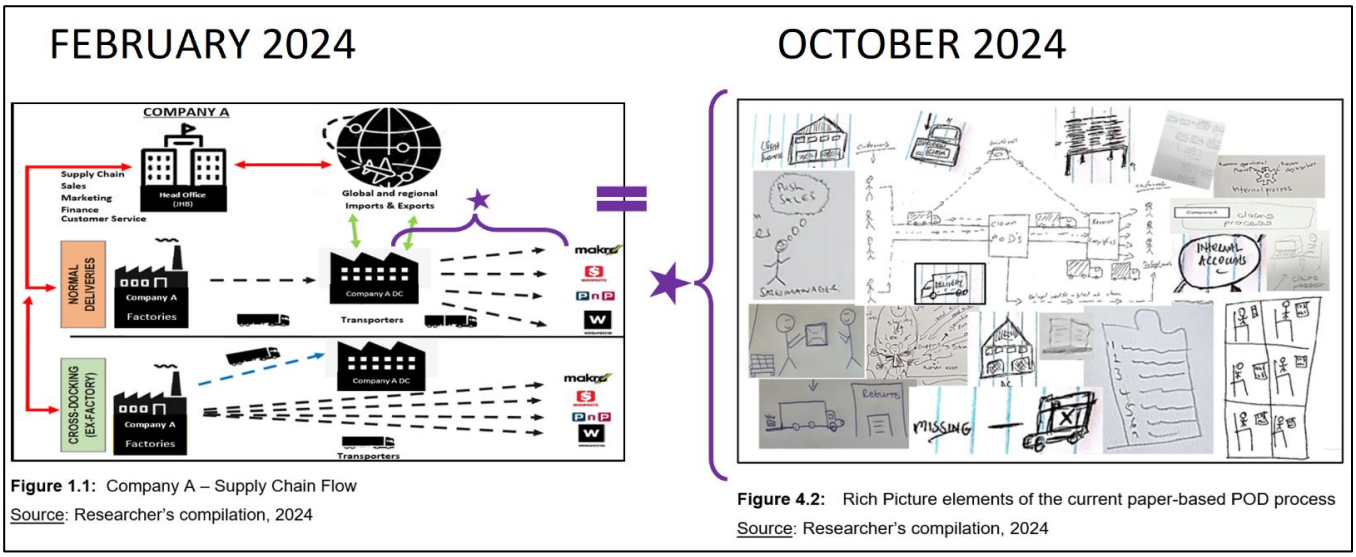


Figure 1.1: Company A – Supply Chain Flow
Source: Researcher’s compilation, 2024

Figure 4.2: Rich Picture elements of the current paper-based POD process
Source: Researcher’s compilation, 2024

Figure 5.2: Research’s new perspectives gained
Source: Researcher’s compilation (2024)

- The researcher’s initial instinct was to change Figure 1.1, but a decision was taken to leave it as was to show the profound insights gained by using rich pictures during thematic analysis.

- Out of a total of 41 redactions made in the transcripts and written feedback, most related to the use of Company A's specific systems names (26), Company A's name (14), or potential red flags (1). Skilled employee changes made up 83% (34) of the redactions that were needed (Figure 5.3). The conversations ranged from 30 to 45 minutes on a platform used daily for engagement (Teams), with high levels of trust in the process, or trust in the interviewer (or a combination of both), which may explain the higher number of redactions made – conversations were relaxed and free-flowing and the perspectives were rich. The managers made up 17% (7) of the total redactions (most of these were removed by the researcher who erred on the side of caution with company-specific systems or partnerships mentioned).

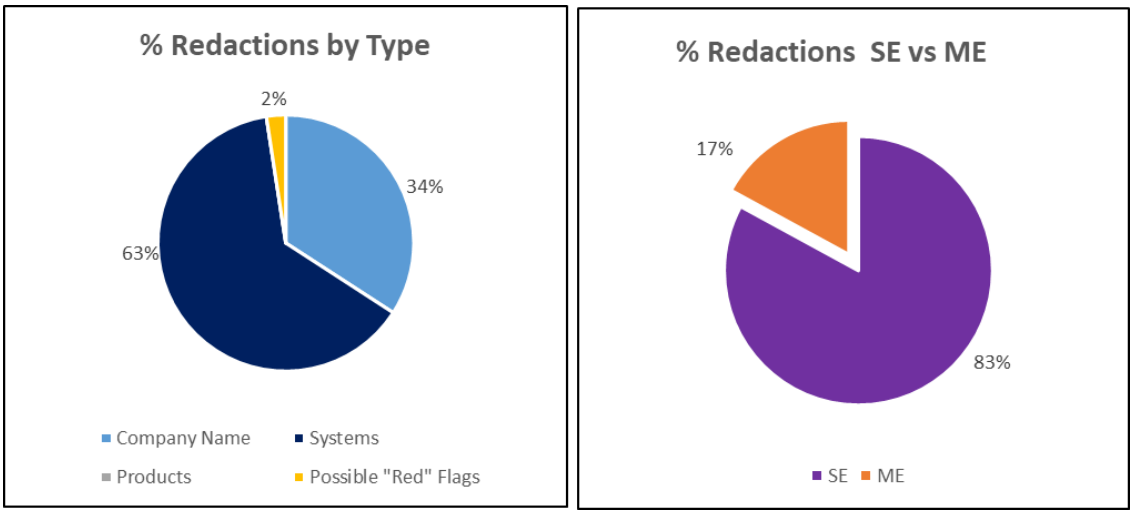


Figure 5.3: SE and ME redactions

Source: Researcher's compilation (2024)

It was important during the researcher's reflection to highlight the three areas of contribution that significantly add value to this research study:

- Methodological contribution: Employing qualitative research methodology this research study makes a striking impact by combining in-depth interviews with the visual elements of rich pictures allowing for a broader perspective (multi-layered), which helped give a voice to the participants to verbalise the complexities of the current POD process so effectively, which led to 'data-richness'. Semi-structured interviews and written feedback, combined with a methodical approach when capturing the researcher notes throughout the process, also added deep insights and context.

- Theoretical contribution: In the field of change management, this study added to the existing knowledge base of crucial elements that need consideration when embedding digital solutions. Linking the real-life challenges faced by a multi-national company during a period of rapid digital change to change models like Kotter's and ADKAR showed that the elements required, which were highlighted by the participants, aligned to those of the change models. The opportunity to leverage the polished theoretical framework and the findings of this study could be useful in circumnavigating potential challenges in the digital transformation journey more effectively.
- Practical contribution: With a global focus on sustainability, this study supplies a concrete roadmap (and potential challenges that need to be mitigated along the way) for consideration for future digitalisation or automation projects. The success of the recommendation can be reviewed post-project, and it will allow for future change management approaches to be finetuned constantly. Although the recommendations were generated for Company A, the guideline could be adapted and streamlined to address similar change management challenges across any industry going through rapid digital change.

5.6. Recommendations for future research

Against the backdrop of a volatile global environment, with cash-strapped consumers being a very real current (and future) reality, combined with the accelerated pace of digital and automation solution implementation, continuous exploration of future research is rich with topics in the field of change management during digital solution implementation.

The recommendations for future research open new possibilities that look beyond the scope of the current research to expand on the findings, namely:

- The use of rich pictures during data collection as a thematic analysis (or theme creation) tool should be considered for more formal research studies and should be front of mind for any serious researcher wanting the rich insights that are gained from this process, making it an excellent 'process efficiency' assessment tool. The ease of implementation (paper and a cellular phone) and the element of play in line with agility principles make it a cost-effective, high-impact tool that should be applied more often as a standard rather than an optional choice during research studies.

- Digital transformation is ever evolving and new emerging digital solutions and the impact (benefits and risks) on a company, employees, stakeholders, and the environment will always require new insights through comprehensive future research.

5.7. Recommendations summary

The human element was a strong repetitive theme, and it cannot be denied that any strategy must include effective communication throughout the change process and give employees the opportunity to upskill themselves in advance so they could be part of the solution, which would help with changing mindsets to always be ready for change. Humans will be the ones having to adapt and implement digital solutions, and effective change management helps consolidate different perspectives and ideas, develop meaningful training to address any skill gaps, and assist with the high adaptation of new tools. This research study's primary objective was achieved by highlighting how different elements within the change management process could facilitate the development of a systematic approach to ensure the high adoption of digital solutions at an FMCG company. To increase employee readiness, the secondary research questions helped to identify current FMCG digital trends (and the impact of paper-based processes on productivity), identified risks to be considered, and delivered nine focused recommendations on how risks could be overcome to ensure company sustainability when changing from manual to digital.

The researcher has concluded that effective change management, like setting the tone and changing the narrative about Industry 4.0 by beginning to incorporate an Industry 5.0 approach and benefits, would add great value to maximise buy-in early in the transformation process. This includes shifting the focus from business efficiencies, developing an approach that begins with environmental and societal benefits, and then flagging the processes for improvement as a strategy to fast-track those benefits. The golden thread from the literature review, to the research methodology factors considered, and the transparent theme creation during the data analysis phase, guaranteed maximum research impact while ensuring research authenticity and trustworthiness.

"you trying to fix me as the problem"

"good for business. It's bad for the employee"

"some of us would think you are cutting a person, not the process"

“everything is moving towards digitalisation and technology is taking over our earning”

The stigma around Industry 4.0 should be changed by increasing employee readiness and making them feel empowered to work with ‘robots’ for enhanced performance in the new digital world. Informed, skilled employees have a greater willingness to join the digital transformation journey without fear, which will help with a more sustainable future for both the company and its employees.

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APPENDIX A: Rich picture instructions

TITLE OF THE RESEARCH PROJECT

IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY

Participants Pre-Work

(In preparation for the scheduled interview)

Drawing a Rich Picture

Instructions

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UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

TITLE OF THE RESEARCH PROJECT

IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY

DATE: August 2024

RESEARCHER NAME AND CONTACT NUMBER:

Name of student/researcher	*Student number*	*Contact number*
Pieter Mattheus	*2004152886*	*082 441 3206*

University Free State
Economic and Management Sciences
Business School

STUDY LEADER NAME AND CONTACT NUMBER:
Dr Peta Thomas
082 811 0045

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

Thank you for opting in to participate in this research and returning your signed informed consent form.

Just a few reminders of your participation:

- Confidentiality for both the company, and participants, is paramount, and in all interactions, reference to Company A and study participants will be made
  - Your name will not be recorded anywhere, and no one will be able to connect you to the answers you give
  - MS Teams recordings will not require video function activation, and only voice will be recorded
  - Your answers will be given pseudonym
- This study has received approval from the Research Ethics Committee of UFS. (A copy of the approval letter can be obtained from the researcher)
- Approval has been received from Company A's CEO to conduct the study
  - No sharing of sensitive company data, strategies, or product information is required at any stage of the study
- Participation is voluntary and there is no penalty or loss of benefit for non-participation
- Participants can opt out of the study at any stage
- Data gathered will be secured by password-protected folders
- MS Teams recordings will be destroyed immediately after verbatim transcription
- If you would like to be informed of the final research findings, or have any questions at any time, please contact the researcher, Pieter Mattheus (082 441 3206)

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Participants Pre-Work: Drawing a Rich Picture

- What is a Rich Picture?
  - A rich picture is a representation of the situation, by using pictures and symbols, highlighting elements, questions, observations, understandings, and insights of the drawer
  - Perspectives derived from the illustrations could deliver valuable insights

INSTRUCTIONS:

Draw a Rich Picture that explains what "Digitalisation" means to YOU in terms of the non-automated POD section of Company A's claims process
(Time: 10-20 Minutes)

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Rich Picture Guidelines To Help You

- Don't structure your rich picture in any way
- Don't use too many words
- Don't exclude relevant observations about culture, emotions, and values
- Include other points of view
- Include a representation of yourself in the picture (*remember no names are allowed)*
- Give your rich picture a title
- Include a date

Remember you don't have to be an artist – let the creative juices flow ☺

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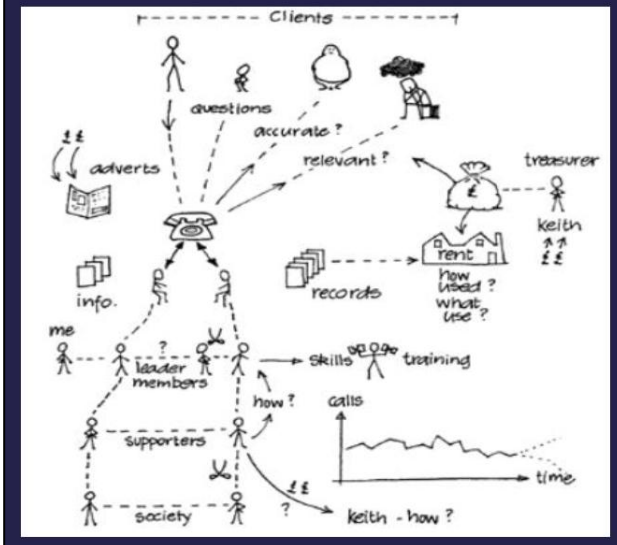
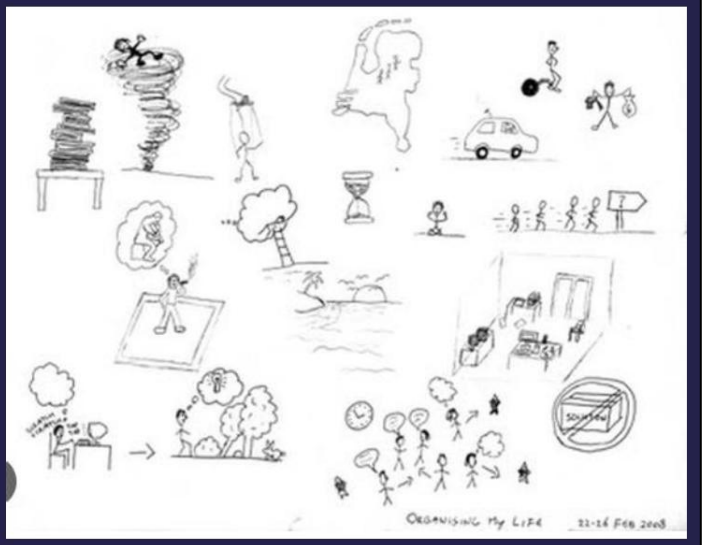
Rich Picture Examples





APPENDIX B: Interview schedule (Skilled Employees)

TITLE OF THE RESEARCH PROJECT

IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY

DATE: August 2024

RESEARCHER NAME AND CONTACT NUMBER:

Name of student/researcher	*Student number*	*Contact number*
Pieter Mattheus	*2004152886*	*082 441 3206*

University Free State
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STUDY LEADER NAME AND CONTACT NUMBER:
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UNIVERSITY OF THE FREE STATE
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  - Your answers will be given pseudonym
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- Approval has been received from Company A's CEO to conduct the study
  - No sharing of sensitive company data, strategies, or product information is required at any stage of the study
- Participation is voluntary and there is no penalty or loss of benefit for non-participation
- Participants can opt out of the study at any stage
- Data gathered will be secured by password-protected folders
- MS Teams recordings will be destroyed immediately after verbatim transcription
- If you would like to be informed of the final research findings, or have any questions at any time, please contact the researcher, Pieter Mattheus (082 441 3206)

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Interview Schedule (SKILLED EMPLOYEES)

Participant Reference
Participant _____

DATE:

TOPIC: Improving business sustainability at a fast-moving consumer goods company

The company of this study is Company A, a global FMCG company.

Section A (Questions A1 – A4) - Details of participant

1. Do you work in an area where automation or digitalisation has been implemented?

Yes ----------	
No ----------	

2. Indicate the length of your employment in Company A.

2 - 5 years ----------	
≥ 6 years ----------	

3. Indicate the level of your position in the organisation.

Management level ----------	
Skilled worker ----------	
Other ----------	

4. What is your employment category?

Sales ----------	
Customer service ----------	
Accounts ----------	
Warehouse or transport ----------	

Section B (Rich picture description)

In preparation for the interview, each participant will be asked to draw a rich picture in advance depicting what “digitalisation” means in terms of the non-automated POD section of Company A’s claims management process. Instructions will be supplied.

Section C (Questions C1 - C9) – Participant personal perspective questions**:**

Question C1: What technological changes have you seen in the last five years at Company A that have helped with the quality of work produced?

Question C2: Can you highlight how, to date, paper-based processes within Company A have an impact on completing your daily activities?

Question C3: Explain what the most challenging aspects were during the automation process when looking back at any previous paper-based processes that have since been digitalised within Company A.

Question C4: In the context of technological developments, can you mention any benefits these proposed advancements applied to the unautomated POD process may hold for you, Company A, or the community?

Question C5: Do you have any fears or concerns about the implementation of a digital POD solution or technological advancements at Company A?

Question C6: What training programmes to manage technology change could be useful for staff awareness of how to deal with POD process change at Company A?

Question C7: What would you look for in your immediate superior to help manage change?

Question C8: How can Company A communicate effectively about what change to the unautomated POD section will entail?

Question C9: Do you have any recommendations or any initiatives Company A can take on board to help employees on this POD process' digital transformation journey?

Thank you for your time in participating in this research.

APPENDIX C: PowerPoint supplied to HRBP to be used as recruitment invitation

TITLE OF THE RESEARCH PROJECT

IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY

Dear Potential Research Study Participant

You have been purposefully selected to participate in the abovementioned research study

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YUNIVESITHI YA FREISTATA
UFS UV

TITLE OF THE RESEARCH PROJECT

IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY

DATE: July 2024

RESEARCHER NAME AND CONTACT NUMBER:

Name of student/researcher	*Student number*	*Contact number*
Pieter Mattheus	*2004152886*	*082 441 3206*

University Free State
Economic and Management Sciences
Business School

STUDY LEADER NAME AND CONTACT NUMBER:
Dr Peta Thomas
082 811 0045

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Q & A's

- Why was I selected?
  - Purposefully selected individuals within Company A who share common traits (years of service, departmental and function affiliation, and would require a signed POD to resolve a customer query or process a claim for returned products or orders.
  - Your knowledge and direct involvement in the reverse logistics process, make you a prime candidate to participate
  - You are likely able to contribute to subject matter and data category differentiation, elaboration, consolidation, and validation

Please refer to the Informed Consent form attached to the email received from the HRBP, which will give you a full explanation and scope of the study, including the UFS ethical clearance process and the extent of participation required.

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The researcher's commitment during this study:

- Confidentiality for both the company and participants is paramount, and in all interactions, reference to Company A and study participants will be made
  - Your name will not be recorded, anywhere and no one will be able to connect you to the answers you give
  - MS Teams recordings will not require video function activation, and only voice will be recorded
  - Your answers will be given pseudonym
- This study has received approval from the Research Ethics Committee of UFS. (A copy of the approval letter can be obtained from the researcher)
- Approval has been received from Company A's CEO to conduct the study
  - No sharing of sensitive company data, strategies, or product information is required at any stage of the study
- Participation is voluntary and there is no penalty or loss of benefit for non-participation
- Participants can opt out of the study at any stage
- Data gathered will be secured by password-protected folders
- MS Teams recordings will be destroyed immediately after verbatim transcription
- You have the right to be informed of the final research findings

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APPENDIX D: Interview schedule (for Managers' written feedback)

TITLE OF THE RESEARCH PROJECT

IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY

DATE: August 2024

RESEARCHER NAME AND CONTACT NUMBER:

Name of student/researcher	*Student number*	*Contact number*
Pieter Mattheus	*2004152886*	*082 441 3206*

University Free State
Economic and Management Sciences
Business School

STUDY LEADER NAME AND CONTACT NUMBER:
Dr Peta Thomas
082 811 0045

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UFS UV

Thank you for opting in to participate in this research and returning your signed informed consent form.

Just a few reminders of your participation:

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  - Your name will not be recorded anywhere, and no one will be able to connect you to the answers you give
  - MS Teams recordings will not require video function activation, and only voice will be recorded
  - Your answers will be given pseudonym
- This study has received approval from the Research Ethics Committee of UFS. (A copy of the approval letter can be obtained from the researcher)
- Approval has been received from Company A's CEO to conduct the study
  - No sharing of sensitive company data, strategies, or product information is required at any stage of the study
- Participation is voluntary and there is no penalty or loss of benefit for non-participation
- Participants can opt out of the study at any stage
- Data gathered will be secured by password-protected folders
- MS Teams recordings will be destroyed immediately after verbatim transcription
- If you would like to be informed of the final research findings, or have any questions at any time, please contact the researcher, Pieter Mattheus (082 441 3206)

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Written Interview Schedule (Managers)

Participant Reference
Participant _____

DATE: _____

TOPIC: Improving business sustainability at a fast-moving consumer goods company

The company of this study is Company A, a global FMCG company.

Section A (Questions A1 – A4) - Details of participant

1. Do you work in an area where automation or digitalisation has been implemented?

Yes ----------	
No ----------	

2. Indicate the length of your employment in Company A.

2 - 5 years ----------	
≥ 6 years ----------	

3. Indicate the level of your position in the organisation.

Management level ----------	
Skilled worker ----------	
Other ----------	

4. What is your employment category?

Sales ----------	
Customer service ----------	
Accounts ----------	
Warehouse or transport ----------	

Section B (Rich picture description)

In preparation for the interview, each participant will be asked to draw a rich picture in advance depicting what “digitalisation” means in terms of the non-automated POD section of Company A’s claims management process. Instructions will be supplied.

Section C (Questions C1 - C9) – Participant personal perspective questions**:**

Question C1: What technological changes have you seen in the last five years at Company A that have helped with the quality of work produced?

Question C2: Can you highlight how, to date, paper-based processes within Company A have an impact on completing your daily activities?

Question C3: Explain what the most challenging aspects were during the automation process when looking back at any previous paper-based processes that have since been digitalised within Company A.

Question C4: In the context of technological developments, can you mention any benefits these proposed advancements applied to the unautomated POD process may hold for you, Company A, or the community?

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Question C7: What would you look for in your immediate superior to help manage change?

Question C8: How can Company A communicate effectively about what change to the unautomated POD section will entail?

Question C9: Do you have any recommendations or any initiatives Company A can take on board to help employees on this POD process' digital transformation journey?

Thank you for your time in participating in this research.

APPENDIX E: Skilled Employees RQ presentation for interviews

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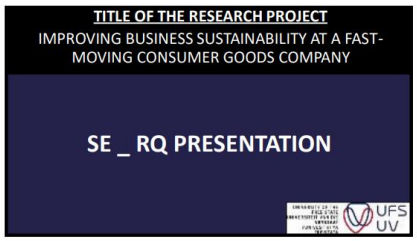

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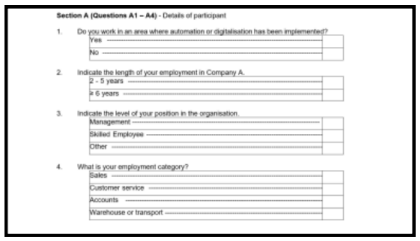

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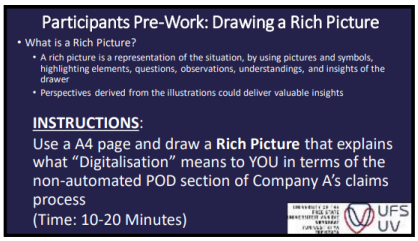

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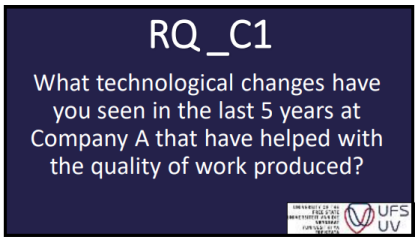

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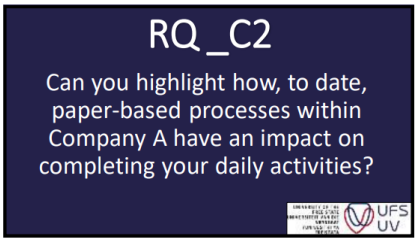

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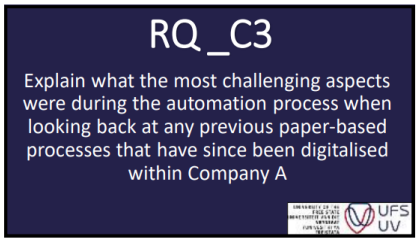

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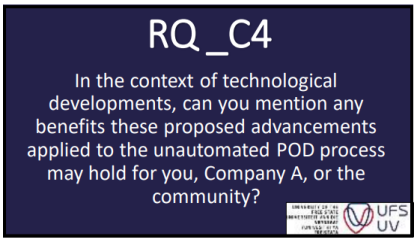

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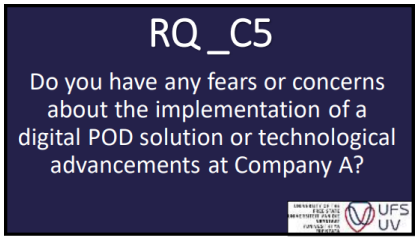

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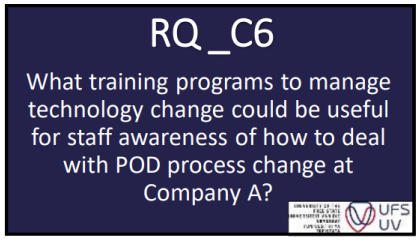

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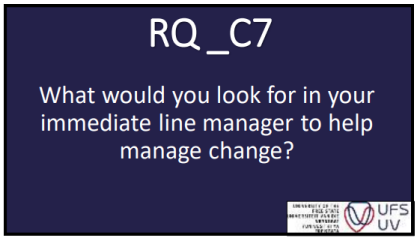

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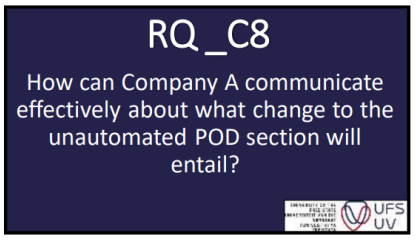

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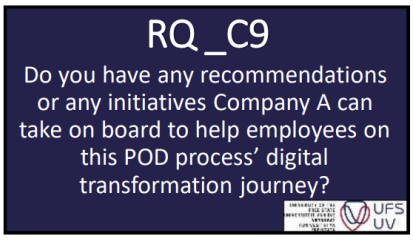

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APPENDIX F: HRBP confidentiality and data protection agreement

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UFS UV

RESEARCH STUDY

HRBP CONFIDENTIALITY AND DATA PROTECTION AGREEMENT

DATE

29 July 2024

TITLE OF THE RESEARCH PROJECT

IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY

PRINCIPLE INVESTIGATOR

Pieter Mattheus *2004152886* *082 441 3206*

FACULTY AND DEPARTMENT:

Economic and Management Sciences Faculty
UFS Business School

STUDY LEADER NAME AND CONTACT

Dr. Peta Thomas
082 811 0045
UFS Business School

WHAT IS THE AIM / PURPOSE OF THE STUDY?

Digital transformation has already proved to be a successful efficiency driver, especially in the FMCG industry. By applying knowledge from current literature on company sustainability, Industry 5.0, and triple bottom line (3BL), the point of this investigation is to identify the readiness of employees affected by the current paper-based POD process and to pre-emptively assessing possible pitfalls that will prevent high levels of adaptation. The outcome of the research is to facilitate various change management strategy recommendations for consideration during the transformation process when future digital solutions are implemented, improving company sustainability and agility.

WHO IS DOING THE RESEARCH?

The research will be done by Pieter Mattheus, who is doing the research as part of his final year MBA studies at the University Free State. He has also been employed with Company A for over 13 years, and his current position is that of National Field Operations Manager.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has received approval from the Research Ethics Committee of UFS. A copy of the approval letter can be obtained from the researcher.

ETHICAL CLEARANCE NUMBER:: UFS-HSD2024/0600

205 Nelson Mandela Drive/Rylaan, Park West/Parkwes, Bloemfontein 9301, South Africa/Suid-Afrika
P.O. Box/Posbus 339, Bloemfontein 9300, South Africa/Suid-Afrika, T: +27(0)51 401 9111, www.ufs.ac.za

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UFS UV

THIS AGREEMENT IS MADE ON [DATE] BETWEEN:

*1. **Pieter Mattheus**, an independent researcher from the University of the Free State (hereinafter referred to as "the Researcher"), with an address at, Johannesburg*

*2. **([HRBP NAME])**, representing **(COMPANY A)** (hereinafter referred to as "the HRBP"), with an address at Bryanston, Johannesburg.*

Purpose:
This Agreement outlines the terms and conditions under which the HRBP will assist the Researcher in gathering qualitative data, ensuring compliance with South African laws, including the Protection of Personal Information Act (POPIA) and other relevant ethical standards.

1. Definitions
1.1. "Confidential Information" refers to all information disclosed by the Researcher to the HRBP that is designated as confidential, including but not limited to data sets, methodologies, proprietary information, and any other material related to the research project.

1.2. "Participants" refers to the individual whose personal data is being collected, stored, or processed.

2. Obligations of the HRBP
2.1. The HRBP agrees to:
- *Assist in gathering quantitative data as specified by the Researcher.*
- *Ensure that all data collection methods comply with POPAI act and the ethical standards required for academic research.*

2.2. The HRBP shall not disclose any Confidential Information to any third party without the prior written consent of the Researcher.

2.3. The HRBP shall use the Confidential Information solely for the purpose of assisting the Researcher and not for any other purpose.

2.4. Implement and maintain appropriate technical and organisational measures to protect the data from unauthorised or unlawful processing and against accidental loss, destruction, or damage, in accordance with POPIA.

3. Data Protection
3.1. The HRBP acknowledges that all personal data collected during the research project will be handled in compliance with the Protection of Personal Information Act (POPIA).

3.2. The HRBP agrees to:
- *Obtain explicit written consent from Participants before collecting any personal data.*
- *Inform Participants of the purpose of data collection, how the data will be used, and their rights regarding their personal data.*
- *Ensure data accuracy and allow Participants to access and correct their personal data.*

3.3. The HRBP shall ensure that personal data is anonymised where possible to protect the identity of Participants.

4. Ethical Standards

4.1. The HRBP agrees to adhere to all ethical guidelines applicable to the research project, including:

- *Ensuring voluntary participation of Participants.*
- *Avoiding harm to Participants and ensuring their well-being.*
- *Maintaining transparency and honesty in data collection and processing.*

5. Breach of Agreement

5.1. In the event of a breach of this Agreement by the HRBP, the Researcher shall be entitled to seek remedies available under South African law.

6. Term and Termination

6.1. This Agreement shall commence on the date first written above and shall continue until the completion of the research project unless terminated earlier by either party with [30] days' written notice.

6.2. Upon termination of this Agreement, the HRBP shall return or destroy all Confidential Information in their possession.

7. Governing Law

7.1. This Agreement shall be governed by and construed in accordance with the laws of South Africa.

8. Miscellaneous

8.1. This Agreement constitutes the entire understanding between the parties and supersedes all prior agreements or understandings, whether written or oral, relating to its subject matter.

8.2. Any amendments or modifications to this Agreement must be in writing and signed by both parties.

8.3. If any provision of this Agreement is found to be invalid or unenforceable, the remaining provisions shall continue in full force and effect.

I, the HRBP, agree to the terms as set out in this agreement

Full Name of HRBP: ***HRBP SIGNATURE***

Signature of HRBP: _____ Date: _____

Full Name(s) of Researcher(s): ***Pieter Mattheus***

Signature of Researcher: _____Date: _____

APPENDIX G: HRBP email template to be used for participant recruitment

Subject: Invitation to Participate in Qualitative Research (Interviews)

Dear Colleague,

I hope this message finds you well.

I am writing to invite you to participate in a qualitative research study being conducted by **Pieter Mattheus**, a member of our team at *Company A*. This research aims to explore ***IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY***, and your insights would be valuable to this study.

As part of this study, we are conducting interviews with purposefully selected individuals, who have been identified as having unique perspectives or experiences relevant to our research. Your participation would involve a one-on-one interview, lasting approximately 30-45 minutes, and will be conducted on Teams.

Your involvement in this study is entirely voluntary, and you may choose to opt out at any time without any consequence. All information collected during the interview will be kept strictly confidential and used solely for academic purposes, and all personal data will be anonymised to protect your privacy.

To maintain the integrity of the research and adhere to ethical standards, ethical clearance from University of the Free State has been obtained. Your participation would significantly contribute to the success of this research and help achieve a deeper understanding of the research topic.

If you are willing to participate in the study, please read the ***research study information leaflet and consent form*** which is attached to this email. It will not only give you the complete and transparent information needed for you to make an informed decision but also provide you with the research questions that will be covered during the interview process. To confirm your participation, you would have to return a signed consent form to me.

Your consideration is appreciated and hope to have the opportunity to include your valuable perspective in this study.

Thank you for your time and potential contribution to this important research.

Best regards,

[***HRBP Full Name***]
Job Title: HRBP
[***Contact Information***]
Company A
Company A address, Johannesburg

APPENDIX H: POPIA Informed consent form

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RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE

27 August 2024

TITLE OF THE RESEARCH PROJECT
IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY

PRINCIPLE INVESTIGATOR
Pieter Mattheus *2004152886* *082 441 3206*

FACULTY AND DEPARTMENT:

Economic and Management Sciences Faculty
Business School

STUDY LEADER NAME AND CONTACT
Dr. Peta Thomas
082 811 0045
UFS Business School

WHAT IS THE AIM / PURPOSE OF THE STUDY?

Digital transformation has already proved to be a successful efficiency driver, especially in the FMCG industry. By applying knowledge from current literature on company sustainability, Industry 5.0, and triple bottom line (3BL), the point of this investigation is to identify the readiness of employees affected by the current paper-based POD process and to pre-emptively assessing possible pitfalls that will prevent high levels of adaptation. The outcome of the research is to facilitate various change management strategy recommendations for consideration during the transformation process when future digital solutions are implemented, improving company sustainability and agility.

WHO IS DOING THE RESEARCH?

The research will be done by Pieter Mattheus, who is doing the research as part of his final semester MBA studies at the University Free State. He has also been employed with Nestlé for over 13 years, and his current position is that of National Field Operations Manager, with COMPANY A.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has received approval from the Research Ethics Committee of UFS. A copy of the approval letter can be obtained from the researcher.

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ETHICAL CLEARANCE NUMBER:: UFS-HSD2024/0600

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

This study has been forwarded to you on my behalf by XXX (HRBP), as you have identified as 1 of 15 suitable participants to participate in my research study. The target population is purposefully selected individuals within Company A who share common traits of being with the company for longer than one year, and who are part of various departments (Sales, Customer Service, Accounts, and Transport/DC). Your knowledge and direct involvement in the reverse logistics process, make you a prime candidate to participate. You are likely able to contribute to subject matter and data category differentiation, elaboration, consolidation, and validation.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

Your role in the study, would be that of an interview participant. The study would require you to draw a rich picture as pre-work (maximum 20 minutes), and to partake in a 45-minute, semi-structred MS Teams interview where audio recording will be saved for transcriotion. The open-ended questions are aimed to gain insights, and your perspective, on topics ranging from digitilisation, the impact of paper-based process has on your daily activities. Rich picture instructions, will be shared on acceptance to participate by signing this informed consent form.

The interview questions content that will be covered is as follows:

A: Rich picture description

In preparation for the interview, each participant will be asked to draw a rich picture in advance depicting what "Digitalisation" means in terms of the non-automated POD section of Company A's claims management process. Instructions will be supplied.

B: Participant personal perspective questions:

***RQ1**: What technological changes have you seen in the last 5 years at Company A that have helped with the quality of work produced?*
***RQ2**: Can you highlight how, to date, paper-based processes within Company A have an impact on completing your daily activities?*
***RQ3**: Explain what the most challenging aspects were during the automation process when looking back at any previous paper-based processes that have since been digitalised within Company A.*
***RQ4**: In the context of technological developments, can you mention any benefits these proposed advancements applied to the unautomated POD process may hold for you, Company A, or the community?*
***RQ5**: Do you have any fears or concerns about the implementation of a digital POD solution or technological advancements at Company A?*
***RQ6**: What training programs to manage technology change could be useful for staff awareness of how to deal with POD process change at Company A?*
***RQ7**: What would you look for in your immediate superior to help manage change?*
***RQ8**: How can Company A communicate effectively about what change to the unautomated POD section will entail?*
***RQ9**: Do you have any recommendations, or any initiatives Company A can take on board to help employees on this POD process' digital transformation journey?*

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a

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary and that there is no penalty or loss of benefit for non-participation. Being in this study is voluntary, and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to opt out at any time and without giving a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Gaining real insights and perspective from the individuals at ground level will enable a deeper understanding of the potential pitfalls, and employee expectations when change is implemented. If recommendations are adapted by Company A, your input would have contributed to a implementable solution, that can improve long-term company sustainability.

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

Time to participate in the interview (45 minutes) and drawing a rich picture (20 minutes) would be the only inconvenience highlighted – as the interviews will happen during work hours.

WILL WHAT I SAY BE KEPT CONFIDENTIAL?

Confidentiality of information is top priority for the researcher. You will be allocated a pseudonym, so your name will not appear on any of the documents. The MS Teams recording will be destroyed, and any personal or company information will be removed during transcription. At no stage will you be required to discuss or disclose any company strategy, statistics or sensitive data during the duration of the research – your perception of the research questions is all that is needed. Data will be stored on double password encrypted OneDrive files.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Electronic information will be stored in a password-protected OneDrive folder for academic purposes and validation purposes by the researcher for the required 6 months. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Any audio recordings will also be destroyed and transcriptions will have all personal data or references to Company A removed. The study can be classified as low-level risk, as no vulnerable participants form part of the study, nor can any potential discomfort to the participant or reasonably foreseeable risks of harm or side-effects be identified by participating

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICPATING IN THIS STUDY?
No financial reward or company advancement for participating.

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HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings, or require additional information on any aspect of the research study, please contact the researcher, Pieter Mattheus on 082 441 3206 or email 2004152886@ufs.ac.za. The findings are accessible for 3 months. Should you have concerns about the way in which the research has been conducted, you may contact Dr Peta Thomas on 082 811 0045.

CONFLICT OF INTEREST DISCLOSURE

In line with conflict of interest considerations, and full transparent disclosure, the researcher has identified the following aspects that might influence a participant's comfort level, or decision to opt in or opt out of the research. As Pieter Mattheus has worked at Company A's Johannesburg office for the last 13 years and may be known to the participants selected for this study. He holds a managerial role, which again might cause discomfort for participants to open up during the interview process. He is funding his studies himself, and Company A has not given any financial support or reward to do the study. Personal interest and benefit for Pieter, should be highlighted as achieving his MBA. Pieter's public stances related to the research topic have been voiced before, and again in full disclosure, has been part of a previous digital solution implementation team. Pieter takes personal responsibility for the conflict of interest disclosure accuracy.

Thank you for taking the time to read this information sheet and for participating in this study.

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CONSENT TO PARTICIPATE IN THIS STUDY

I, the undersigned,

_____ (*participant's full names to be included*), (the "**Participant**")

confirm that I voluntarily agree to participate in the research study referred to as the ***IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY*** (the "**Study**") in relation to ***PARTICIPATING IN RESEARCH STUDY (RICH PICTURE PRE-WORK AND INTERVIEW)***

and which Study is being conducted by
PIETER MATTHEUS

(*insert the name of the researcher*), (the "**Researcher**").

I, the undersigned Participant, further confirm that–

1. the Researcher has explained the nature, procedure, potential benefits and anticipated inconvenience of my participation in the Study;
2. I have read (or had explained to me) and understood the Study as explained in the attached information sheet;
3. I have had sufficient opportunity to ask questions and am prepared to participate in the Study;
4. I understand that my participation in the Study is entirely voluntary and that I am free to withdraw at any time without penalty (if applicable);
5. I voluntarily provide the UFS and the Researcher with my personal information and consent to the UFS and the Researcher collecting, disclosing and processing my personal information in order to conduct the Study and any related activities in relation thereto;
6. I hereby acknowledge and confirm that I understand the purpose for which the UFS and the Researcher may collect, store, use, delete, destroy, outsource, transfer or otherwise process, as the context and circumstances may require and as contemplated in terms of POPIA, my personal information as set out herein;
7. I am aware that the findings of the Study will be anonymously processed into a research report, journal publications and/or conference proceedings and that my personal information will be aggregated and deidentified at such stage;
8. I also give the UFS permission to share, without notification, the collected data with other researchers at the UFS or other Higher Education Institutions. This permission is dependent on the same principles of ethical research practices, anonymity/confidentiality, safekeeping of information, and other issues listed above applying.

I, the Participant, agree to the recording of the interview process.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____Date: _____

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APPENDIX I: HRBP participant follow-up script (during recruitment)

Subject: Follow Up Script (Recruitment): IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY

Attachments: Appendix C _ HRBP Recruitment to Participate in Study.pdf; COMPLETED_Appendix G - POPIA compliant consent _SE.pdf

Hi *HRBP*

Worked on some Q&A that might come up during the follow up with the participants

Step 1: Introduction:

Good Day XXX
I hope you are having a great week thus far.
You were sent an email with the subject: Invitation to Participate in Qualitative Research.

Step 2: Follow Up message
The email contains 2 attachments, which give you an overview of the research and informed consent form.
I am just doing a follow-up to see if you are willing to participate – and if you have any questions.

Step 3: Q&A's

Skilled Employee

1. You have been purposefully selected due to your time with the company, skill set, and unique perspective you might bring to the topic
2. Your participation is only known to me, and Pieter
3. You will not know who the other participants are
    a. 15 Participants have been selected in Sales, Accounts/Finance, Customer service, and DC/Transport
4. After your acceptance you will be given a Pseudonym that will be used going forward (no names are recorded)
5. *Your answers during the interview will only be used for information purposes – (conversation transcribed and again no names will be used)*
6. *COMPANY A* has approved the time to do the Rich Picture and Interview – and you can block time in your calendar
7. All information will be destroyed in line with research ethical clearance guidelines

Manager Employee

1. You have been purposefully selected due to your time with the company, skill set, and unique perspective you might bring to the topic
2. Your participation is only known to me, and Pieter
3. You will not know who the other participants are
    a. 15 Participants have been selected in Sales, Accounts/Finance, Customer Service, and DC/Transport
4. After your acceptance you will be given a Pseudonym that will be used going forward (no names are recorded)
5. You will be sent the questionnaire questions and will be asked to write down your answers - (No interviews) – this gives you flexibility to complete the tasks
6. *COMPANY A* has approved the time to do the Rich Picture and Interview – and you can block time in your calendar
7. All information will be destroyed in line with research ethical clearance guidelines

APPENDIX J: Email invite for research findings feedback sessions

Good Day Participant

I hope this message finds you well. I am writing this email with immense gratitude, for your support and time taken during the research study:

IMPROVING BUSINESS SUSTAINABILITY AT A FAST-MOVING CONSUMER GOODS COMPANY.

Your insights, creativity, and invaluable perspective added tremendous insight, and value to the study finding. Research findings to be shared with participants is an ethical research standard that ensures research integrity. As involvement in this study has been entirely voluntary, and you may choose to opt out at any time, the following step is again 100% voluntary. Only one participant per session to protect participant privacy during this research feedback phase.

Please note, the research findings feedback sessions will be on Teams. The feedback sessions will not be recorded (nor transcribed), and any feedback or questions during the engagement session will again be treated as confidential. Select 1 of 23 available 15-minute time slots to book your Research Findings feedback session (*DATE*).

You will receive an Outlook meeting request to book your timeslot. If you are unable to attend any slot on the selected day, please feel free to contact Pieter to align on another slot (*very flexible*). Findings will be available for 3 months from the date of this communication

STEP 1 – Book my Research Findings Feedback Slot

Select your Study Feedback slot by clicking: HERE *(Insert Hyperlink)*

Regards,

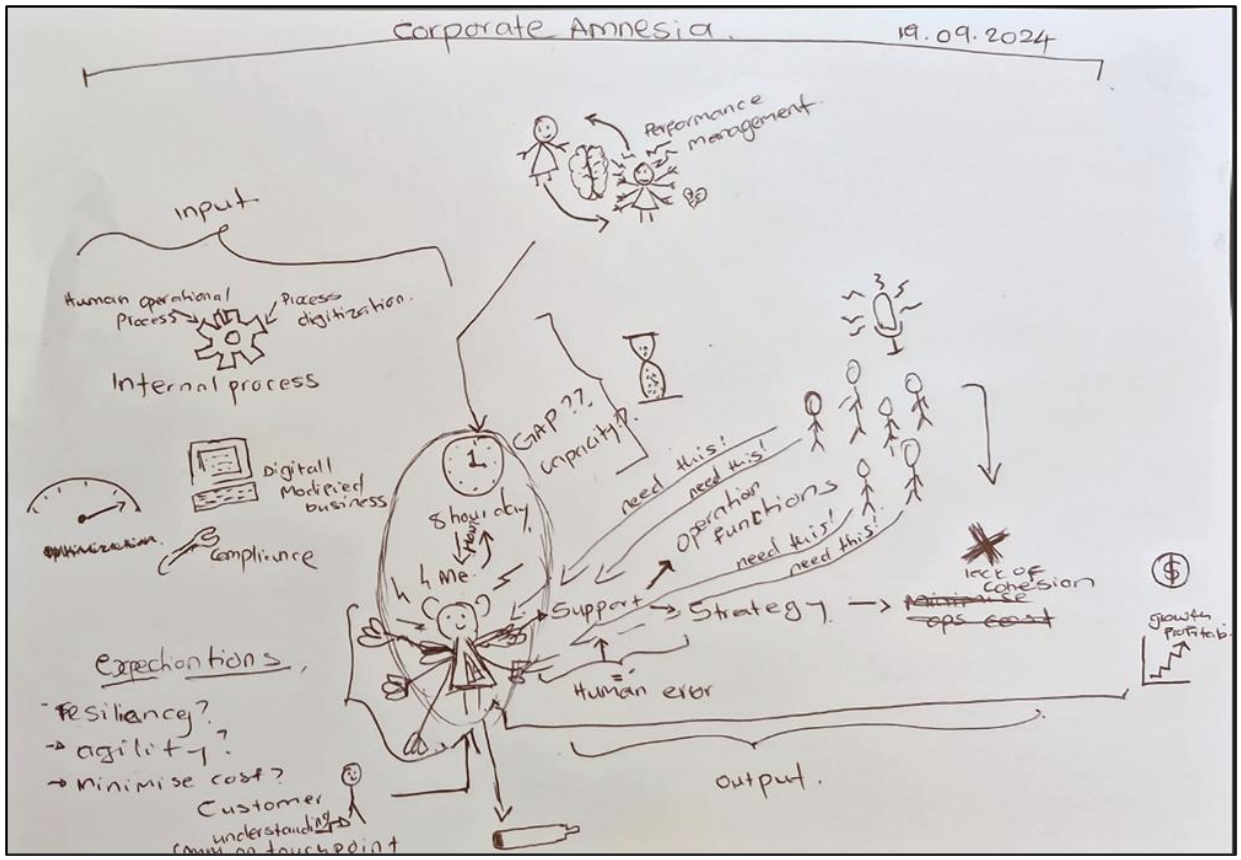
Pieter Matheus

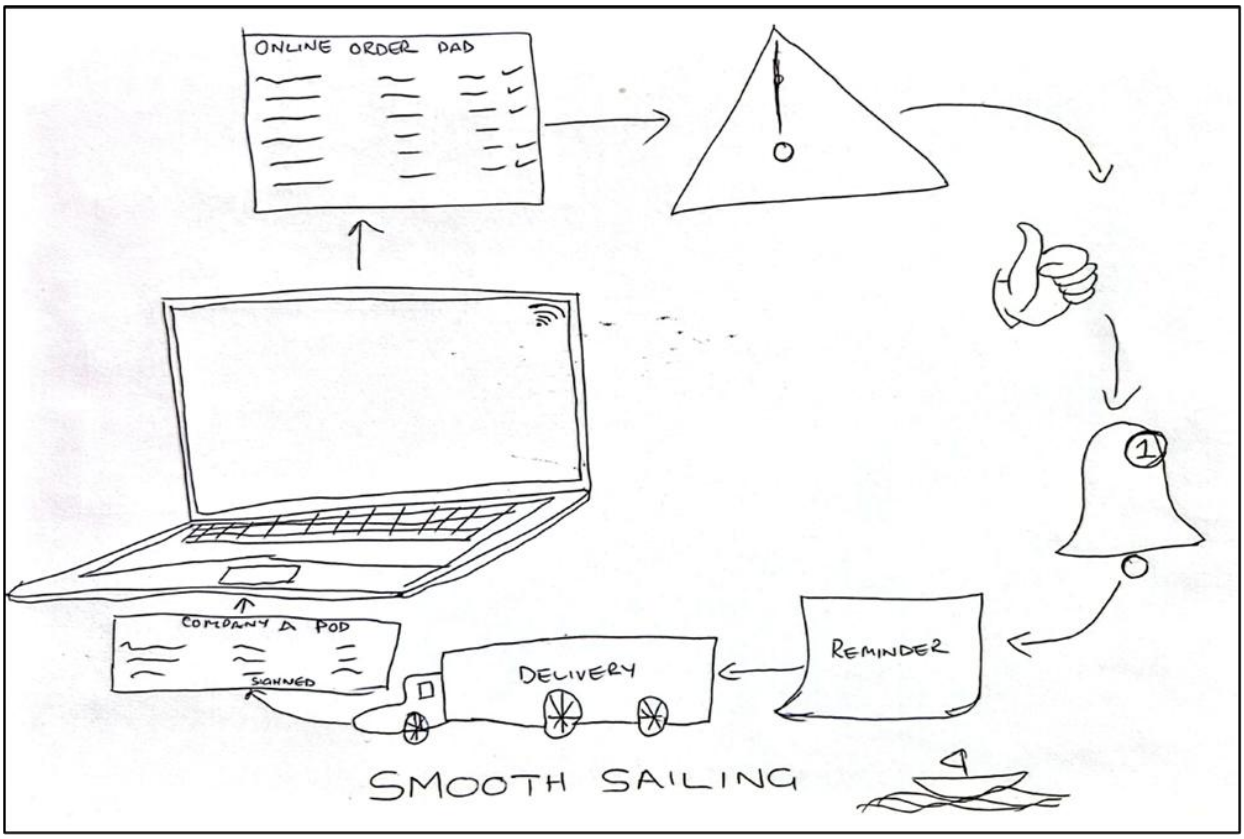
University Free State

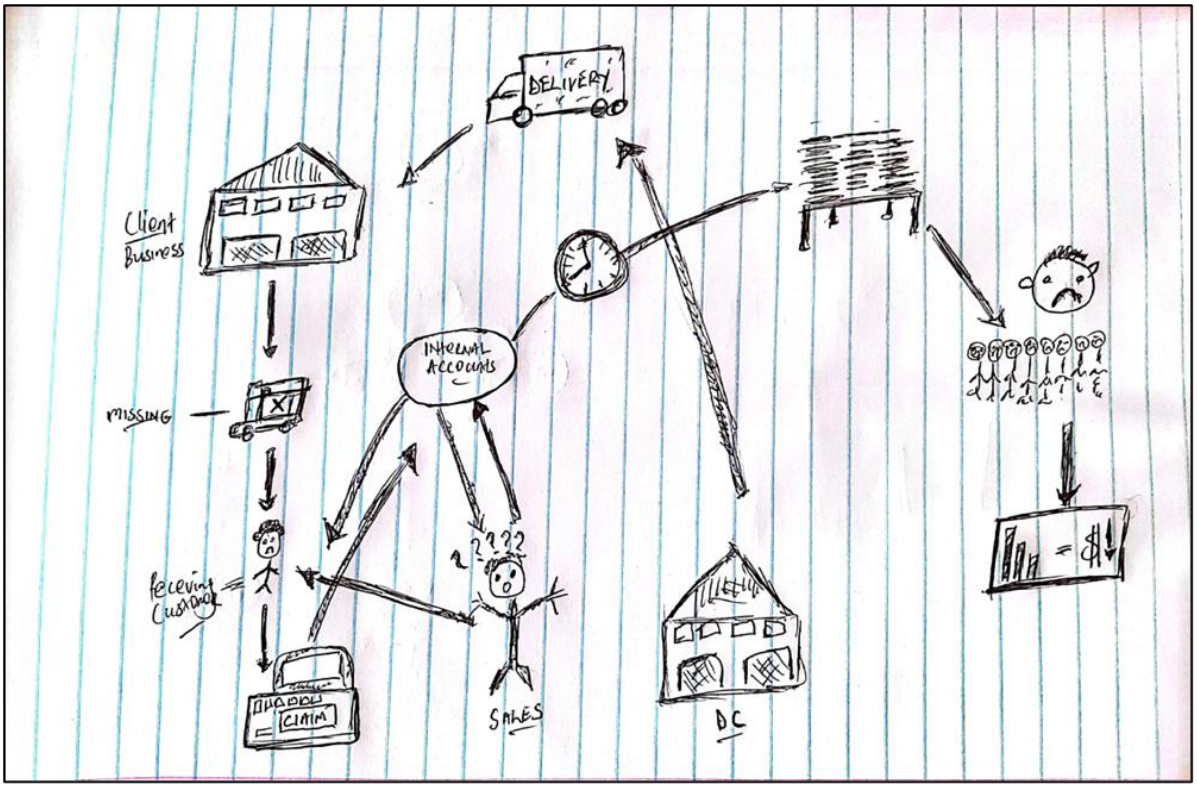
Economic and Management Sciences Business School

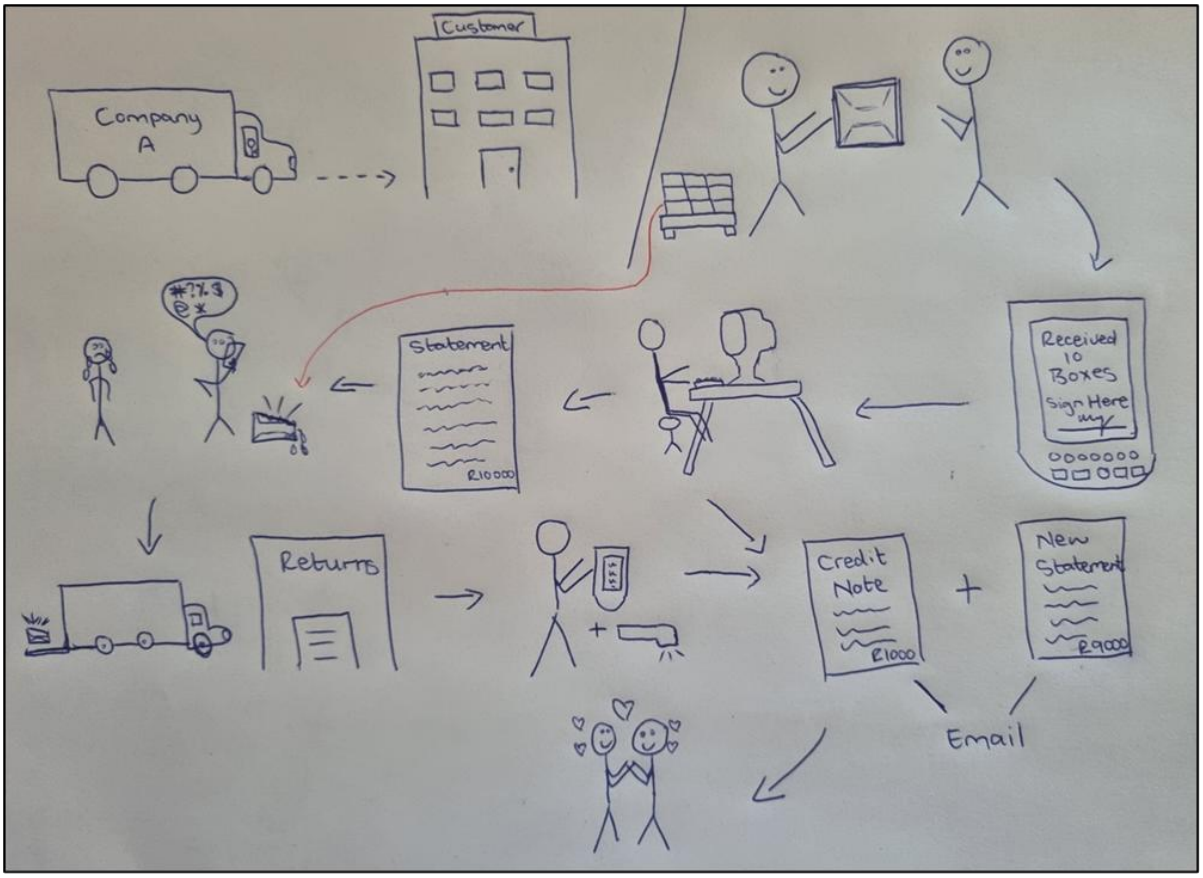
UFS Student Number: 2004152886 (MBA Student)

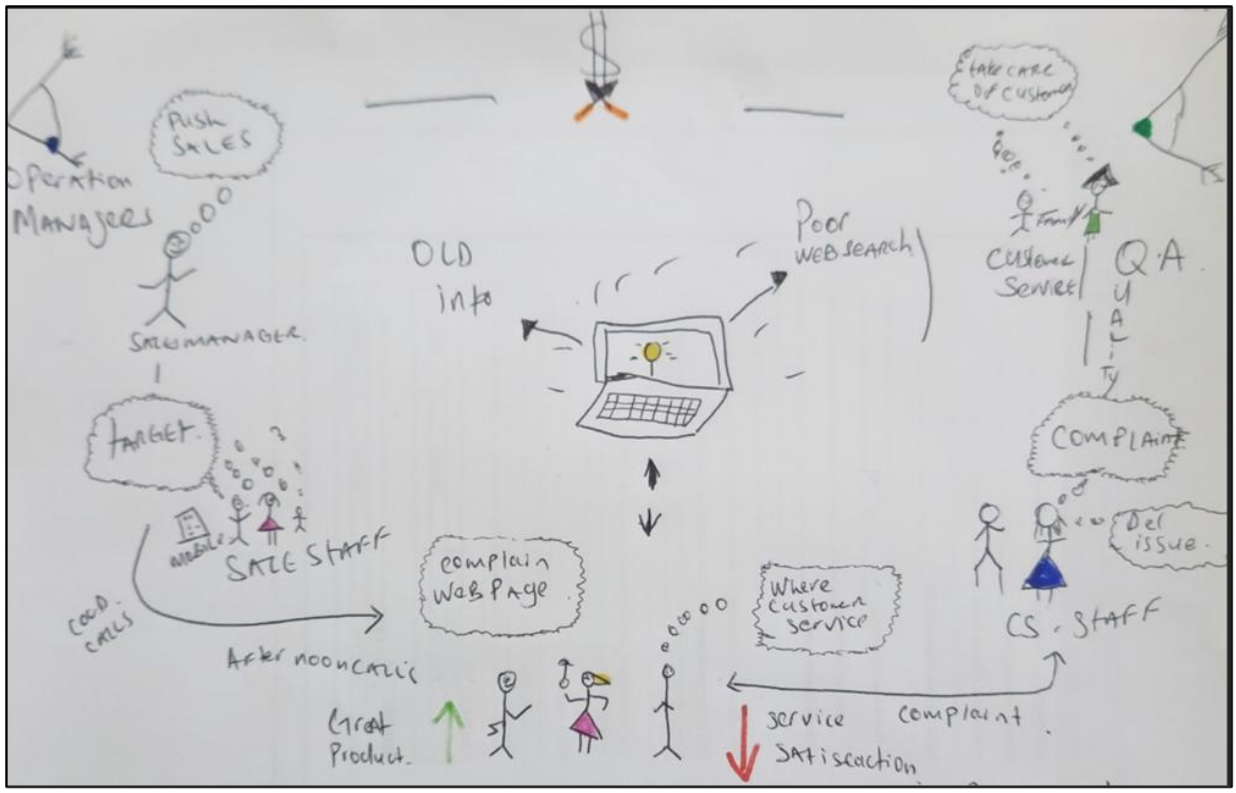
APPENDIX K: Participants' Rich Pictures

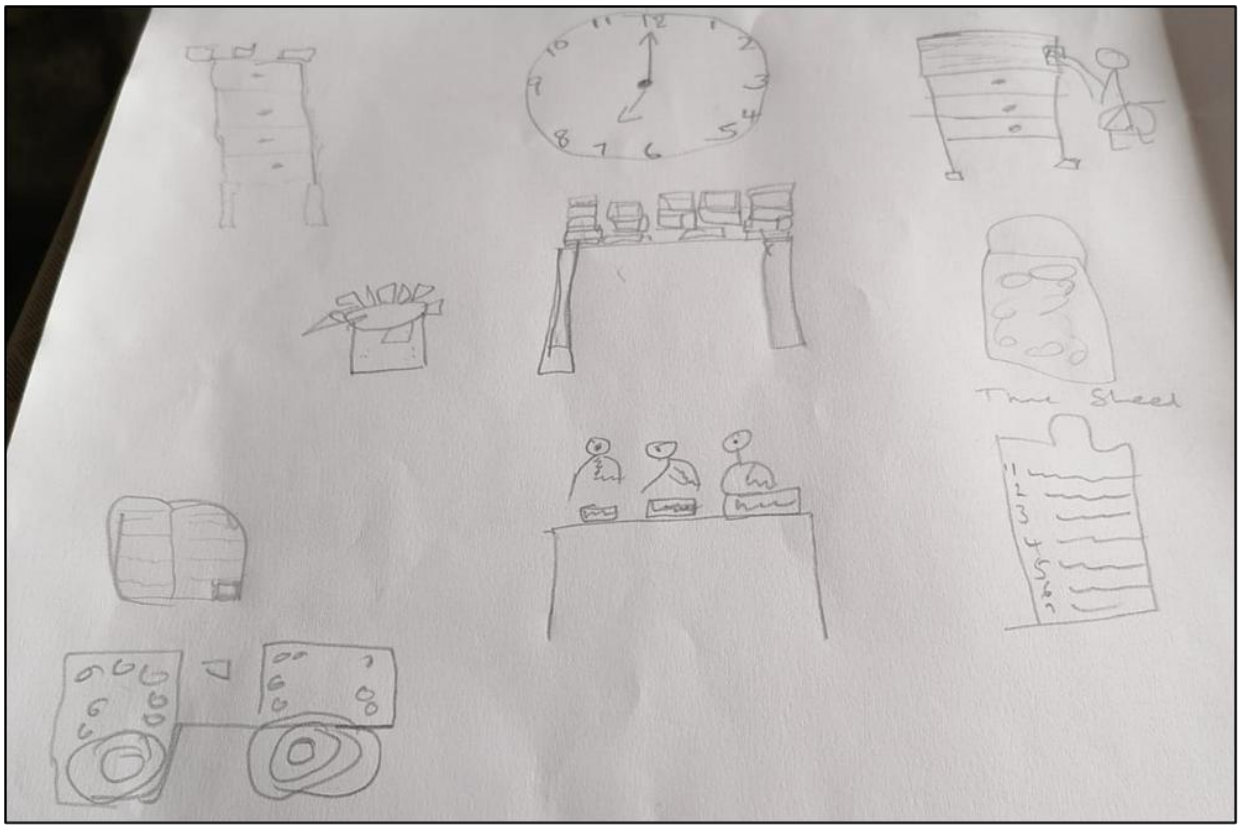


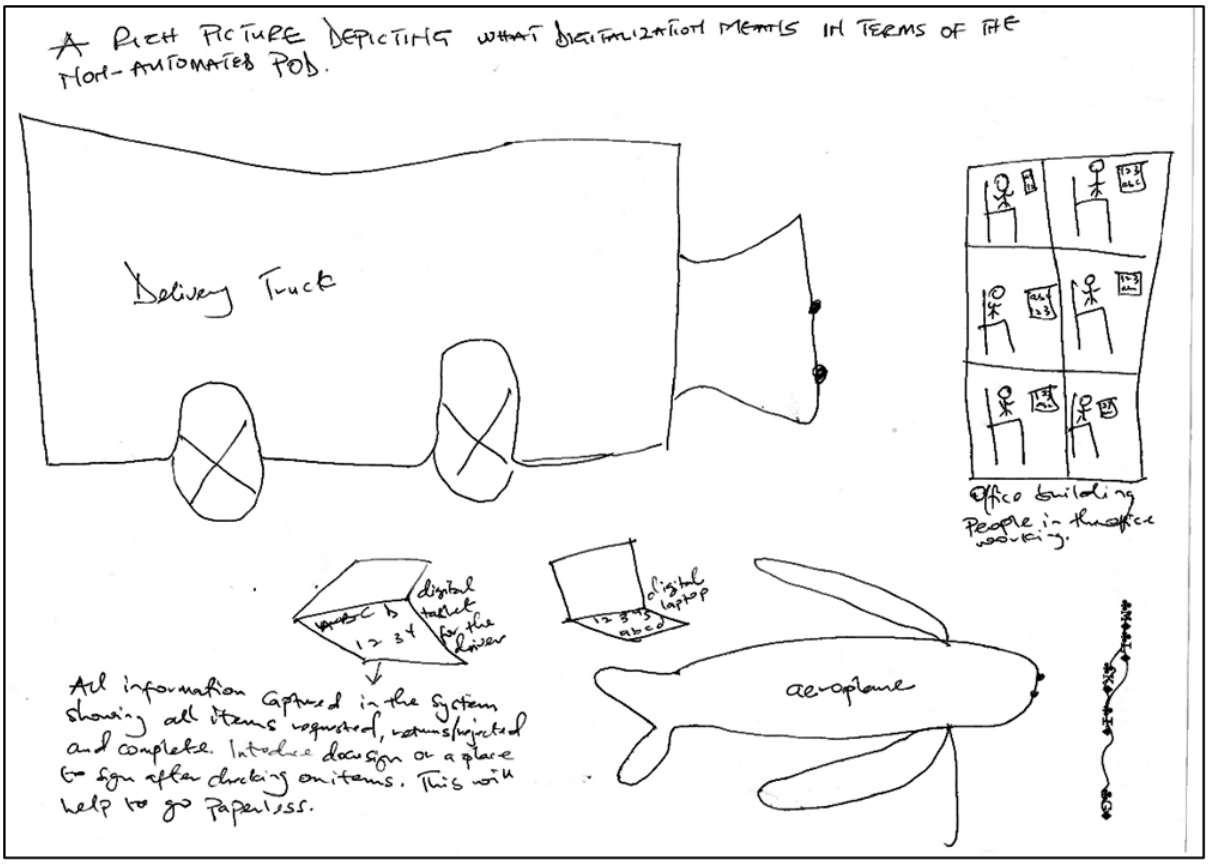


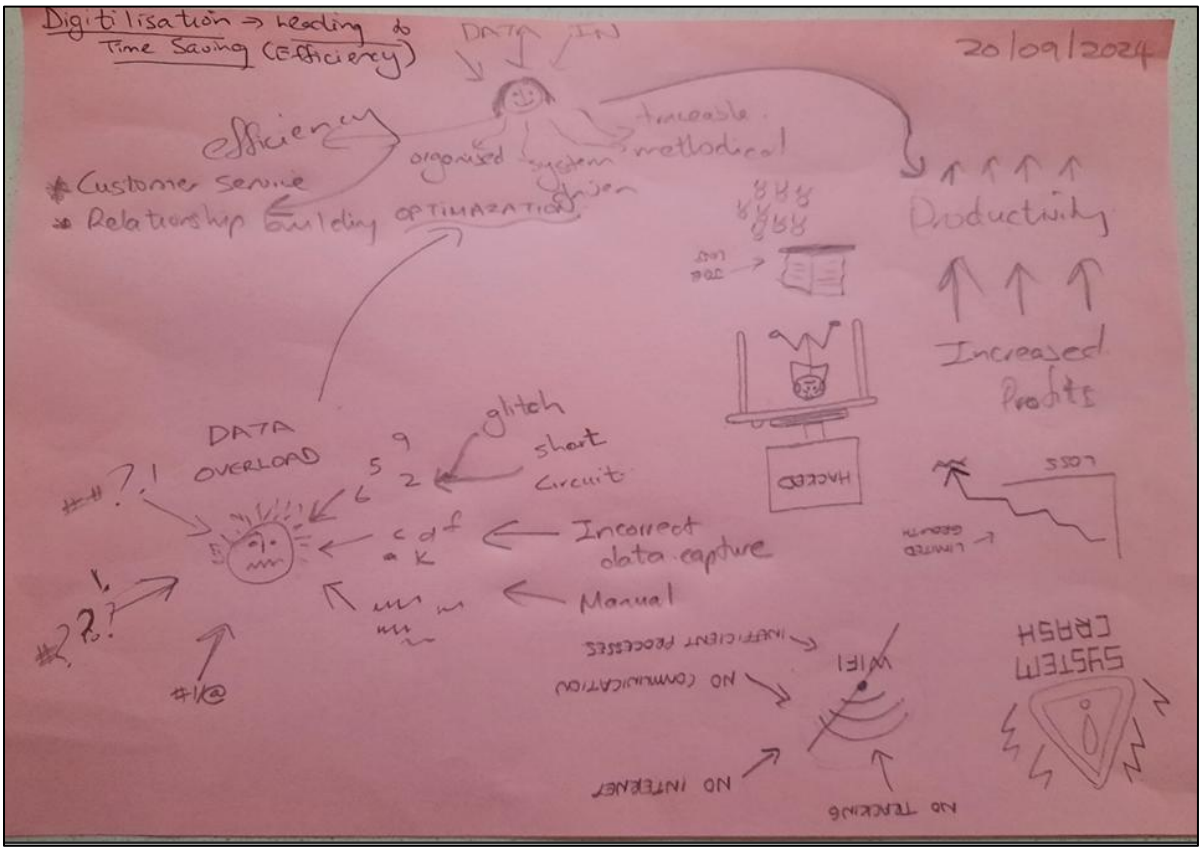

DELIVERY
Client Business
MISSING
INTERNAL ACCOUNTS
receiving Customer
CLAIM
SALES
DC

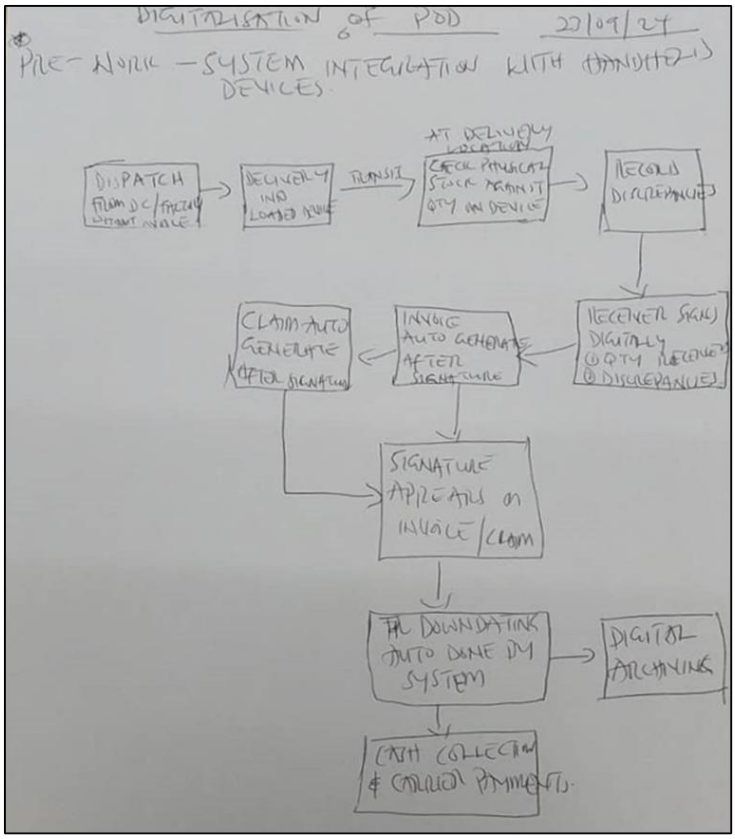

Customer
Company A
Statement
R10000
Received 10 Boxes Sign Here
Returns
Credit Note
R1000
New Statement
R9000
Email

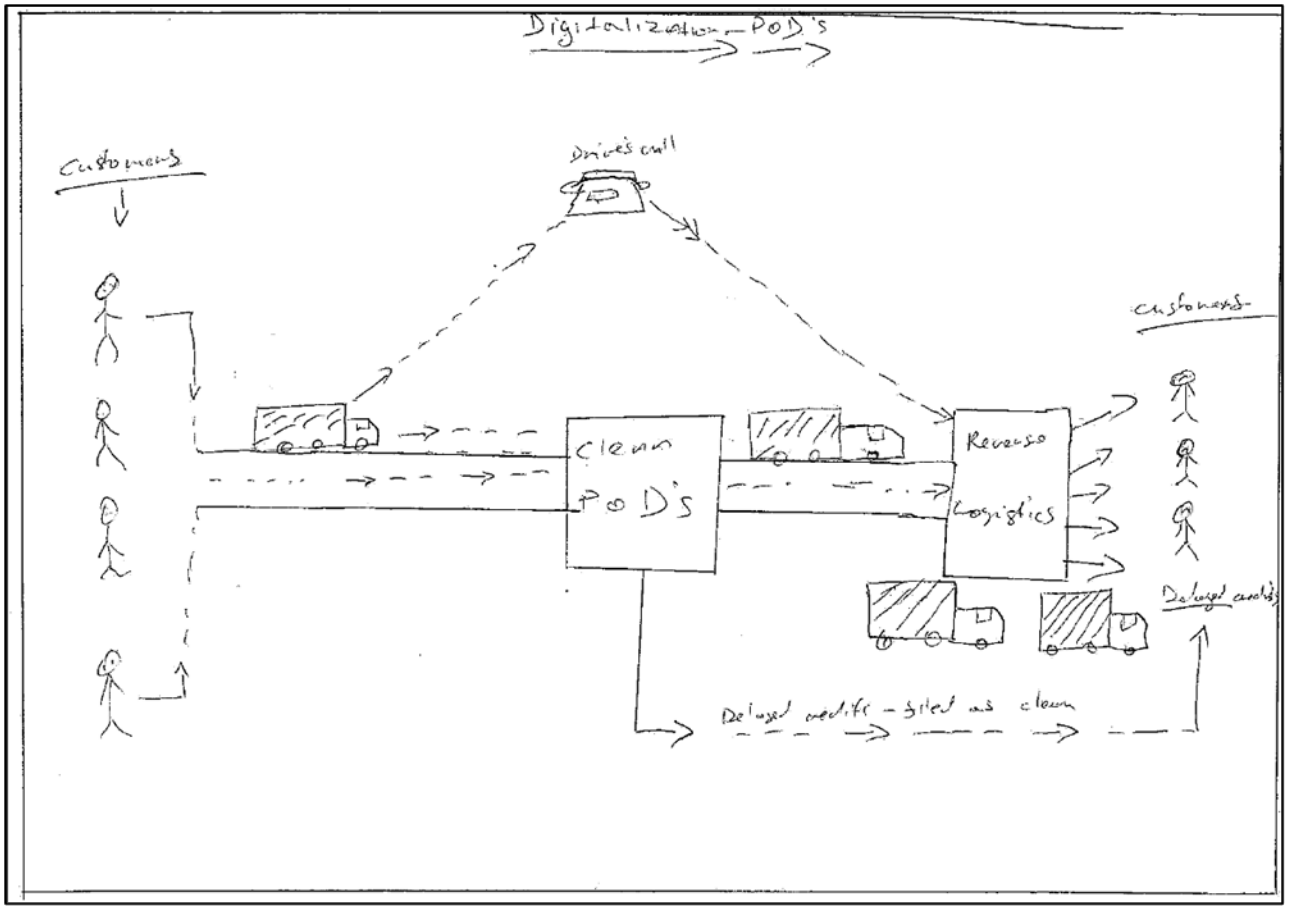

Push Sales
Operation Managers
Sale Manager
Target
Sale Staff
Cold calls
After noon calls
OLD info
Poor web search
complain Web Page
Where customer service
Great Product
service complaint
satisfaction
Take care of customer
Customer Service
Q·A
Quality
Complaint
Del issue
CS · Staff

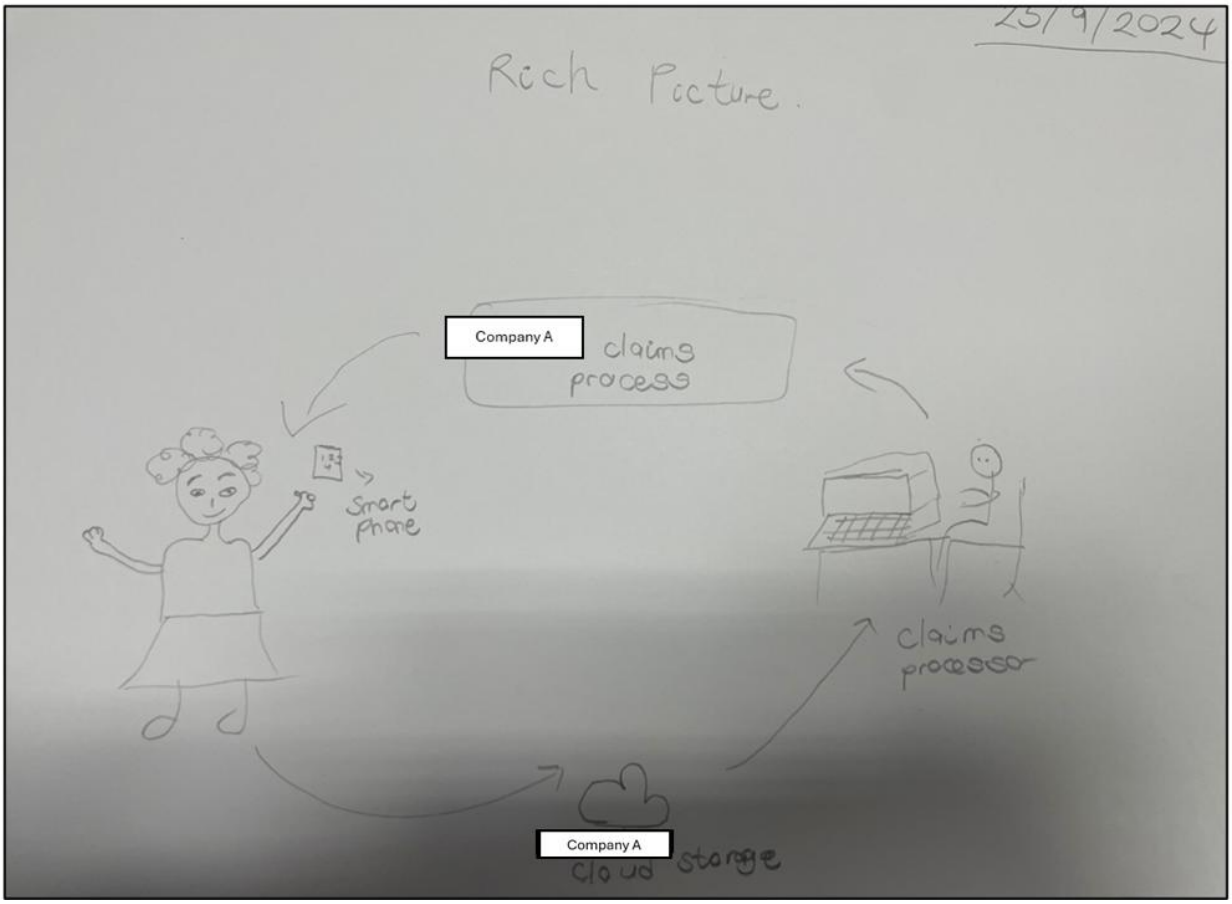

Time Sheet

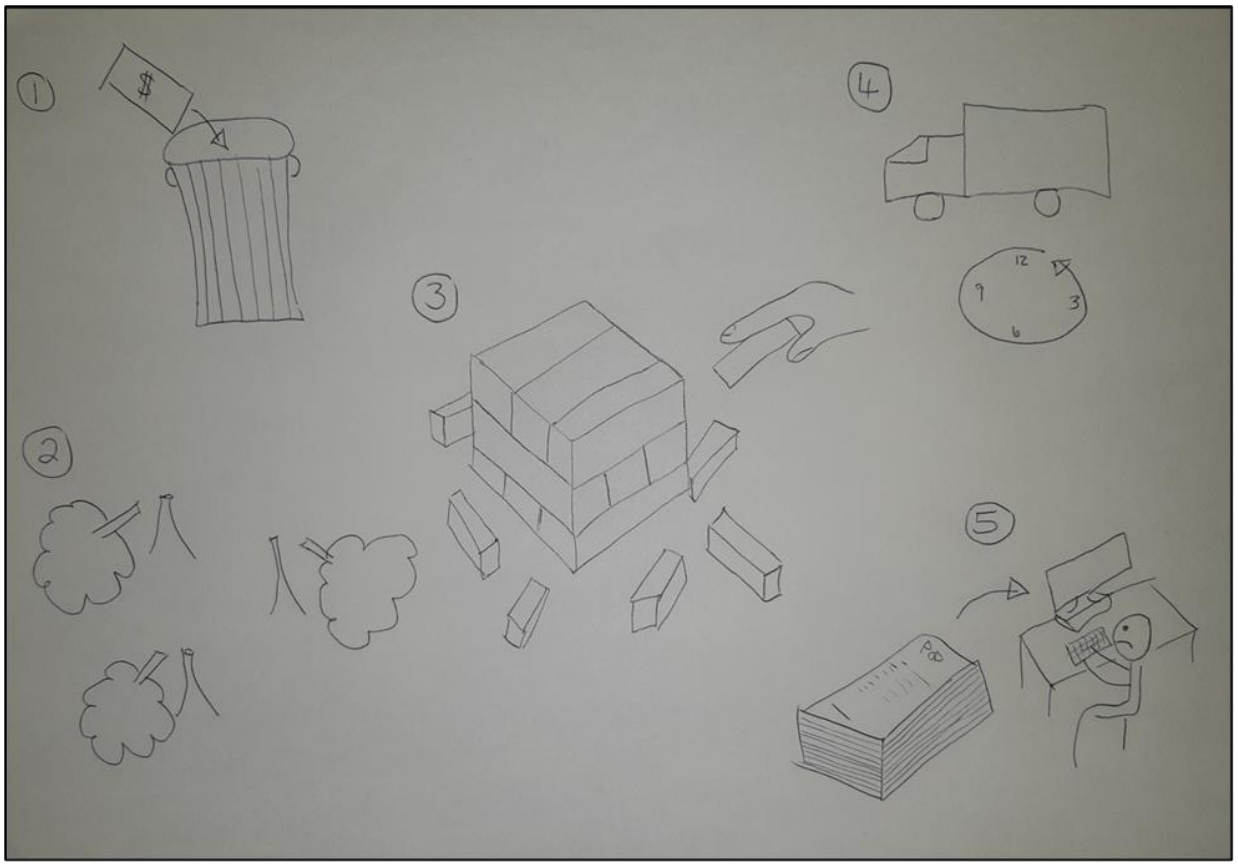

A RICH PICTURE DEPICTING WHAT DIGITALIZATION MEANS IN TERMS OF THE NON-AUTOMATED POD.
Delivery Truck
Office building
People in the office working.
digital tablet for the driver
digital laptop
aeroplane
All information captured in the system showing all items requested, returns/rejected and complete. Introduce docusign or a place to sign after checking on items. This will help to go paperless.


Digitilisation → Leading to Time Saving (Efficiency)
DATA IN
20/09/2024
efficiency
Customer service
Relationship building
organised
timeable
methodical
OPTIMAZATION
Productivity
Increased Profits
DATA OVERLOAD
glitch
short circuit
Incorrect data capture
Manual
HACKED
LOSS
SYSTEM CRASH
NO INTERNET
NO TRACKING
NO COMMUNICATION
INEFFICIENT PROCESSES
WIFI


DIGITALISATION of POD 22/09/24
PRE-WORK - SYSTEM INTEGRATION WITH HANDHELD DEVICES.
DISPATCH
DELIVERY AND LOADED MILE
TRANSIT
AT DELIVERY LOCATION
RECORD DISCREPANCIES
RECEIVER SIGNS DIGITALLY
INVOICE AUTO GENERATE AFTER SIGNATURE
CLAIM AUTO GENERATE
SIGNATURE APPEARS ON INVOICE / CLAIM
DIGITAL ARCHIVING
CASH COLLECTION & ONLINE PAYMENTS.


Digitalization - POD's
Customers
Drivers call
Claim PoD's
Reverse Logistics
customers
Delayed credits
Delayed modifi - filed as claim


25/9/2024
Rich Picture.
Company A
claims process
smart phone
claims processor
Company A
cloud storage


1
$
2
3
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12
3
6
9
5

APPENDIX L: Language editing confirmation letter

MARGARET LINSTRŌM

LANGUAGE EDITOR

Honours degree in Language Practice (Editing and Translation) (UFS)

Master's degree (Journalism and Media Studies) (UFS)

6 November 2024

CONFIRMATION OF EDITING

I, Margaret Linstrōm, hereby confirm that I language edited the research report titled *Improving business sustainability at a fast-moving consumer goods company* by Pieter Mattheus (student number 2004152886).

The editing was done electronically, using Track Changes, to enable the candidate to accept or reject the suggested changes.